GEMÜ 352, 354

Pneumatically operated multi-port globe valve

EN

Assembly instructions

Replacing the wearing parts

GEMÜ 352

GEMÜ 354

Ex EAC

further information
webcode: GW-352, 354

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Contents

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.

Control function

The possible actuation functions of the GEMÜ product.

Control medium

The medium whose increasing or decreasing pressure causes the GEMÜ product to be actuated and operated.

1.4 Warning notes

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

SIGNAL WORD	
Possible symbol for the specific danger	Type and source of the danger ▶Possible consequences of non-observance. ●Measures for avoiding danger.

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:

⚠ DANGER

Imminent danger!

▶ Non-observance can cause death or severe injury.

⚠ WARNING

Potentially dangerous situation!

▶ Non-observance can cause death or severe injury.

⚠ CAUTION

Potentially dangerous situation!

▶ Non-observance can cause moderate to light injury.

NOTICE

Potentially dangerous situation!

▶ Non-observance can cause damage to property.

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

Symbol	Meaning
	The equipment is subject to pressure!

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 basic safety information that must be observed. 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, compliance with which the operator is responsible for (including compliance by any additional installation personnel).

This documentation is a supplement to the associated installation, operating and maintenance instructions, and contains additional information and safety information for the installation of the product.

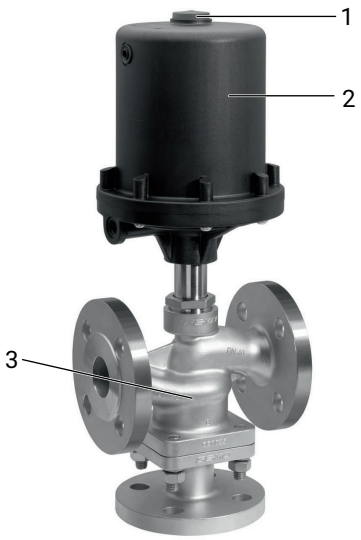
See the associated installation, operating and maintenance instructions for the product description and the description of the most important components and displays.

Before installation:

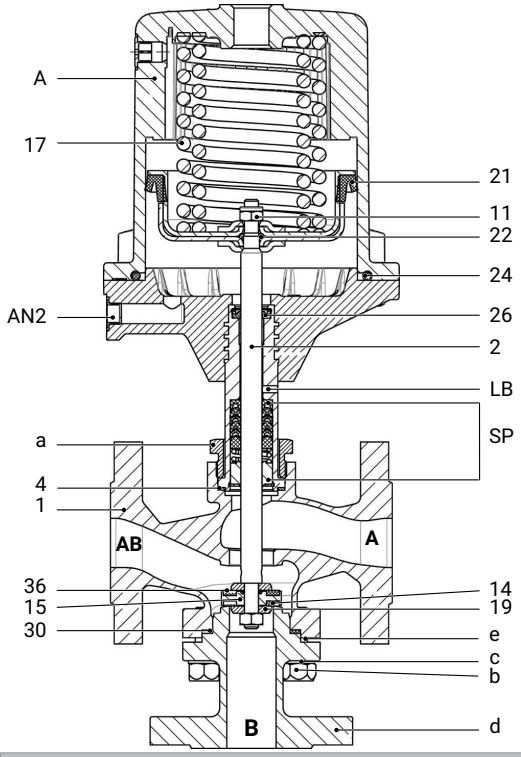
- Read the complete installation, operating and maintenance instructions for the GEMÜ 352/354 before you work with the product.

3 Construction

3.1 GEMÜ 352 construction



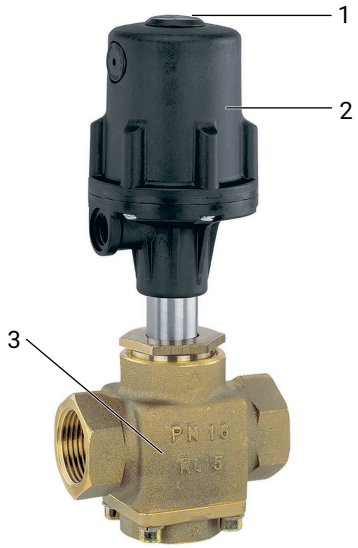
Item	Name	Materials
1	Optical position indicator	
2	Piston actuator	Plastic
3	Valve body	1.4408, investment casting
	Seat seal	PTFE, PTFE, glass fibre reinforced



