

# GEMÜ 417

Manually operated butterfly valve

EN

## Operating instructions



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## 1 General information

### 1.1 Information

- The descriptions and instructions apply to the standard versions. For special versions not described in this document the basic information contained herein applies in combination with any additional special documentation.
- Correct installation, operation, maintenance and repair work ensure faultless operation of the product.
- Should there be any doubts or misunderstandings, the German version is the authoritative document.
- Contact us at the address on the last page for staff training information.

### 1.2 Symbols used

The following symbols are used in this document:

| Symbol | Meaning               |
|--------|-----------------------|
| ●      | Tasks to be performed |
| ►      | Response(s) to tasks  |
| –      | Lists                 |

### 1.3 Definition of terms

#### Working medium

The medium that flows through the GEMÜ product.

### 1.4 Warning notes

Wherever possible, warning notes are organized according to the following scheme:

| SIGNAL WORD                             |                                                   |
|-----------------------------------------|---------------------------------------------------|
| Possible symbol for the specific danger | Type and source of the danger                     |
|                                         | ► Possible consequences in case of non-compliance |
|                                         | ● Measures for avoiding danger                    |

Warning notes are always labelled with a signal word and sometimes also with a symbol for the specific danger.

The following signal words and danger levels are used:

|  <b>DANGER</b>  |                                                                                              |
|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
|                 | <b>Imminent danger!</b><br>► Non-observance can cause death or severe injury                 |
|  <b>WARNING</b> |                                                                                              |
|                 | <b>Potentially dangerous situation!</b><br>► Non-observance can cause death or severe injury |

|  <b>CAUTION</b> |                                                                                                |
|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
|                   | <b>Potentially dangerous situation!</b><br>► Non-observance can cause moderate to light injury |

| <b>NOTICE</b>                                                                     |                                                                                          |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|  | <b>Potentially dangerous situation!</b><br>► Non-observance can cause damage to property |

The following symbols for the specific dangers can be used within a warning note:

| Symbol                                                                              | Meaning                                |
|-------------------------------------------------------------------------------------|----------------------------------------|
|    | Danger of explosion!                   |
|    | The equipment is subject to pressure!  |
|   | Corrosive chemicals!                   |
|  | Hot plant components!                  |
|  | Maximum permissible pressure exceeded! |
|  | Risk of crushing!                      |
|  | Leakage!                               |

## 2 Safety information

The safety information in this document refers only to an individual product. Potentially dangerous conditions can arise in combination with other plant components, which need to be considered on the basis of a risk analysis. The operator is responsible for the production of the risk analysis and for compliance with the resulting precautionary measures and regional safety regulations.

The document contains fundamental safety information that must be observed during commissioning, operation and maintenance. Non-compliance with these instructions may cause:

- Personal hazard due to electrical, mechanical and chemical effects

- Hazard to nearby equipment
- Failure of important functions
- Hazard to the environment due to the leakage of dangerous materials

The safety information does not take into account:

- Unexpected incidents and events, which may occur during installation, operation and maintenance
- Local safety regulations which must be adhered to by the operator and by any additional installation personnel

#### Prior to commissioning:

1. Transport and store the product correctly.
2. Do not paint the bolts and plastic parts of the product.
3. Carry out installation and commissioning using trained personnel.
4. Provide adequate training for installation and operating personnel.
5. Ensure that the contents of the document have been fully understood by the responsible personnel.
6. Define the areas of responsibility.
7. Observe the safety data sheets.
8. Observe the safety regulations for the media used.

#### During operation:

9. Keep this document available at the place of use.
10. Observe the safety information.
11. Operate the product in accordance with this document.
12. Operate the product in accordance with the specifications.
13. Maintain the product correctly.
14. Do not carry out any maintenance work and repairs not described in this document without consulting the manufacturer first.

#### In cases of uncertainty:

15. Consult the nearest GEMÜ sales office.

## 3 Product description

### 3.1 Configuration

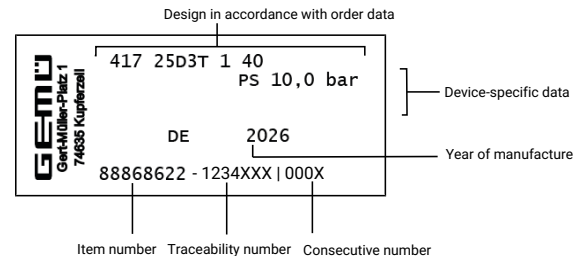


| Item | Name             | Material    |
|------|------------------|-------------|
| 1    | Valve body       | PVC-U, grey |
| 2    | Pipe connections | PVC-U, grey |
| 3    | Locking device   | PP-RT       |
| 4    | Manual override  | PP-H        |
| 5    | Union nut        | PVC-U, grey |

### 3.2 Description

GEMÜ 417 is a butterfly valve with union end. It has an ergonomically designed manual override with integrated locking device (with intermediate stop in nominal sizes to DN 50). This protects the butterfly valve against accidental operation.

