

## GEMÜ 507

Manually operated angle seat globe valve

EN

### Assembly instructions

Replacement of the gland packing



further information  
webcode: GW-507



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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 organised according to the following scheme:

SIGNAL WORD	
Possible symbol for the specific danger	<b>Type and source of the danger</b> <ul style="list-style-type: none"> <li>▶ Possible consequences of non-observance.</li> <li>● Measures for avoiding danger.</li> </ul>

Warning notes are always marked 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> <ul style="list-style-type: none"> <li>▶ Non-observance can cause death or severe injury.</li> </ul>
 <b>WARNING</b>	
	<b>Potentially dangerous situation!</b> <ul style="list-style-type: none"> <li>▶ Non-observance can cause death or severe injury.</li> </ul>

 <b>CAUTION</b>	
	<b>Potentially dangerous situation!</b> <ul style="list-style-type: none"> <li>▶ Non-observance can cause moderate to light injury.</li> </ul>

<b>NOTICE</b>	
	<b>Potentially dangerous situation!</b> <ul style="list-style-type: none"> <li>▶ Non-observance can cause damage to property.</li> </ul>

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

Symbol	Meaning
	The equipment is subject to pressure.
	Corrosive chemicals!
	Hot plant components!

## 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 substances.

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:

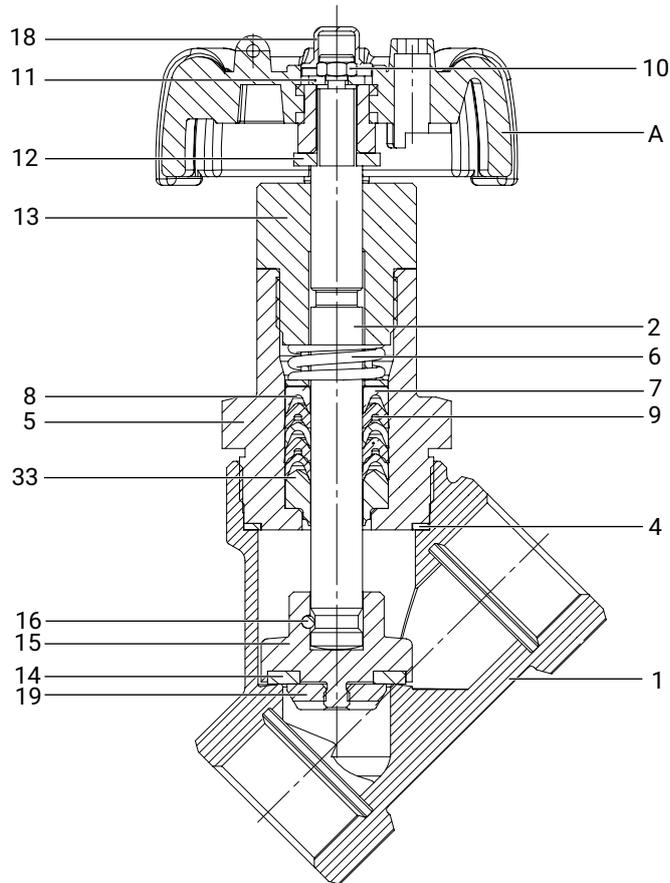
1. Transport and store the product correctly.
2. Do not paint the bolts and plastic parts of the product.
3. Carry out installation and commissioning using trained personnel.
4. Provide adequate training for installation and operating personnel.
5. Ensure that the contents of the document have been fully 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 Construction**

Item		Name
1		Valve body
2		Spindle
4		Gasket
5		Distance piece
10		Hexagon nut
11		Washer
12		Washer
13		Union nut
14		Seat seal
15		Valve plug
16		Cylindrical pin
18		Protective cap
19		Retaining washer
A		Actuator
5	Gland packing	Guide bush
6		Compression spring
7		Support ring
8		Chevron packing
9		Pressure ring
33		Chevron packing

## 4 Installing/removing the gland packing

### ⚠ DANGER



#### The equipment is subject to pressure.

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

### ⚠ WARNING



#### Corrosive chemicals!

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

### ⚠ CAUTION



#### Hot plant components!

- ▶ Risk of burns
- Only work on plant that has cooled down.

### ⚠ CAUTION

#### Use as step!

- ▶ Damage to the product
- ▶ Risk of slipping-off
- Choose the installation location so that the product cannot be used as a foothold.
- Do not use the product as a step or a foothold.

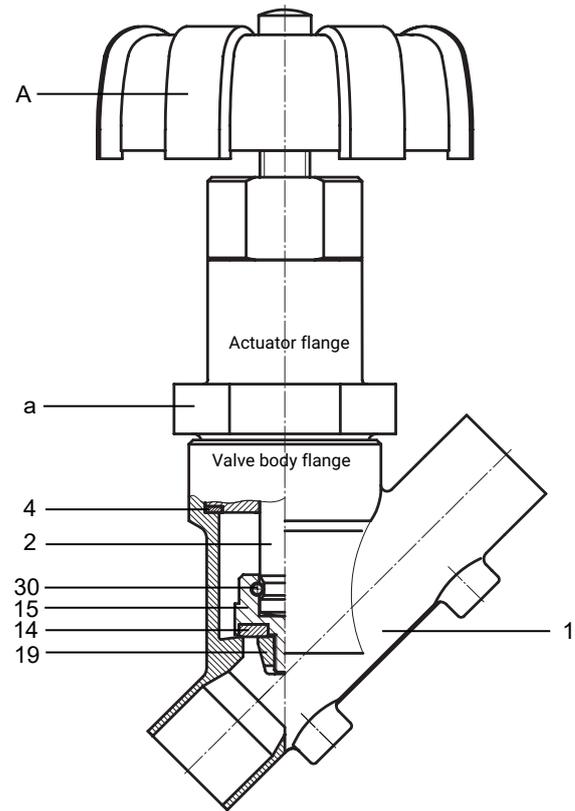
### ⚠ CAUTION

#### Exceeding the maximum permissible pressure!

- ▶ Damage to the product
- Provide precautionary measures against exceeding the maximum permitted pressures caused by pressure surges (water hammer).