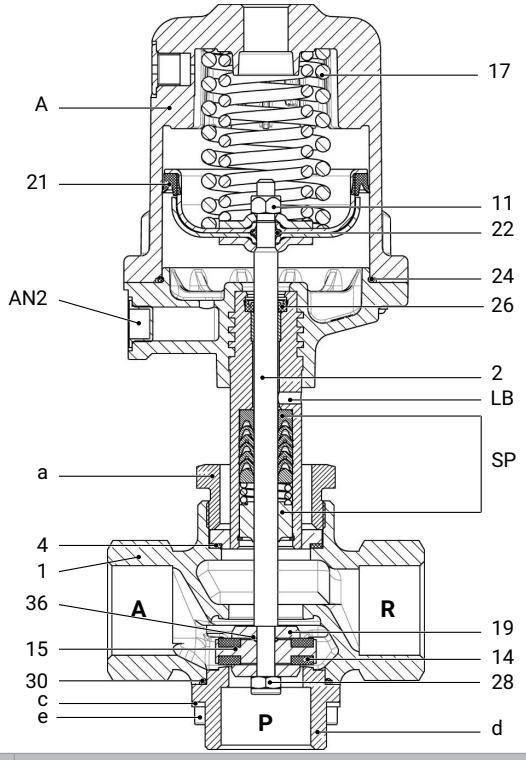
Item	Name
1	Valve body
2	Spindle
4	Gasket

Item	Name
11	Hexagon nut
14	Seat seal
15	Valve plug
17	Compression spring(s)
19	Retaining washer
21	Lip ring
22	O-ring
24	O-ring
26	Lip ring
30	Gasket
36	O-ring
A	Actuator
a	Union nut
b	Hexagon nut
c	Washer
d	Seat flange
e	Stud bolt
AN2	Connector 2
LB	Leak detection hole
SP	Gland packing

3.2 GEMÜ 354 construction



Item	Name	Materials
1	Optical position indicator	
2	Piston actuator	Plastic
3	Valve body	(Rg 5) CC499K, cast bronze
	Seat seal	PTFE, PTFE, glass fibre reinforced



Item	Name
1	Valve body
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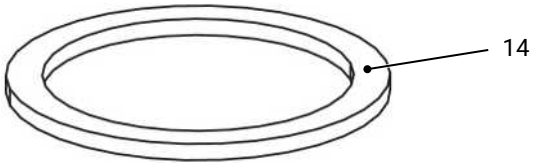
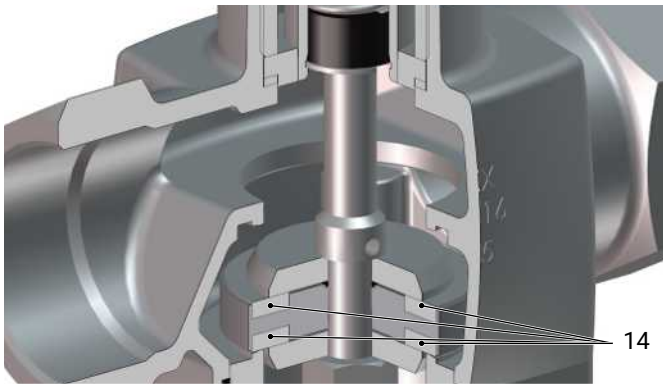
4	Gasket
11	Hexagon nut
14	Seat seal
15	Valve plug
17	Compression spring(s)
19	Retaining washer
21	Lip ring
22	O-ring
24	O-ring
26	Lip ring
28	Hexagon nut
30	O-ring
36	O-ring
A	Actuator
a	Union nut
c	Washer
d	Seat flange
e	Stud bolt
AN2	Connector 2
LB	Leak detection hole
SP	Gland packing