### 3.3 Product label



The month of manufacture is encoded in the traceability number and can be obtained from GEMÜ.

The product was manufactured in Germany.

#### 4 Intended use

|  <b>DANGER</b> |                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | <p><b>Danger of explosion!</b></p> <ul style="list-style-type: none"><li>▶ Risk of severe injury or death</li><li>● Do not use the product in potentially explosive zones.</li><li>● Only use the product in potentially explosive zones confirmed in the declaration of conformity.</li></ul> |

|  <b>WARNING</b>                                                                                                                                                                                                                                  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p><b>Improper use of the product!</b></p> <ul style="list-style-type: none"><li>▶ Risk of severe injury or death</li><li>▶ Manufacturer liability and guarantee will be void.</li><li>● Only use the product in accordance with the operating conditions specified in the contract documentation and in this document.</li></ul> |  |

The product is designed for installation in piping systems and for controlling a working medium.

- Use the product in accordance with the technical data.

## 5 Order data

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

Products ordered with **bold marked ordering options** are so-called preferred series. Depending on the nominal size, these are available more quickly.

### Order codes

| 1 Type                             | Code |
|------------------------------------|------|
| Butterfly valve, manually operated | 417  |

| 2 DN  | Code |
|-------|------|
| DN 15 | 15   |
| DN 20 | 20   |
| DN 25 | 25   |
| DN 32 | 32   |
| DN 40 | 40   |
| DN 50 | 50   |

| 3 Body configuration | Code |
|----------------------|------|
| 2/2-way body         | D    |

| 4 Connection type                        | Code |
|------------------------------------------|------|
| Union end with insert (socket) – DIN     | 7    |
| Union end with inch insert – BS (socket) | 33   |

| 5 Body material | Code |
|-----------------|------|
| PVC-U, grey     | 1    |

| 6 Shut-off seal material | Code |
|--------------------------|------|
| FKM                      | 4    |
| EPDM                     | 14   |

| 7 Control function | Code |
|--------------------|------|
| Manually operated  | 0    |

**Order example**

| Ordering option          | Code | Description                          |
|--------------------------|------|--------------------------------------|
| 1 Type                   | 417  | Butterfly valve, manually operated   |
| 2 DN                     | 25   | DN 25                                |
| 3 Body configuration     | D    | 2/2-way body                         |
| 4 Connection type        | 7    | Union end with insert (socket) – DIN |
| 5 Body material          | 1    | PVC-U, grey                          |
| 6 Shut-off seal material | 14   | EPDM                                 |
| 7 Control function       | 0    | Manually operated                    |

## 6 Technical data

### 6.1 Medium

**Working medium:** Corrosive, inert, gaseous and liquid media which have no negative impact on the physical and chemical properties of the body, disc and seal material. The product is only suitable for use with fluids of group 2 according to the Pressure Equipment Directive.

### 6.2 Temperature

**Media temperature:** 0 – 60 °C

**Ambient temperature:** 10 – 60 °C

**Storage temperature:** 0 – 40 °C

### 6.3 Pressure

**Operating pressure:** 0 – 6 bar

**Kv values:**

| DN | Kv value |
|----|----------|
| 15 | 7.0      |
| 20 | 13.0     |
| 25 | 17.0     |
| 32 | 33.0     |
| 40 | 53.0     |
| 50 | 74.0     |

Kv values in m³/h

**Pressure/temperature correlation:**

| Material | Code | Temperature | Permissible operating pressure |
|----------|------|-------------|--------------------------------|
| PVC-U    | 1    | 10          | 10.0                           |
|          |      | 20          | 10.0                           |
|          |      | 25          | 10.0                           |
|          |      | 30          | 8.0                            |
|          |      | 40          | 6.0                            |
|          |      | 50          | 3.5                            |
|          |      | 60          | 1.5                            |

Temperatures in °C

Pressures in bar

All pressures are gauge pressures.

The permissible operating pressure depends on the working medium temperature.

