

Type 3273 Side-mounted Handwheel

30 mm rated travel

SAMSON



Translation of original instructions

Mounting and Operating Instructions

EB 8312-2 EN

Edition April 2017

Note on these mounting and operating instructions

These mounting and operating instructions assist you in mounting and operating the device safely. The instructions are binding for handling SAMSON devices.

- For the safe and proper use of these instructions, read them carefully and keep them for later reference.
- If you have any questions about these instructions, contact SAMSON's After-sales Service Department (aftersaleservice@samson.de).



The mounting and operating instructions for the devices are included in the scope of delivery. The latest documentation is available on our website (www.samson.de) > Product documentation. You can enter the document number or type number in the [Find:] field to look for a document.

Definition of signal words

DANGER

Hazardous situations which, if not avoided, will result in death or serious injury

WARNING

Hazardous situations which, if not avoided, could result in death or serious injury

NOTICE

Property damage message or malfunction

Note

Additional information

Tip

Recommended action

| | | |
|----------|---|-----------|
| 1 | Safety instructions and measures | 5 |
| 1.1 | Notes on possible severe personal injury | 7 |
| 1.2 | Notes on possible personal injury | 8 |
| 1.3 | Notes on possible property damage | 8 |
| 2 | Markings on the device | 8 |
| 2.1 | Nameplate of the side-mounted handwheel | 8 |
| 2.2 | Valve nameplate | 9 |
| 2.3 | Actuator nameplate | 9 |
| 3 | Design and principle of operation | 10 |
| 3.1 | Versions | 11 |
| 3.2 | Technical data | 12 |
| 4 | Measures for preparation | 15 |
| 4.1 | Unpacking | 15 |
| 4.2 | Transporting and lifting | 15 |
| 4.2.1 | Transporting | 15 |
| 4.2.2 | Lifting | 16 |
| 4.3 | Storage | 16 |
| 4.4 | Preparation for installation | 17 |
| 5 | Mounting and start-up | 18 |
| 5.1 | Mounting the handwheel onto the valve | 19 |
| 5.2 | Mounting the actuator onto the handwheel | 19 |
| 5.3 | Quick check | 21 |
| 6 | Operation | 22 |
| 6.1 | Working in automatic operation | 22 |
| 6.2 | Working in manual operation | 23 |
| 7 | Servicing | 25 |
| 7.1 | Preparation for return shipment | 25 |
| 7.2 | Ordering spare parts and operating supplies | 25 |
| 8 | Malfunctions | 26 |

| | | |
|-----------|--|-----------|
| 9 | Decommissioning and disassembly | 27 |
| 9.1 | Decommissioning | 27 |
| 9.2 | Removing the handwheel from the actuator and valve | 27 |
| 9.3 | Final steps | 28 |
| 9.4 | Disposal | 28 |
| 10 | Annex | 29 |
| 10.1 | After-sales service | 29 |
| 10.2 | Spare parts | 29 |

1 Safety instructions and measures

Intended use

The SAMSON Type 3273 Hand-operated Actuator is mounted on a valve and is intended for the following activities in combination with a pneumatic actuator, e.g. SAMSON Type 3271 or Type 3277 Actuator:

- To manually move the valve to the closed or open position for maintenance or repair work, e.g. to exchange the actuator.
- To manually move the valve upon air supply failure
- To keep the fail-safe action of the pneumatic actuator also during maintenance and repair work on the actuator
- Special version: to operate a mounted valve without pneumatic actuator

The side-mounted handwheel is not suitable to perform control tasks. The side-mounted handwheel is designed to operate under exactly defined conditions (e.g. thrust, travel, actuator area). Therefore, operators must ensure that the side-mounted handwheel is only used in applications that meet the specifications used for sizing at the ordering stage. In case operators intend to use the handwheel in other applications or conditions than specified, contact SAMSON.

SAMSON does not assume any liability for damage resulting from the failure to use the device for its intended purpose or for damage caused by external forces or any other external factors.

→ Refer to the technical data and nameplate for limits and fields of application as well as possible uses.

Reasonably foreseeable misuse

The handwheel is not suitable for the following applications:

- To limit the valve travel
- To control the flow rate through the mounted valve (on/off only)
- Use outside the limits defined during sizing and in the technical data

Furthermore, the following activities do not comply with the intended use:

- Use of non-original spare parts
- Performing service and repair work not described in these instructions

Qualifications of operating personnel

The handwheel must be mounted, started up, serviced, and repaired by fully trained and qualified personnel only; the accepted industry codes and practices are to be observed. According to these mounting and operating instructions, trained personnel refers to individuals who are able to judge the work they are assigned to and recognize possible hazards due to their specialized training, their knowledge and experience as well as their knowledge of the applicable standards.

Personal protective equipment

We recommend wearing the following protective equipment:

- Safety gloves due to the moving parts (actuator stem, threaded rod, plug stem, handwheel)

→ Check with the plant operator for details on further protective equipment.

Revisions and other modifications

Revisions, conversions or other modifications to the product are not authorized by SAMSON. They are performed at the user's own risk and may lead to safety hazards, for example. Furthermore, the product may no longer meet the requirements for its intended use.

Safety devices

The side-mounted handwheel is locked by a locking bolt, which locks the gear, to prevent accidental adjustment of the valve travel (see Fig. 7 and section 6.1).

Warning against residual hazards

To avoid personal injury or property damage, plant operators and operating personnel must prevent hazards that could be caused in the handwheel by the signal pressure or moving parts by taking appropriate precautions. They must observe all hazard statements, warning and caution notes in these mounting and operating instructions, especially for installation, start-up, and service work.

Responsibilities of the operator

The operator is responsible for proper operation and compliance with the safety regulations. Operators are obliged to provide these mounting and operating instructions as well as the referenced documents to the operating personnel and to instruct them in proper operation. Furthermore, the operator must ensure that operating personnel or third persons are not exposed to any danger.