3.3 Seat seal construction

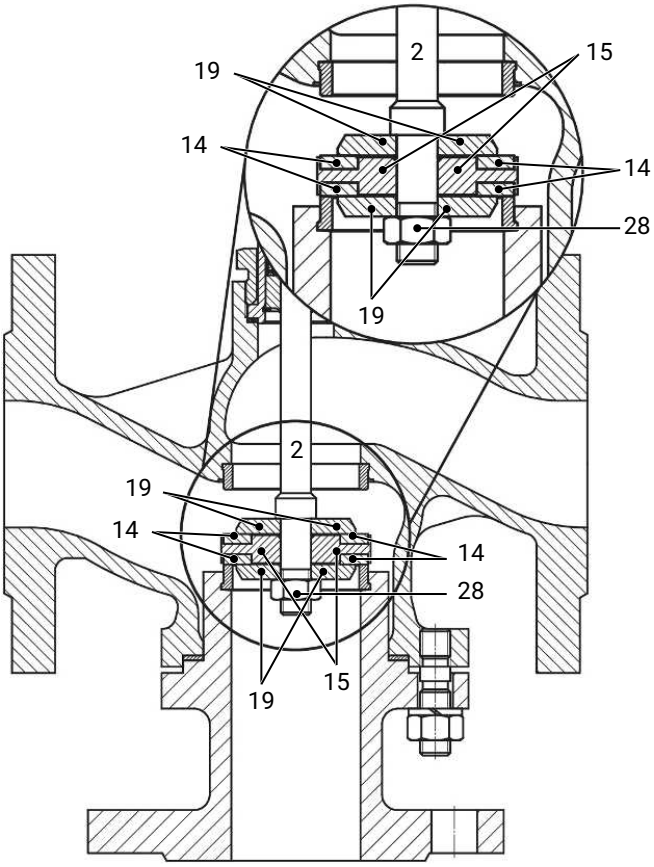


Seat seal position

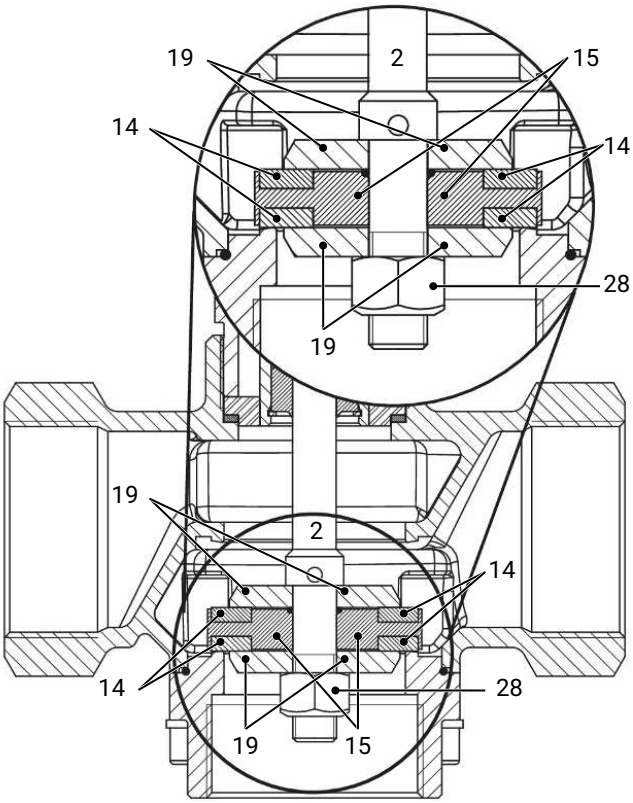


Item	Name
14	Seat seal

GEMÜ 352: Seat seal installed



GEMÜ 354: Seat seal installed



4 Preparing for installation

⚠ 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.

1. Ensure that the product is suitable for the respective application.
2. Check the technical data of the product and the materials.
3. Keep appropriate tools ready.
4. Wear appropriate protective gear in accordance with the plant operator's guidelines.
5. Observe appropriate regulations for connections.
6. Installation work must only be performed 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 allow it to cool down until the temperature is below the media vaporization temperature and cannot cause scalding.
11. If necessary, correctly decontaminate, rinse and ventilate the plant or plant component.

5 Installation

5.1 Information

- See the GEMÜ 352 construction (see Chapter 3.1, page 5) and GEMÜ 354 construction (see Chapter 3.2, page 6) chapters.

5.2 Removing the actuator

NOTICE

► 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).

NOTICE

Gasket!

- Replace the gasket **4** and gasket/O-ring **30** each time the actuator is disassembled/assembled.