### 6.4 Product conformities

**Pressure Equipment Directive:** 2014/68/EU

6.5 Mechanical data

Torques:

| DN | Torques |
|----|---------|
| 15 | 6.0     |
| 20 | 6.0     |
| 25 | 6.0     |
| 32 | 8.0     |
| 40 | 20.0    |
| 50 | 21.0    |

Torques in Nm

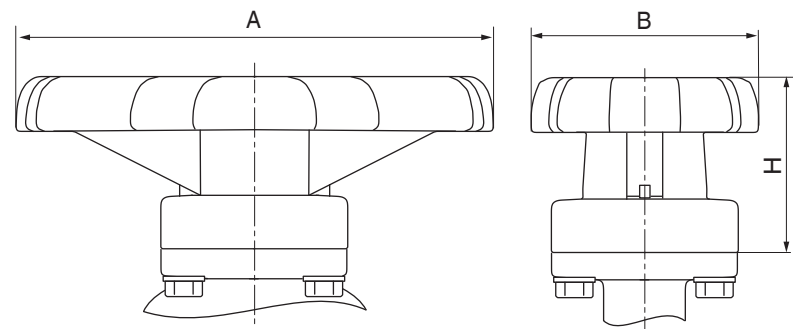
Weight:

| DN | Weight |
|----|--------|
| 15 | 0.36   |
| 20 | 0.36   |
| 25 | 0.36   |
| 32 | 0.48   |
| 40 | 0.63   |
| 50 | 0.83   |

Weights in kg

7 Dimensions

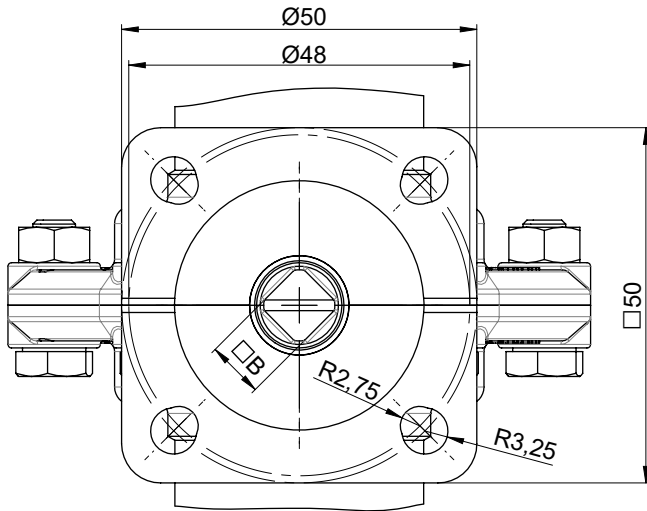
7.1 Actuator dimensions



| DN      | A     | B    | H    |
|---------|-------|------|------|
| 15 - 25 | 118.0 | 55.0 | 42.0 |
| 32 - 50 | 160.0 | 71.0 | 63.0 |