Responsibilities of operating personnel

Operating personnel must read and understand these mounting and operating instructions as well as the referenced documents and observe the hazard statements, warning and caution notes specified in them. Furthermore, the operating personnel must be familiar with the applicable health, safety and accident prevention regulations and comply with them.

Referenced documentation

The following documents apply in addition to these mounting and operating instructions:

- Mounting and operating instructions for mounted actuator, e.g. for SAMSON Type 3271 and Type 3277 Actuators:
 - ▶ EB 8310-2 (1000 cm²) (Type 3271 only)
 - ▶ EB 8310-3 (1400-60 cm²) (Type 3271 only)
 - ▶ EB 8310-4 (355 cm²)
 - ▶ EB 8310-5 (175 and 750 cm²)
 - ▶ EB 8310-6 (240, 350, and 700 cm²)
- Mounting and operating instructions for the mounted valve
- ▶ AB 0100 for tools, lubricant, and tightening torques

1.1 Notes on possible severe personal injury

DANGER

The handwheel poses no hazard with possible severe personal injury.

- Observe hazard statements in the associated valve and actuator documentation.

1.2 Notes on possible personal injury

WARNING

Crush hazard arising from moving parts.

The handwheel contains moving parts (actuator stem, threaded rod, plug stem, handwheel), which can injure hands or fingers if inserted into it.

- Do not insert hands or fingers into the yoke while the valve is in operation.
- While working on the handwheel, disconnect and lock the pneumatic air supply as well as the control signal.
- Use the locking bolt to lock the handwheel.

1.3 Notes on possible property damage

NOTICE

Risk of handwheel damage due to the use of unsuitable tools.

- To turn the handwheel, do not use any additional tools, such as a lever or wrench.

Risk of handwheel damage due to the use of excessive force.

- Do not turn the handwheel in the end position any further by exerting force.

Risk of damage to control valve components due to excessively high or low tightening torques.

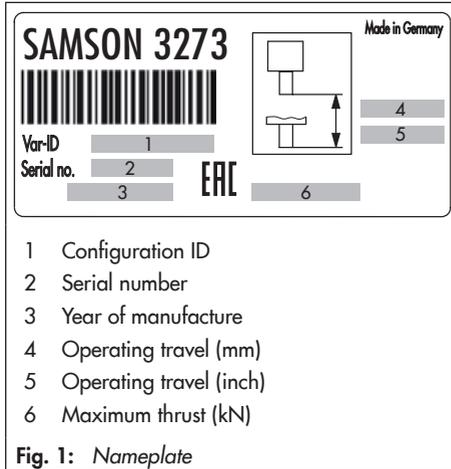
Observe the specified torques on tightening control valve components. Excessively tightened torques lead to parts wearing out quicker. Parts that are not tightened far enough may loosen.

- Observe the specified tightening torques (▶ AB 0100).

2 Markings on the device

2.1 Nameplate of the side-mounted handwheel

It includes all details required to identify the handwheel:



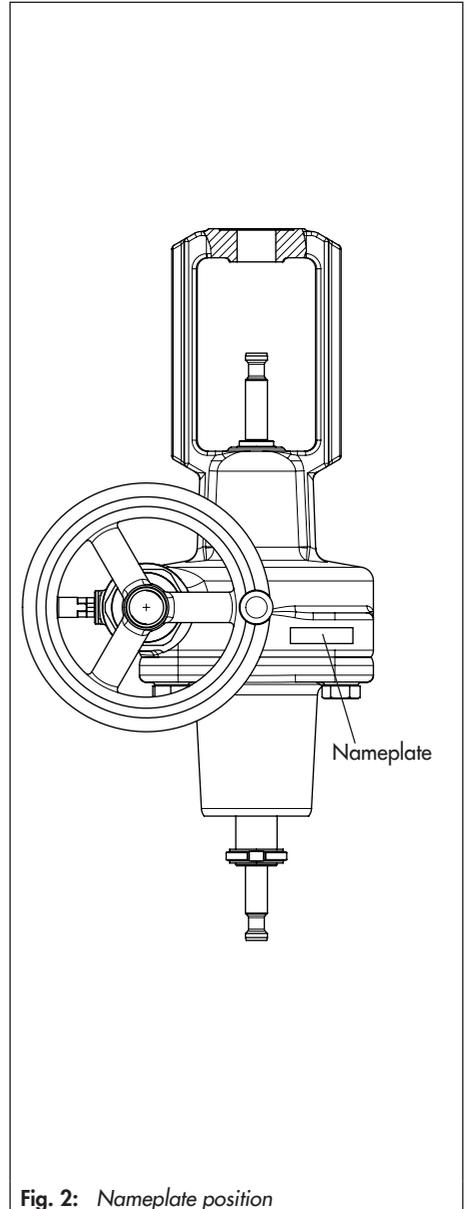
The nameplate is located on the top bonnet (see Fig. 2).

2.2 Valve nameplate

See associated valve documentation.

2.3 Actuator nameplate

See associated actuator documentation.