GEMÜ 352: Removing the actuator

1. Move actuator **A** to the open position.
   ⇨ Connection AB-B open.
2. Undo and remove screws **e**, hexagon nuts **b** and washers **c** on seat flange **d**.
3. Pull seat flange **d** downwards.
4. Remove gasket **30**.
5. Move actuator **A** to the closed position.
   ⇨ Connection AB-A open.
6. Undo and remove hexagon nut **28** on valve plug **15** with retaining washer **19**.
7. Move actuator **A** to the open position.
   ⇨ Connection AB-A open.
   ⇨ Valve plug **15** becomes loose.
8. Move actuator **A** to the closed position.
   ⇨ Connection AB-A open.
9. Remove all of the loosened parts.
10. Undo union nut **a**.
11. Remove actuator **A** from valve body **1**.
12. Remove gasket **4**.
13. Disconnect the control medium supply/remove the control medium hoses.

GEMÜ 354: Removing the actuator

14. Move actuator **A** to the open position.
    ⇨ Connection A-P open.
15. Undo and remove cylindrical screws **b** and washers **c** on seat flange **d**.
16. Pull seat flange **d** downwards.
17. Remove O-ring **30**.
18. Move actuator **A** to the closed position.
    ⇨ Connection A-R open.
19. Undo and remove hexagon nut **28** on valve plug **15** with retaining washer **19**.
20. Move actuator **A** to the open position.
    ⇨ Connection A-P open.
    ⇨ Valve plug **15** becomes loose.
21. Move actuator **A** to the closed position.
    ⇨ Connection A-R open.
22. Remove all of the loosened parts.
23. Undo union nut **a**.
24. Remove actuator **A** from valve body **1**.
25. Remove gasket **4**.
26. Disconnect the control medium supply/remove the control medium hoses.

5.3 Removing the seat seal

1. Remove actuator **A** (Removing the actuator).
2. Undo retaining washer **19** on spindle **2** (hold spindle **2** in place using an appropriate tool that will not damage the spindle surface).
3. Remove seat seal **14**.
4. Clean all parts; do not scratch or damage the parts during cleaning.

5.4 Installing a new seat seal

NOTICE

Steel seat seal!

► The steel seat seal may only be replaced by GEMÜ.
● Send the **complete** valve to GEMÜ together with a completed return delivery note.

1. Insert new seat seals **14** into valve plug **15** from above and below.
2. Apply appropriate thread locking compound to the thread of valve plug **15**.
3. Push upper retaining washer **19** over spindle **2**.
4. Place O-ring **36** on valve plug **15**.
5. Push valve plug **15** with inserted seat seals **14** over spindle **2**.
6. Push lower retaining washer **19** over spindle **2** and upwards as far as valve plug **15**, and bolt it with hexagon nut **28**.
7. Mount actuator **A** (Mounting the actuator).

5.5 Mounting the actuator

NOTICE

Gasket!

● Replace the gasket **4** and gasket/O-ring **30** each time the actuator is disassembled/assembled.

1. Move actuator **A** to the open position.
   ⇨ **GEMÜ 352:** Connection AB-B open.
   ⇨ **GEMÜ 354:** Connection A-P open.
2. Insert new gasket **4** into valve body **1**.
3. Place actuator **A** on valve body **1** approx. 90° anticlockwise to the end position of the control medium connectors and screw it on hand tight using union nut **a**.
   ⇨ The actuator can be rotated through 360°.
   ⇨ The position of the control medium connectors is optional.
4. Tighten union nut **a** with an open-end wrench (for torques, see table). This causes the actuator to turn approx. 90° clockwise until it reaches the desired position.

Nominal size	Torques [Nm]
DN 15	100
DN 20	100
DN 25	100
DN 32	100
DN 40	100
DN 50	100
DN 65	120
DN 80	120
DN 100	120

5. Move actuator **A** to the closed position.
   ⇨ **GEMÜ 352:** Connection AB-A open.
   ⇨ **GEMÜ 354:** Connection A-R open.
6. Insert gasket/O-ring **30** into seat flange **d**.
7. Connect valve body **1** and the seat flange using screws, washers and nuts.
8. With the valve fully assembled, check that it is working correctly and that it is leak-tight.

6 SVS wearing parts kit

Item	Name	Order designation
4	Gasket	352...SVS...
14	Seat seal	354...SVS...
28	Hexagon nut	
30	Gasket	
36	O-ring	

7 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.

8 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.

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Subject to alteration

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