Dimensions in mm

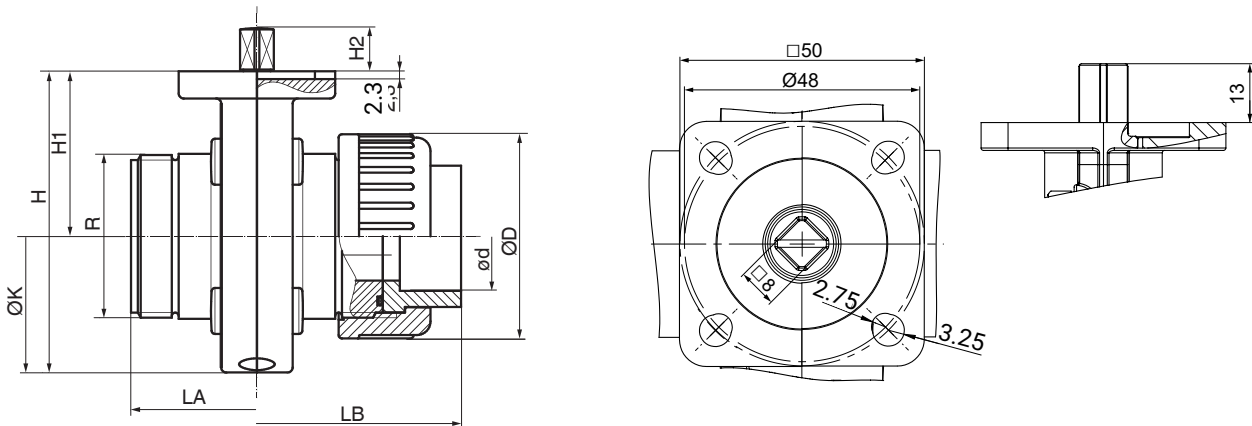
### 7.2 Actuator flange F05/G05



| DN | □B  | ØE   | ØR   | L max | L min | H2   |
|----|-----|------|------|-------|-------|------|
| 15 | 8.0 | 25.0 | 10.0 | 18.0  | 7.0   | 13.0 |
| 20 | 8.0 | 25.0 | 10.0 | 18.0  | 7.0   | 13.0 |
| 25 | 8.0 | 25.0 | 10.0 | 18.0  | 7.0   | 13.0 |
| 32 | 8.0 | 65.0 | 10.0 | 34.0  | 22.0  | 13.0 |
| 40 | 8.0 | 80.0 | 12.0 | 42.0  | 30.0  | 13.0 |
| 50 | 8.0 | 90.0 | 12.0 | 42.0  | 30.0  | 13.0 |

Dimensions in mm

### 7.3 Body



| DN | LA    | LB    | H     | H1   | H2   | øD    | ød   | R       | øK    |
|----|-------|-------|-------|------|------|-------|------|---------|-------|
| 15 | 74.0  | 114.0 | 89.0  | 48.5 | 13.0 | 60.0  | 20.0 | G 1 1/2 | 80.0  |
| 20 | 74.0  | 118.0 | 89.0  | 48.5 | 13.0 | 60.0  | 25.0 | G 1 1/2 | 80.0  |
| 25 | 74.0  | 124.0 | 89.0  | 48.5 | 13.0 | 60.0  | 32.0 | G 1 1/2 | 80.0  |
| 32 | 80.0  | 138.0 | 106.0 | 57.5 | 13.0 | 74.0  | 40.0 | G 2     | 96.0  |
| 40 | 94.0  | 162.0 | 112.0 | 58.0 | 13.0 | 83.0  | 50.0 | G 2 1/4 | 108.0 |
| 50 | 106.0 | 188.0 | 137.0 | 74.0 | 13.0 | 103.0 | 63.0 | G 2 3/4 | 126.0 |

Dimensions in mm

## 8 Manufacturer's information

### 8.1 Delivery

- Check that all parts are present and check for any damage immediately upon receipt.

The product's performance is tested at the factory. The scope of delivery is apparent from the dispatch documents and the design from the order number.

### 8.2 Transport

1. Only transport the product by suitable means. Do not drop. Handle carefully.
2. After the installation dispose of transport packaging material according to relevant local or national disposal regulations / environmental protection laws.

### 8.3 Storage

1. Store the product free from dust and moisture in its original packaging.
2. Avoid UV rays and direct sunlight.
3. Do not exceed the maximum storage temperature (see chapter "Technical data").
4. Do not store solvents, chemicals, acids, fuels or similar fluids in the same room as GEMÜ products and their spare parts.
5. Close the compressed air connections with protection caps or sealing plugs.
6. Store the product in the "open" position.

## 9 Installation in piping

### 9.1 Preparing for installation

|  <b>WARNING</b> |                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <b>The equipment is subject to pressure!</b> <ul style="list-style-type: none"> <li>► Risk of severe injury or death</li> <li>● Depressurize the plant or plant component.</li> <li>● Completely drain the plant or plant component.</li> </ul> |

|  <b>WARNING</b> |                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <b>Corrosive chemicals!</b> <ul style="list-style-type: none"> <li>► Risk of caustic burns</li> <li>● Wear appropriate protective gear.</li> <li>● Completely drain the plant.</li> </ul> |

|  <b>CAUTION</b> |                                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 | <b>Hot plant components!</b> <ul style="list-style-type: none"> <li>► Burns</li> <li>● Only work on plant that has cooled down.</li> <li>● Wear protective gear.</li> </ul> |

|  <b>CAUTION</b> |                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <b>Maximum permissible pressure exceeded!</b> <ul style="list-style-type: none"> <li>► Damage to the product!</li> <li>● Provide for precautionary measures against exceeding the maximum permissible pressure that may be caused by pressure surges (water hammer).</li> </ul> |

|  <b>CAUTION</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <b>Risk of crushing!</b> <ul style="list-style-type: none"> <li>► There is a risk of crushing when reaching into the valve.</li> <li>● Installation and removal of the valve may only be performed by suitable/trained personnel.</li> <li>● Install only if the valve is deenergized (without control energy).</li> <li>● When used as an end-of-line valve, a mating flange must be used.</li> <li>● The operator must ensure that the valve is adequately secured by piping, e.g. pipe bends or grids.</li> </ul> |

|  <b>CAUTION</b>                                                                                                                                                                                     |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Use as step!</b> <ul style="list-style-type: none"> <li>► Damage to the product</li> <li>► Risk of slipping-off</li> <li>● Choose the installation location so that the product cannot be used as a foothold.</li> <li>● Do not use the product as a step or a foothold.</li> </ul> |  |

| <b>NOTICE</b>                                                                                                                                                                                                                                                     |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Suitability of the product!</b> <ul style="list-style-type: none"> <li>► The product must be appropriate for the piping system operating conditions (medium, medium concentration, temperature and pressure) and the prevailing ambient conditions.</li> </ul> |  |