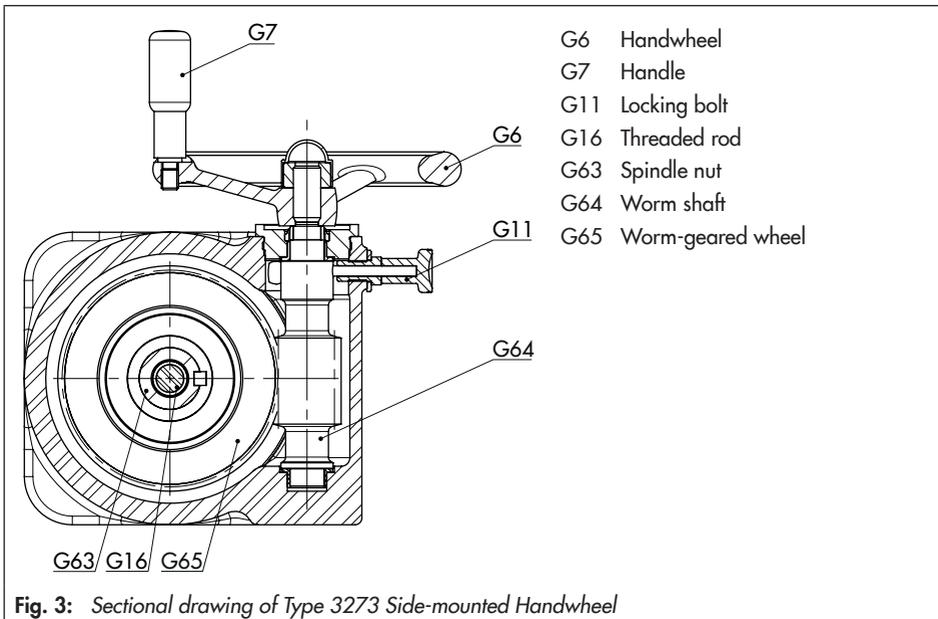
3 Design and principle of operation

The Type 3273 Side-mounted Handwheel with 30 mm travel is suitable for mounting on Series 240, 250, 280, and 290 Valves or on suitable interfaces together with the Type 3271 or Type 3277 Pneumatic Actuators with areas of 175 to 1400-60 cm². A special version of the side-mounted handwheel can also be used to move the valve on which a pneumatic actuator is not mounted.

The side-mounted handwheel is mounted between the valve and actuator. The handwheel can remain mounted on the valve during maintenance and repair work or while exchanging the pneumatic actuator. The hand-

wheel can be used in this case to move the valve manually to its closed or open position. The handwheel can be used to move the valve manually opposing the spring force of the pneumatic actuator upon air supply failure.

The worm shaft unit, consisting of the worm shaft and worm-gearred wheel, is driven over the handwheel. The spindle nut transfers the rotary motion to the threaded rod, which moves the valve. Depending on the direction of rotation and mounted valve, the threaded rod extends or retracts.



For mounted SAMSON globe valves

The handwheel is marked 'Open/Close' and has directional arrows.

- Turn the handwheel clockwise: the globe valve closes.
- Turn the handwheel counterclockwise: the globe valve opens.

For mounted SAMSON three-way valves

A label is affixed to the handwheel, which indicates in which direction the threaded rod is moved by turning the handwheel (see Fig. 4).

The gear is locked by the locking bolt to prevent accidental adjustment.

3.1 Versions

- **Version with 30 mm Ø connection** for Type 3271 and Type 3277 Actuators with 175 to 750 cm² actuator areas (see Table 1)
- **Version with 60 mm Ø connection** for Type 3271 Actuators with 1000 or 1400-60 cm² actuator area (see Table 1)
- **Special version** without pneumatic actuator · On request