### NOTICE

- ▶ Please refer to GEMÜ 507 installation, operating and maintenance instructions – chapter 11.1 "Installing the valve" and chapter 20 "Sectional drawings and spare parts".



Item	Name
1	Valve body
2	Spindle
4	Gasket
14	Seat seal
15	Valve plug
19	Retaining washer
30	Gasket
A	Actuator
a	Union nut

### 4.1 Disassembly of actuator and gasket 30

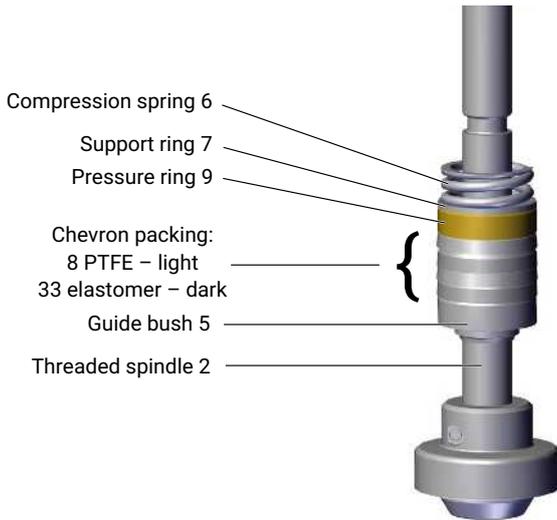
### NOTICE

#### Important:

- ▶ Clean all parts of contamination (do not damage the parts during cleaning) following removal. Check parts for potential damage; replace if necessary (only use genuine parts from GEMÜ).

1. Move actuator **A** to the open position.
2. Undo actuator **A** from valve body **1** using a wrench.
3. Lift the actuator **A** with actuator flange off valve body flange.
4. Move the actuator **A** to the closed position.
5. Remove gasket **30** from the valve body flange.

**4.2 Replacing the gland packing**



1. Undo actuator **A** from valve body **1** using a wrench.
2. Remove the valve plug **15** from the spindle **2** by knocking out the mounting pin. The plug must be fixed in place to prevent the cone from rotating away.
3. Unscrew the actuator cover from the actuator **A** using a wrench.
4. Remove the seals from the gland packing and reinsert them in the same order from below (from the plug side).
5. Re-attach the valve plug **15** by knocking down the mounting pin. The plug must be fixed in place to prevent the cone from rotating away.
6. Screw the actuator top on to actuator **A** as far as it will go.
7. Screw actuator **A** onto the valve body **1** to the tightening torques stated in the table.

Nominal size	Actuator size	Torques [Nm]
DN 8	1	90
DN 10	1	90
DN 15	1	90
DN 20	1	100
DN 25	1	120
DN 32	1	120
DN 40	1	150
DN 50	1	200
DN 65	2	260
DN 80	2	280

**4.3 Replacing seat seal**

**NOTICE**

**Important:**

- ▶ After disassembly, clean all parts of contamination (do not damage the parts during cleaning). Check parts for potential damage, replace if necessary (only use genuine parts from GEMÜ).

1. Remove the actuator **A** as described in chapter 4.1, points 1–5.
2. Loosen the retaining washer **19** on the spindle **2** (hold the spindle **2** in place using an appropriate tool that will not damage the spindle surfaces).
3. Remove the seat seal **14**.
4. Clean all parts; do not scratch or damage the parts during cleaning.
5. Insert new seat seal **14**.
6. Apply appropriate thread locking compound to the thread of the valve plug **15**.
7. Position retaining washer **19** (hold spindle **2** in place using an appropriate tool that will not damage the spindle surfaces) and tighten it.
8. Assemble the actuator **A** as described in chapter 4.4, points 1–5.

**4.4 Assembly of actuator and gasket 30**

**NOTICE**

- ▶ Replace the gasket **30** each time the actuator is disassembled/assembled.

1. Move actuator **A** to the open position.
2. Insert new gasket **30** in valve body flange.
3. Place the actuator **A** with actuator flange on valve body flange.
4. Screw in the mounting parts hand-tight and tighten screws with a suitable wrench.
5. Move actuator **A** to the closed position. With the valve fully assembled, check that it is working correctly and that it is leak-tight.

#### 4.5 Replacing gasket 4

##### NOTICE

- ▶ Replace the gasket 4 each time the actuator is disassembled/assembled.

1. Move actuator **A** to the open position.
2. Undo the union nut **a**.
3. Lift actuator **A** off the actuator flange.
4. Remove gasket **4** from the actuator flange.
5. Clean all parts; do not scratch or damage the parts during cleaning.
6. Check all parts for potential damage. Replace damaged parts (only use genuine parts from GEMÜ).
7. Insert new gasket **4** in actuator flange.
8. Place actuator **A** on the actuator flange so that the control medium connectors are approx. 90° before the end position. Tighten the union nut **a**. This causes the actuator to turn by approx. 90° until it reaches the desired position.
9. Move actuator **A** to the closed position. With the valve fully assembled, check that it is working correctly and that it is leak-tight.

#### 5 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.



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Subject to alteration

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