## NOTICE

### Tools!

- The tools required for installation and assembly are not included in the scope of delivery.
  - Use appropriate, functional and safe tools.
1. Ensure the product is suitable for the relevant application.
  2. Check the technical data of the product and the materials.
  3. Keep appropriate tools ready.
  4. Wear appropriate protective gear, as specified in the plant operator's guidelines.
  5. Observe appropriate regulations for connections.
  6. Have installation work carried out by trained personnel.
  7. Shut off plant or plant component.
  8. Secure plant or plant component against recommissioning.
  9. Depressurize the plant or plant component.
  10. Completely drain the plant (or plant component) and let it cool down until the temperature is below the media vaporization temperature and cannot cause scalding.
  11. Correctly decontaminate, rinse and ventilate the plant or plant component.
  12. Lay piping so that the product is protected against transverse and bending forces, and also from vibrations and tension.
  13. Only install the product between matching aligned pipes (see chapters below).
  14. Please note the flow direction (see chapter "Flow direction").
  15. Please note the installation position (see chapter "Installation position").

### 9.2 Installation location

1. Do not apply external force to the product
2. Choose the installation location so that the product cannot be used as a foothold.
3. Lay the piping so that the valve body is protected against thrust and bending forces, vibrations and tension.
4. Only install the product between matching aligned pipes.

#### Installation position

- Align the product preferably with the actuator facing upwards.
- Any direction of working medium is OK.

### 9.3 Mounting the product

1. Shut off the plant or plant component.
2. Secure against recommissioning.
3. Depressurize the plant or plant component.
4. Completely drain the plant or plant component and allow it to cool down until the temperature is below the media vaporization temperature and cannot cause scalding.
5. Correctly decontaminate, rinse and ventilate the plant or plant component.

## CAUTION

### Wrong solvent cement

- Valve body will be damaged.
- Only use solvent cement suitable for the valve body.



6. Screw the threaded connections into the piping in accordance with valid standards.
7. Unscrew the union nut 1 on the valve body 2.
8. Reinsert the O-ring if necessary.
9. Place the insert into the union nut 1.
10. Glue the union nut 1 with insert onto the pipe.
11. Reinsert the O-ring if necessary.
12. Screw the union nut 1 back onto the valve body.
13. Connect the valve body 2 on the other side to the pipe as well.

## 10 Commissioning

## WARNING



### Corrosive chemicals!

- Risk of caustic burns
- Wear appropriate protective gear.
- Completely drain the plant.

## CAUTION



### Leakage!

- Emission of dangerous materials
- Provide for precautionary measures against exceeding the maximum permissible pressure that may be caused by pressure surges (water hammer).

## CAUTION

### Cleaning agent!

- Damage to the GEMÜ product
- The plant operator is responsible for selecting the cleaning material and performing the procedure.

1. Check the tightness and the function of the product (close and reopen the product).
  2. Flush the piping system of new plant and following repair work (the product must be fully open).
- ⇒ Harmful foreign matter has been removed.

- ⇒ The product is ready for use.
- Commission the product.
  - Commissioning of actuators in accordance with the enclosed instructions.

## 11 Operation

| Position            | Open/closed |
|---------------------|-------------|
| Across the piping   | Closed      |
| In piping direction | Open        |

- Press the locking button.
- Move the lever to the required position.

## 12 Troubleshooting

| Error                                                        | Possible cause                                                       | Troubleshooting                                                            |
|--------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------|
| The product does not open/close or does not open/close fully | Actuator defective                                                   | Replace actuator                                                           |
|                                                              | Foreign matter in the product                                        | Remove and clean the product                                               |
| The product does not close or does not close fully           | Operating pressure too high                                          | Operate the product with the operating pressure specified in the datasheet |
|                                                              | Shut-off seal incorrectly mounted or incorrect shut-off seal mounted | Replace or correctly mount the shut-off seal.                              |
| Product leaking between actuator and body                    | Shut-off seal faulty                                                 | Replace shut-off seal.                                                     |
|                                                              | Bolting loose                                                        | Tighten bolting.                                                           |
|                                                              | Body faulty                                                          | Check body for potential damage, replace body if necessary.                |
| Connection between body and piping leaking                   | Incorrect installation                                               | Check installation of body in piping.                                      |
|                                                              | O-ring missing or is contaminated or faulty                          | Replace O-ring.                                                            |
|                                                              | Union nut loose                                                      | Tighten the union nut.                                                     |
| Body leaking                                                 | Body faulty                                                          | Check body for potential damage, replace body if necessary.                |
|                                                              | Shut-off seal faulty                                                 | Replace shut-off seal.                                                     |
|                                                              | Shut-off seal incorrectly mounted or incorrect shut-off seal mounted | Replace or correctly mount the shut-off seal.                              |