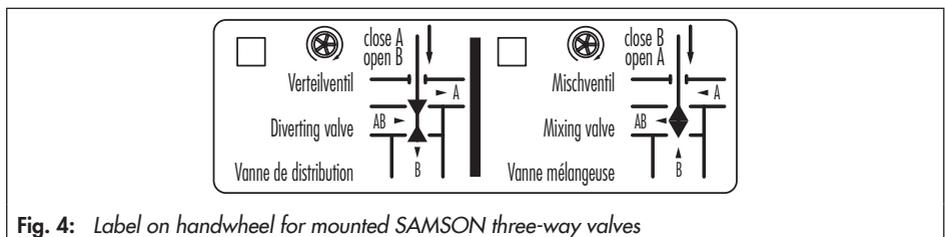


Fig. 4: Label on handwheel for mounted SAMSON three-way valves

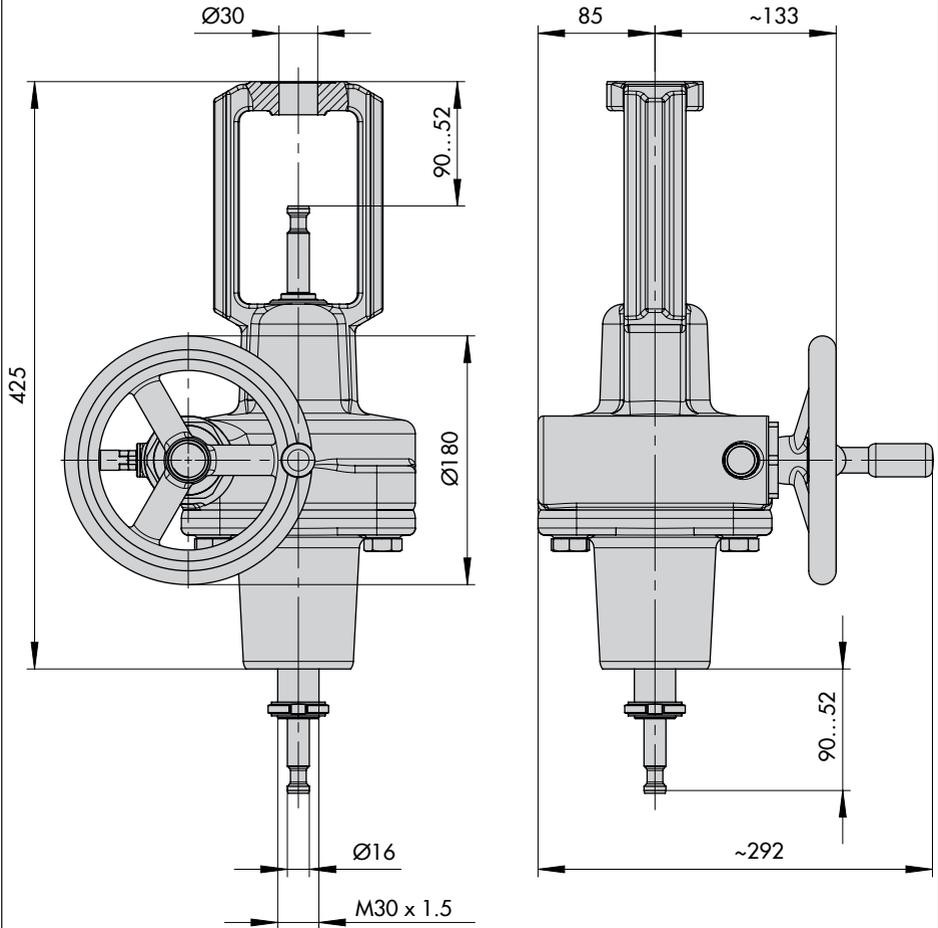
3.2 Technical data

Table 1: *Technical data for Type 3273 up to 30 mm rated travel*

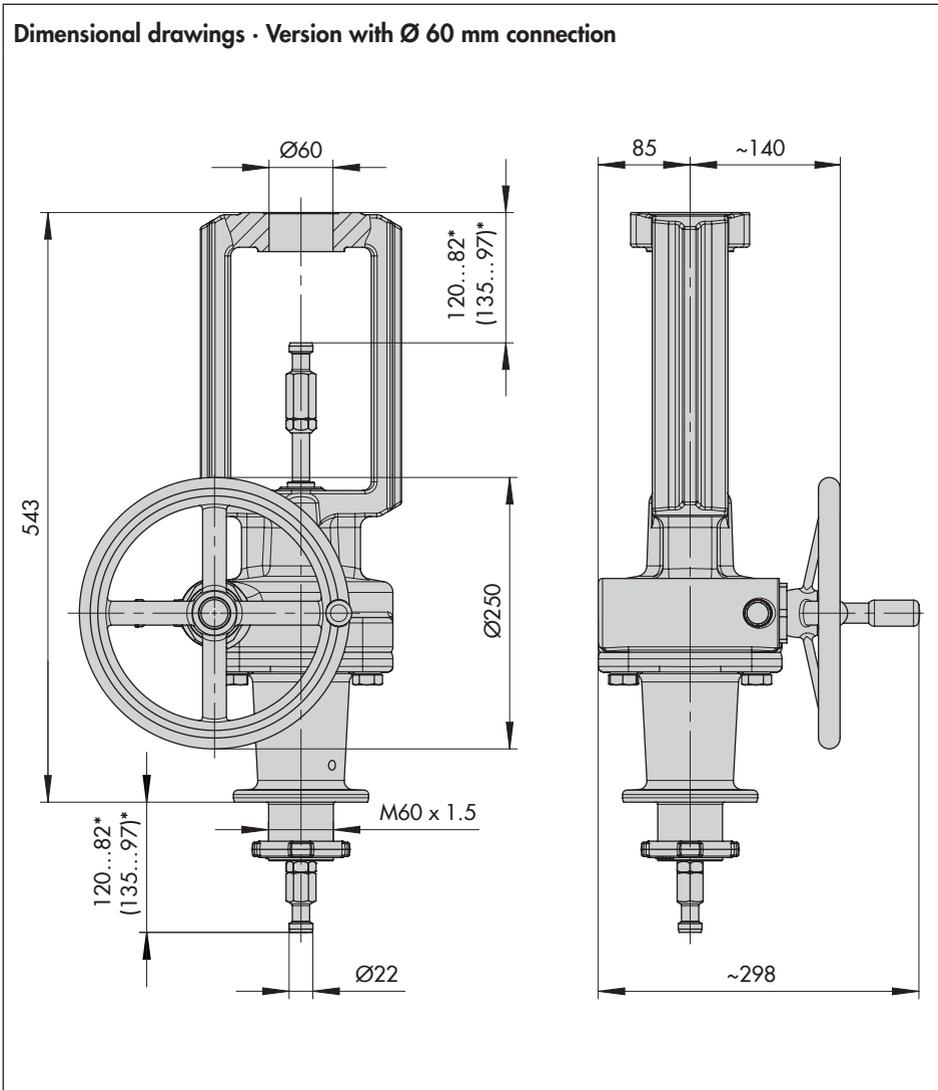
| Type 3273 | Version with connection | |
|--|---|--|
| | Ø 30 mm (see dimensional drawing on p. 13) | Ø 60 mm (see dimensional drawing on p. 14) |
| Rated travel | 30 mm ¹⁾ | 30 mm ¹⁾ |
| Max. travel range | 38 mm | 38 mm |
| Max. thrust | 35 kN | 50 kN |
| Operating forces | According to DIN EN 12570 | |
| Max. number of turns | With 30 mm travel: 147 With 15 mm travel: 73.5 | |
| Max. handwheel diameter | 180 mm | 250 mm |
| Mounting to actuators with actuator areas | 175, 240, 350, 355, 700, 750 cm ² | 1000, 1400-60 cm ² |
| Compliance etc. | CE | |
| Materials | | |
| Body material and permissible ambient temperature | 1.0619/A216 WCC: -29 to +120 °C 1.5638/A352 LC3: -60 to +90 °C | |
| Spindle | 1.4404/A479 316L | |
| Threaded nut | 1.4104/A582 430F | |
| Handwheel | Cast iron or aluminum | |
| Weight (gear only) | 26 kg | 37 kg |

¹⁾ Also for pneumatic actuators with 30 mm rated travel and up to 25 % (7.5 mm) spring compression

Dimensional drawings · Version with $\varnothing 30$ mm connection



Dimensional drawings · Version with $\varnothing 60$ mm connection



* For "Actuator stem retracts" direction of action: swap top and bottom stem connector nuts

4 Measures for preparation

After receiving the shipment, proceed as follows:

1. Check the scope of delivery. Compare the shipment received against the delivery note.
2. Check the shipment for transportation damage. Report any damage to SAMSON and the forwarding agent (refer to delivery note).

4.1 Unpacking

Proceed as follows to lift and install the handwheel:

1. Remove the packaging from the handwheel.
2. Dispose of the packaging in accordance with the valid regulations.

4.2 Transporting and lifting

⚠ DANGER

Hazard due to suspended loads falling. Stay clear of suspended or moving loads.

⚠ WARNING

Risk of lifting equipment tipping and risk of damage to lifting accessories due to exceeding the rated lifting capacity.

- Only use approved lifting equipment and accessories whose minimum lifting capacity is higher than the weight of the valve (including actuator, if applicable).

- Refer to section 3.2 or Data Sheet
▶ T 8312 for weights.

! NOTICE

Risk of handwheel damage due to incorrectly attached slings.

The handwheel is not designed to lift the entire handwheel unit.

- When lifting the handwheel unit, make sure that the slings attached to the yoke bear the entire load.
- Do not attach load-bearing slings to the handwheel.
- Observe lifting instructions (see section 4.2.2).

💡 Tip

SAMSON's After-sales Service department can provide more detailed transport and lifting instructions on request.

4.2.1 Transporting

The handwheel can be transported using lifting equipment (e.g. crane or forklift).

- ➔ Leave the handwheel in its transport container or on the pallet to transport it.
- ➔ Observe the transport instructions.

Transport instructions

- Protect the handwheel against external influences (e.g. impact).
- Do not damage the corrosion protection (paint, surface coatings). Repair any damage immediately.

- Protect the handwheel against moisture and dirt.
- Observe the permissible ambient temperatures (see section Table 1).

4.2.2 Lifting

To mount the handwheel, use lifting equipment (e.g. crane or forklift) to lift it.

Lifting instructions

- Secure slings against slipping.
- Make sure the slings can be removed after mounting the handwheel.
- Prevent the handwheel from tilting or tipping.
- Do not leave loads suspended when interrupting work for longer periods of time.

Lifting the handwheel

1. Attach the lifting tackle to the yoke.
2. Carefully lift the handwheel. Check whether the lifting equipment and accessories can bear the weight.
3. Move the handwheel at an even pace to the site of installation.
4. Mount the handwheel. See section 5.
5. Remove the lifting tackle.



Tip

We recommend using a hook with safety latch. The safety latch prevents the slings from slipping during lifting and transporting.

4.3 Storage

NOTICE

Risk of handwheel damage due to improper storage.

- Observe storage instructions.
- Avoid long storage times.
- Contact SAMSON in case of different storage conditions or long storage periods.

Storage instructions

- Protect the handwheel against external influences (e.g. impact).
- Do not damage the corrosion protection (paint, surface coatings). Repair any damage immediately.
- Protect the handwheel against moisture and dirt. Store it at a relative humidity of less than 75 %. In damp spaces, prevent condensation. If necessary, use a drying agent or heating.
- Make sure that the ambient air is free of acids or other corrosive media.
- Observe the permissible ambient temperatures (see Table 1).
- Do not place any objects on the handwheel.
- Pack the handwheel in airtight packaging.



Tip

SAMSON's After-sales Service department can provide more detailed storage instructions on request.

4.4 Preparation for installation

Proceed as follows:

- Remove the actuator first if the valve and actuator have already been assembled without handwheel. See associated actuator documentation.
- Check the handwheel for damage.
- Check whether the handwheel (model, travel, thrust, and handwheel diameter) fits the actuator and valve.

5 Mounting and start-up

i Note

- The actuator must be removed first before mounting the handwheel if the valve and actuator have already been assembled. See instructions on how to remove the actuator in the associated actuator documentation.
- In case, the valve, actuator, and handwheel are delivered separately, assemble components as described in following.
- See associated valve and actuator documentation for additional mounting instructions.

! NOTICE

Risk of damage to control valve components due to excessively high or low tightening torques.

Observe the specified torques on tightening control valve components. Excessively tightened torques lead to parts wearing out quicker. Parts that are not tightened far enough may loosen.

Observe the specified tightening torques (▶ AB 0100).

! NOTICE

Risk of damage to control valve components due to the use of unsuitable tools. Certain tools are required to work on the control valve.

Only use tools approved by SAMSON (▶ AB 0100).

! NOTICE

Risk of damage to control valve components due to the use of unsuitable lubricants.

The lubricants to be used depend on the material of the control valve. Unsuitable lubricants may corrode and damage the valve surface.

Only use lubricants approved by SAMSON (▶ AB 0100).

! NOTICE

Risk of malfunction due to different travels. Make sure that the travels of the actuator, handwheel, and valve match. If necessary, contact SAMSON's After-sales Service department.

! NOTICE

Risk of control valve damage due to the incorrect mounting.

Versions with anti-rotation fixture at the plug stem must only be mounted by SAMSON's After-sales Service department or after they have given their consent.

! NOTICE

Risk of malfunction due to incorrect mounting of the stem connector nut.

Two different stem connector nuts with varying lengths exist for mounting the handwheel on Type 3271 Actuators with 1000 or 1400-60 cm² actuator area.

– For "stem extends" direction of action, screw the long stem connector nut (G70)

from above and the short stem connector nut (G71) from below onto the threaded rod.

- For "stem retracts" direction of action, screw the short stem connector nut (G71) from above and the long stem connector nut (G70) from below onto the threaded rod.

5.1 Mounting the handwheel onto the valve

1. Place the handwheel on the yoke (G4) so that it faces the operating side. The inscription on the valve body (1) serves as a guide (as it also faces the operating side).
2. Apply a suitable lubricant to the thread of the fastening nut (G9).
3. Slide the fastening nut (G9) over the stem connector nut (G71) and screw it tight at the yoke (G4). Observe tightening torques.
4. Move the handwheel to the neutral position (see section 6.1).
5. Place the stem connector nut (G5) on the plug stem, screw it tight and use a suitable tool to lock it at the lock nut. Observe tightening torques.
6. Turn the handwheel to slowly extend the threaded rod downward until the ready-mounted stem connector nut (G71) on the threaded rod touches the stem connector nut (G5) on the valve.
7. Connect the threaded rod and plug stem using the stem connector clamps (G26/27). Tighten the hex screws (G29). Observe tightening torques.
8. Optionally, a protective bellows (G69) can be mounted around the plug stem on the valve side.