| Error | Possible cause                              | Troubleshooting |
|-------|---------------------------------------------|-----------------|
|       | O-ring missing or is contaminated or faulty | Replace O-ring. |

## 13 Inspection and maintenance

**⚠ WARNING**



**The equipment is subject to pressure!**

- Risk of severe injury or death
- Depressurize the plant or plant component.
- Completely drain the plant or plant component.

**⚠ CAUTION**



**Hot plant components!**

- Burns
- Only work on plant that has cooled down.
- Wear protective gear.

**⚠ CAUTION**



**Risk of crushing!**

- There is a risk of crushing when reaching into the valve.
- Installation and removal of the valve may only be performed by suitable/trained personnel.
- Install only if the valve is deenergized (without control energy).
- When used as an end-of-line valve, a mating flange must be used.
- The operator must ensure that the valve is adequately secured by piping, e.g. pipe bends or grids.

**NOTICE**

**Use of incorrect spare parts!**

- Damage to the GEMÜ product
- The manufacturer liability and guarantee will be void.
- Use only genuine parts from GEMÜ.

**NOTICE**

**Exceptional maintenance work!**

- Damage to the GEMÜ product
- Any maintenance work and repairs not described in these operating instructions must not be performed without consulting the manufacturer first.

The operator must carry out regular visual examinations of the products, depending on the operating conditions and the potentially hazardous situations, in order to prevent leakage and damage.

1. Have servicing and maintenance work performed by trained personnel.
2. Wear appropriate protective gear as specified in the plant operator's guidelines.
3. Disconnect from power supply.
4. Shut off plant or plant component.
5. Secure plant or plant component against recommissioning.
6. Depressurize the plant or plant component.
7. Actuate products that are always in the same position four times a year.

### 13.1 Cleaning the product

- Clean the product with a damp cloth.
- Do **not** clean the product with a high pressure cleaning device.

### 13.2 Removing the butterfly valve from the piping

#### ⚠ WARNING



##### The equipment is subject to pressure!

- Risk of severe injury or death
- Depressurize the plant or plant component.
- Completely drain the plant or plant component.

#### ⚠ WARNING



##### Corrosive chemicals!

- Risk of caustic burns
- Wear appropriate protective gear.
- Completely drain the plant.

#### ⚠ CAUTION



##### Hot plant components!

- Burns
- Only work on plant that has cooled down.
- Wear protective gear.

1. Maintenance work must only be performed by trained personnel.
2. Use appropriate protective gear as specified in plant operator's guidelines.
3. Move the butterfly valve to a slightly open position. The disc must not project from the body.
4. Loosen and remove flange bolts and nuts.
5. Spread the piping flanges.
6. Remove the butterfly valve.

### 13.3 Replace actuator

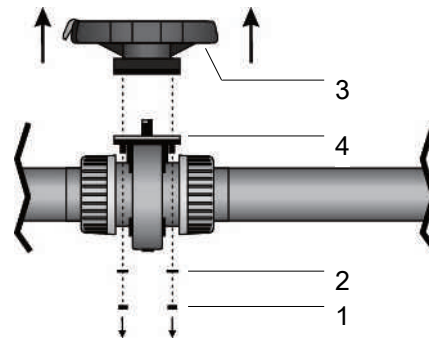
#### NOTICE

- Assembly information for the actuators can be found in the separately enclosed assembly instructions.

Tools required:

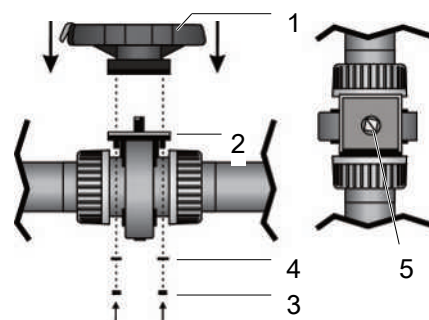
- Hexagon wrench WAF 5
- Open-end wrench WAF 8
- Bearing grease (Molycote DC 111)

#### Removing the actuator



1. Depressurize the plant or plant component.
2. Move the butterfly valve to the closed position.
3. Remove the protective caps.
4. Unscrew the hexagon nuts 1.
5. Do not lose the washers 2.
6. Remove the actuator 3 from the valve body 4.
7. Clean all of the product parts.
8. Ensure that none of the product parts are damaged.