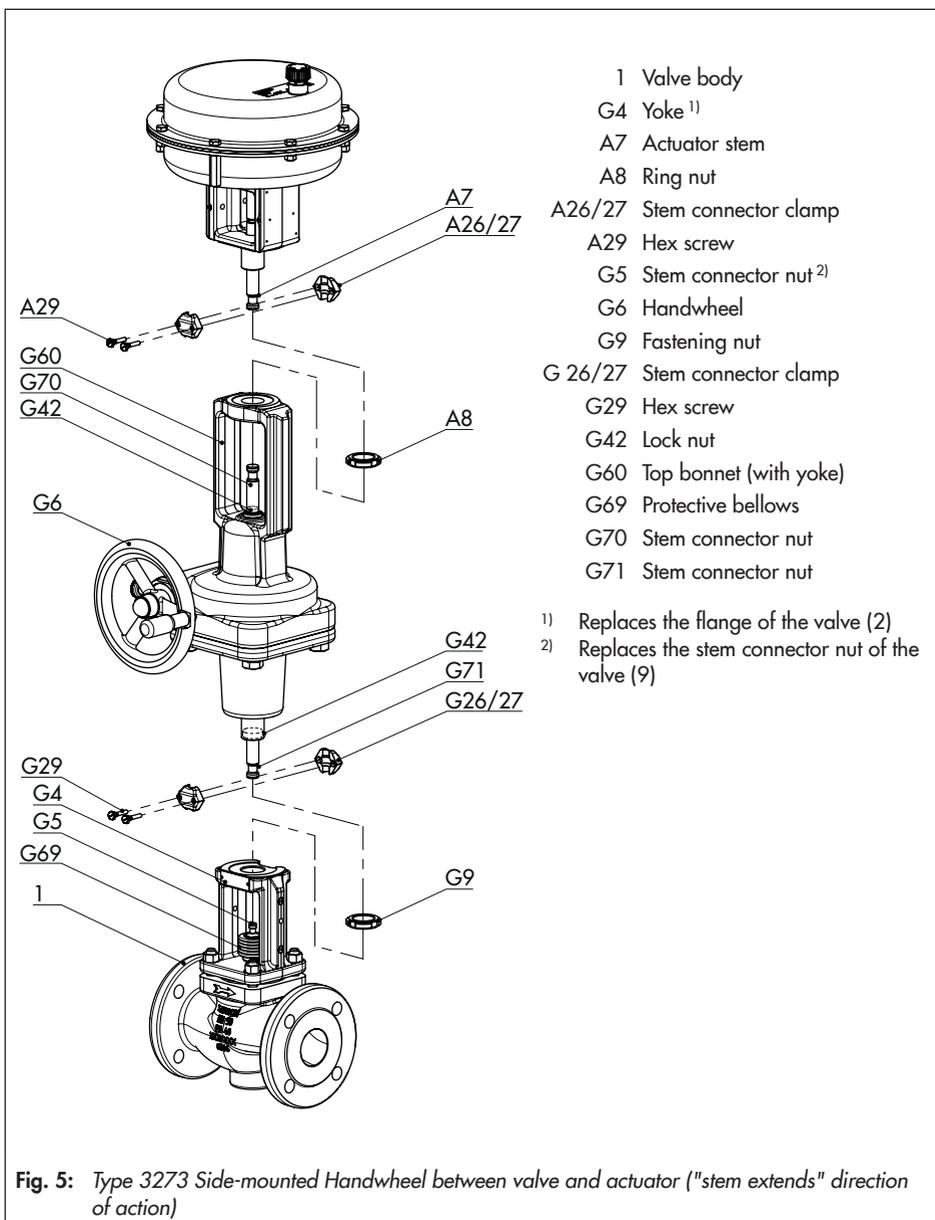
5.2 Mounting the actuator onto the handwheel



Tip

The handwheel and actuator are assembled with special attention paid to the actuator's bench range and direction of action. These details are specified on the actuator nameplate (see the associated actuator documentation).

1. Move the handwheel to the neutral position (see section 6.1).
2. Remove the clamps of the stem connector (A26/27) and the ring nut (A8) from the actuator.
3. Apply a suitable lubricant to the threaded nipple on the top bonnet (G60).
4. **In the "actuator stem extends" version:** apply a signal pressure to the connection on the bottom diaphragm chamber to completely retract the actuator stem (A7).
- In the "actuator stem retracts" version:** vent the actuator to retract the actuator stem (A7) completely.
5. Place the actuator on the top bonnet (G60) of the handwheel.
6. Apply a suitable lubricant to the ring nut (A8).



7. Slide the ring nut (A8) over the actuator stem (A7) and fasten it on the actuator. Observe tightening torques.
8. Adjust the rated travel of the actuator over the stem connector nut (G70). The rated travel corresponds to the distance from the bottom of the actuator stem to the tip of the stem connector nut.
9. Use a suitable tool to lock the stem connector nut (G70) at the lock nut (G42) on the actuator side.
10. **In the "actuator stem extends" version:** vent the actuator to extend the actuator stem (A7) completely. It must touch the stem connector nut (G70).
In the "actuator stem retracts" version: apply a signal pressure to the actuator to extend the actuator stem (A7) completely. It must touch the stem connector (G70).
11. Connect the threaded rod and actuator stem (A7) using the stem connector clamps (A26/27). Tighten the hex screws (A29). Observe tightening torques.

5.3 Quick check

SAMSON control valves are delivered ready for use. To test the valve's ability to function, e.g. after mounting the side-mounted handwheel, the following quick checks can be performed:

Travel motion

The movement of the actuator stem must be linear and smooth.

- ➔ Open and close the valve, observing the movement of the actuator stem.
- ➔ Apply the maximum and minimum control signals to check the end positions of the valve.

Handwheel

- ➔ Shut off the signal pressure line.
- ➔ Unlock the handwheel (see section 6.2).
- ➔ Turn the handwheel to open and close the valve.

Fail-safe position

- ➔ Shut off the signal pressure line.
- ➔ Check whether the valve moves to the fail-safe position.

6 Operation

Immediately after completing mounting and start-up (see section 5), the handwheel is ready for use.

⚠ WARNING

Crush hazard arising from moving parts (actuator stem, threaded rod, plug stem, hand-wheel).

Do not insert hands or fingers into the yoke while the valve is in operation.

⚠ NOTICE

Operation disturbed by a blocked actuator stem, threaded rod or plug stem.

Do not impede the movement of the actuator stem, threaded rod or plug stem by inserting objects into their path.

The valve position is adjusted by the hand-wheel in manual operation. It can be adjusted either when the supply air is still applied or has failed or when no pneumatic actuator is mounted onto the valve (special version).

6.1 Working in automatic operation

In automatic operation, the valve is adjusted by the supply air. The side-mounted hand-wheel is locked by the locking bolt to prevent accidental adjustment of the valve travel.

In automatic operation, the handwheel is in the neutral position. The groove at the top end of the threaded rod must be aligned with the top of the guide tube (see Fig. 6).

After the handwheel has been unlocked and turned, the threaded rod rises or disappears into the yoke. The travel is adjusted.

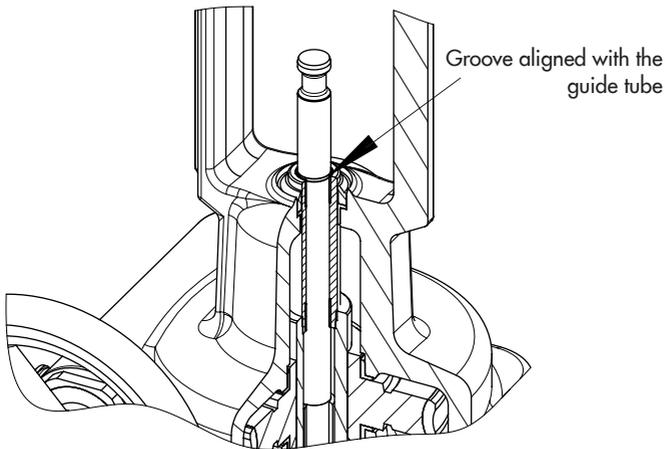


Fig. 6: Neutral position in automatic operation

6.2 Working in manual operation

⚠ NOTICE

Risk of handwheel damage due to the use of unsuitable tools.

To turn the handwheel, do not use any additional tools, such as a lever or wrench.

⚠ NOTICE

Risk of valve damage due to the use of excessive force.

Do not turn the handwheel any further by exerting force after the valve has reached its end position.

i Note

- The valve travel can only be reached after the neutral travel of the handwheel has been overcome. You will notice at this point that the force needed increases.
- The turning direction depends on the mounted valve (see Table 2).

With mounted pneumatic actuator

1. To change from automatic to manual operation, unlock the handwheel by pulling the locking bolt and turning it 90° (see Fig. 7).
2. Turn the handwheel until the valve reaches its end position.
3. To change from manual to automatic operation, put the handwheel into the neutral position (see section 6.1).

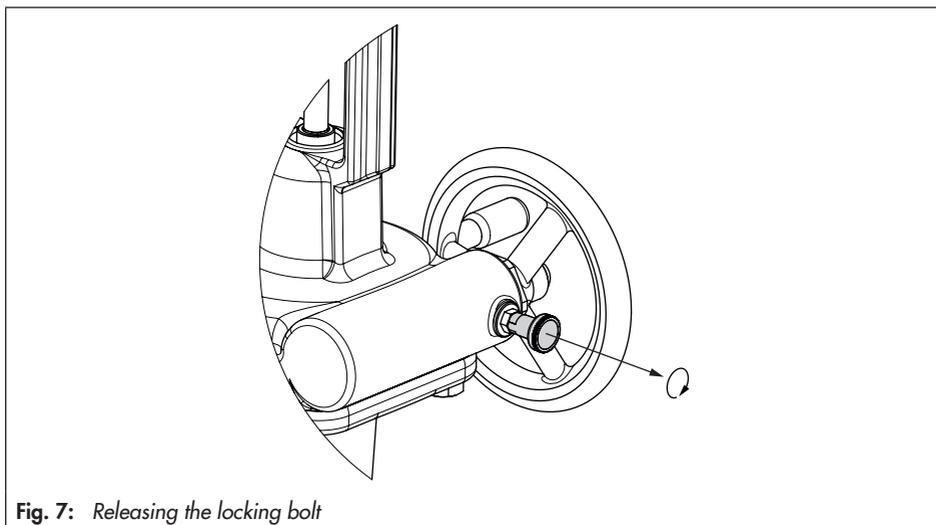


Fig. 7: Releasing the locking bolt

Operation

- Lock the handwheel by turning the locking bolt by at least 90° until it engages again (see Fig. 7).
- Turn the locking bolt by at least 90° until it engages again to lock the handwheel (see Fig. 7).

Special version without pneumatic actuator

i Note

There is no neutral travel in versions without pneumatic actuator. One turn of the handwheel always immediately causes the travel at the valve to change.

- Pull the locking bolt and turn it 90° to unlock the handwheel (see Fig. 7).
- Turn the handwheel. The turning direction depends on the mounted valve (see Table 2).

Table 2: Turning direction of the handwheel

| | Open the valve | Close the valve |
|-------------------------------|-------------------------------------|------------------------------|
| SAMSON globe valve | Turn the handwheel counterclockwise | Turn the handwheel clockwise |
| SAMSON three-way valve | | |

Tip

The handwheel is marked 'Open/Close' and has directional arrows in the version for SAMSON globe valves.