#### Mounting the actuator



1. Check the position of the butterfly disc indicated by the groove; move the butterfly disc to the correct position if necessary.
2. Put the new actuator 1 on the valve body 2.
3. Turn the actuator 1 until the screws can be inserted.
4. Screw in the hexagon nuts 3 with their washers 4 again until hand tight.
5. Tighten the hexagon nuts 1-4 diagonally until hand tight.
6. Put the protective caps back on.

### 13.4 Replacing the shut-off seal

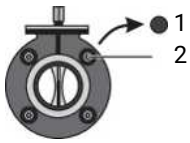
Tools required:

- Hexagon wrench WAF 5

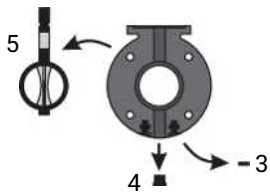
- Open-end wrench WAF 8
- Bearing grease (Molycote DC 111)

### Removing the shut-off seal

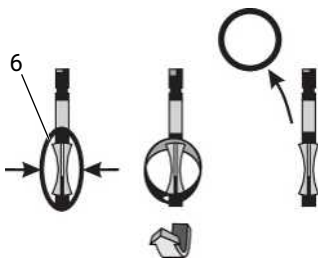
- ✓ The actuator is removed.



1. Remove the protective caps 1.
2. Undo the hexagon socket screws 2.
3. Keep the hexagon nuts in a safe place.
4. Press the two valve halves apart.

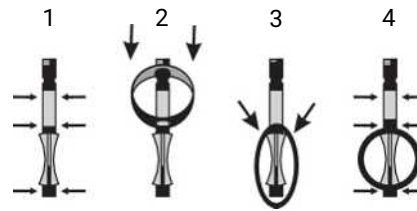


5. Keep the two square nuts 3 and protective cap 4 in a safe place.
6. Remove the disc 5 with shut-off seal.



7. Squeeze the shut-off seal 6 and pull it down over the short part of the shaft towards the front.
8. Pull off the shut-off seal upwards over the long part of the shaft.

### Mounting the shut-off seal



1. Lubricate the shaft of the butterfly disc above and below the disc (1).
2. Lubricate the shut-off seal in the axis/shaft area.
3. Push on the new shut-off seal with a hole over the long part of the shaft (2).
4. Squeeze the shut-off seal and slip it over the short part of the shaft (3).
5. Click the shut-off seal into position.
6. Lubricate the disc shaft above and below the shut-off seal (4).
7. Press the two valve halves apart.
8. Position the disc with shut-off seal between the two valve halves.
9. Push the two valve halves together.
10. Mount two square nuts and the protective cap.
11. Insert the hexagon socket screws and tighten with hexagon nuts diagonally until they are hand tight.
12. Press the protective caps into the valve body.

## 14 Spare parts

### 14.1 Ordering spare parts

#### NOTICE

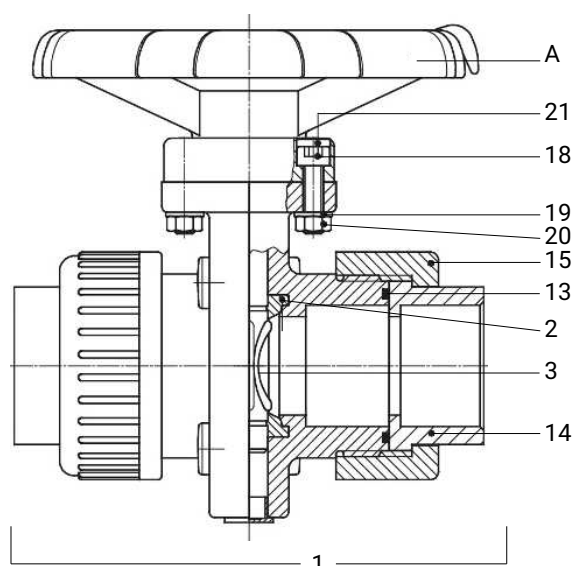
##### Use of incorrect spare parts!

- ▶ Damage to the GEMÜ product
- ▶ The manufacturer liability and guarantee will be void.
- Use only genuine parts from GEMÜ.

When ordering spare parts, please provide the following information:

1. Complete order code
2. Item number
3. Traceability number
4. Name of spare part
5. Area of use (medium, temperatures and pressures)

### 14.2 Spare parts overview



| Item | Name                           | Order designation |
|------|--------------------------------|-------------------|
| 1    | Butterfly valve body, complete | K410              |
| 2    | Shut-off seal                  | 410 SLN           |
| 3    | Butterfly disc, PP             | 410 SDS           |
| 13   | O-ring                         | 410 SOR           |
| 14   | Insert                         | 410 SCK           |
| 15   | Union nut                      | 410 SCK           |
| 18   | Bolt                           | 410 SVK           |
| 19   | Washer                         | 410 SVK           |
| 20   | Nut                            | 410 SVK           |
| 21   | Protective cap                 | 410 SVK           |
| A    | Actuator                       | 9411              |

## 15 Disposal

1. Pay attention to adhered residual material and gas diffusion from penetrated media.
2. Dispose of all parts in accordance with the disposal regulations/environmental protection laws.

## 16 Returns

Legal regulations for the protection of the environment and personnel require that the completed and signed return delivery note is included with the dispatch documents. Returned goods can be processed only when this note is completed. If no return delivery note is included with the product, GEMÜ cannot process credits or repair work but will dispose of the goods at the operator's expense.

1. Clean the product.
2. Request a return delivery note from GEMÜ.
3. Complete the return delivery note.
4. Send the product with a completed return delivery note to GEMÜ.

## 17 EU Declaration of Conformity



Version 1.0



### EU-Konformitätserklärung EU Declaration of Conformity

Wir, die Firma

We, the company

GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG  
Gert-Müller-Platz 1  
74635 Kupferzell  
Deutschland

erklären hiermit in alleiniger Verantwortung, dass die nachfolgend bezeichneten Produkte den Vorschriften der genannten Richtlinien entspricht.

hereby declare under our sole responsibility that the below-mentioned products complies with the regulations of the mentioned Directives.

**Produkt:** GEMÜ 417

**Product:** GEMÜ 417

**Produktname:** Manuell betätigte Absperrklappe

**Product name:** Manually operated butterfly valve

**Richtlinien/Verordnungen:**

**Directives/Regulations:**

PED 2014/68/EU<sup>1)</sup>

**Folgende harmonisierte Normen (oder Teile hieraus) wurden angewandt:**

**The following harmonized standards (or parts thereof) have been applied:**

EN ISO 16136:2006/A1:2019

<sup>1)</sup> PED 2014/68/EU

**Einteilung gemäß Druckgeräterichtlinie 2014/68/EU, Artikel 4 und Anhang II:**  
Fluidklasse 1 (gasförmig oder flüssig),  
Diagramm 6, Kategorie I  
Instabile Gase sind ausgeschlossen.

**Notifizierte Stelle:**

TÜV Rheinland Industrie Service GmbH  
Am Grauen Stein 1  
51105 Köln

**Kennnummer der notifizierten Stelle:** 0035

**Nr. des QS-Zertifikats:** 01 202 926/Q-02 0036

**Angewandte(s) Konformitätsbewertungsverfahren:** Modul H

**Hinweis für Produkte mit einer Nennweite ≤ DN 25:**

Die Produkte werden entwickelt und produziert nach GEMÜ eigenen Verfahrensangeweisungen und Qualitätsstandards, welche die Forderungen der ISO 9001 und der ISO 14001 erfüllen. Die Produkte dürfen gemäß Artikel 4, Absatz 3 der Druckgeräterichtlinie 2014/68/EU keine CE-Kennzeichnung tragen.

<sup>1)</sup> PED 2014/68/EU

**Classification in accordance with the Pressure Equipment Directive 2014/68/EU, Article 4 and Annex II:**  
Fluid class 1 (gaseous or liquid),  
Diagram 6, Category I  
Unstable gases are excluded.

**Notified body:**

TÜV Rheinland Industrie Service GmbH  
Am Grauen Stein 1  
51105 Cologne

**Identification number of the notified body:** 0035

**QA certificate number:** 01 202 926/Q-02 0036

**Applied conformity assessment procedures:** Module H

**Note for products with a nominal size ≤ DN 25:**

The products are developed and manufactured in accordance with GEMÜ's own process instructions and quality standards, which meet the requirements of ISO 9001 and ISO 14001. In accordance with Article 4, Paragraph 3 of the Pressure Equipment Directive 2014/68/EU, the products are not permitted to bear the CE mark.

i.V. M. Barghoorn  
Leiter Globale Technik  
Kupferzell, 19.03.2026

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Subject to alteration

03.2026 | 88928559