A label is affixed to the version for SAMSON three-way valves on the handwheel, which indicates in which direction the threaded rod is moved by turning the handwheel (see Table 2).

7 Servicing

! NOTICE

The handwheel was checked by SAMSON before it left the factory.

- The product warranty becomes void if service or repair work not described in these instructions is performed without prior agreement by SAMSON's After-sales Service department.
- Only use original spare parts by SAMSON, which comply with the original specifications.

i Note

See associated valve and actuator documentation for instructions on how to perform maintenance on the valve and actuator.

aries are listed on our website at
▶ www.samson.de > Contact.

7.2 Ordering spare parts and operating supplies

Contact your nearest SAMSON subsidiary or the SAMSON After-sales Service department for information on spare parts, lubricants, and tools.

Spare parts

See section 10.2 for details on spare parts.

Lubricant

Details on suitable lubricants can be found in the document ▶ AB 0100.

Tools

Details on suitable tools can be found in the document ▶ AB 0100.

7.1 Preparation for return shipment

Defective handwheels can be returned to SAMSON for repair.

Proceed as follows to return valves to SAMSON:

1. Put the control valve out of operation.
See associated valve and actuator documentation.
2. Remove actuator and handwheel. See section 9.2 as well as associated valve and actuator documentation.
3. Send the handwheel to your nearest SAMSON subsidiary. SAMSON subsid-

8 Malfunctions

Depending on the operating conditions, check the handwheel at certain intervals to prevent possible failure before it can occur. Operators are responsible for drawing up an inspection plan.



Tip

SAMSON's After-sales Service department can support you to draw up an inspection plan for your plant.

Troubleshooting

| Malfunction | Possible reasons | Recommended action |
|---|--|--|
| Actuator or plug stem/threaded rod does not move on demand. | Actuator is blocked. | Check attachment. Unblock the actuator. |
| | Insufficient signal pressure | Check the signal pressure. Check the signal pressure line for leakage. |
| The handwheel cannot be turned. | The handwheel is still locked. | Unlock the handwheel (see section 6.2). |
| | The valve plug is already in the end position. | – |
| The locking bolt cannot be unlocked. | The bolt is worn. | Lubricate the locking bolt. If the locking bolt remains blocked, contact SAMSON's After-sales Service department. |



Note

Contact SAMSON's After-sales Service department for malfunctions not listed in the table.

9 Decommissioning and disassembly

WARNING

Crush hazard arising from moving parts. The handwheel contains moving parts (actuator stem, threaded rod, plug stem, handwheel), which can injure hands or fingers if inserted into it.

- Do not insert hands or fingers into the yoke while the valve is in operation.
- While working on the handwheel, disconnect and lock the pneumatic air supply as well as the control signal.
- Use the locking bolt to lock the handwheel.

NOTICE

Risk of damage to control valve components due to excessively high or low tightening torques.

Observe the specified torques on tightening control valve components. Excessively tightened torques lead to parts wearing out quicker. Parts that are not tightened far enough may loosen.

Observe the specified tightening torques (▶ AB 0100).

Note

See associated valve and actuator documentation for additional instructions on removal and decommissioning.

9.1 Decommissioning

To decommission the handwheel for maintenance and repair work on the valve or for disassembly, proceed as follows:

1. Put the control valve out of operation. See associated valve documentation.
2. Disconnect the pneumatic air supply to depressurize the actuator.
3. Make sure the handwheel is locked.

9.2 Removing the handwheel from the actuator and valve

1. Put the control valve out of operation. See associated valve documentation.
2. Unscrew the hex screws (A29) at the stem connector clamps (A26/27) between the handwheel and actuator.
3. **In the "actuator stem extends" version:** apply a signal pressure to the connection on the bottom diaphragm chamber to completely retract the actuator stem (A7).
In the "actuator stem retracts" version: vent the actuator to retract the actuator stem (A7) completely.
4. Unscrew the stem connector nut (G70) and lock nut (G42) between the handwheel and actuator.
5. Unscrew the ring nut (A8).
6. Disconnect the signal pressure again.
7. Remove the ring nut (A8) and actuator from the handwheel. Loosely thread the ring nut onto the actuator stem (A7).

8. Remove the protective bellows (G69).
9. Unscrew the hex screws (G29) at the stem connector clamps (G26/27) between the handwheel and valve.
10. Unscrew the top lock nut (G71) between the handwheel and valve, while holding the stem connector nut (G5) stationary.
11. Loosen the bottom lock nut, while holding the stem connector nut (G5) stationary.
12. Unscrew the stem connector nut (G5).

screws (A29). Observe tightening torques.

9.4 Disposal

- Observe local, national, and international refuse regulations.
- Do not dispose of components, lubricants, and hazardous substances together with your other household waste.



Tip

Turn the handwheel to retract the threaded rod. This makes it easier to remove the stem connector nut (G5) from the plug stem.

13. Unscrew the fastening nut (G9).
14. Remove the handwheel from the valve.
15. Loosely thread the stem connector nut and lock nuts onto the threaded rod.

9.3 Final steps

Mounting the actuator (without handwheel) onto the valve

1. Mount the actuator on the valve. See associated valve and actuator documentation.

Storing the valve and actuator separately

1. Fasten the lock nut (10) and stem connector nut (9) on the valve.
2. Slide the ring nut (A8) over the actuator stem (A7).
3. Tighten the ring nut (A8). Fasten the stem connector clamps (A26/27) with the hex

10 Annex

10.1 After-sales service

Contact SAMSON's After-sales Service department for support concerning service or repair work or when malfunctions or defects arise.

E-mail

You can reach the After-sales Service Department at aftersaleservice@samson.de.

Addresses of SAMSON AG and its subsidiaries

The addresses of SAMSON AG, its subsidiaries, representatives, and service facilities worldwide can be found on the SAMSON website, in all SAMSON product catalogs or on the back of these Mounting and Operating Instructions.

Required specifications

Please submit the following details:

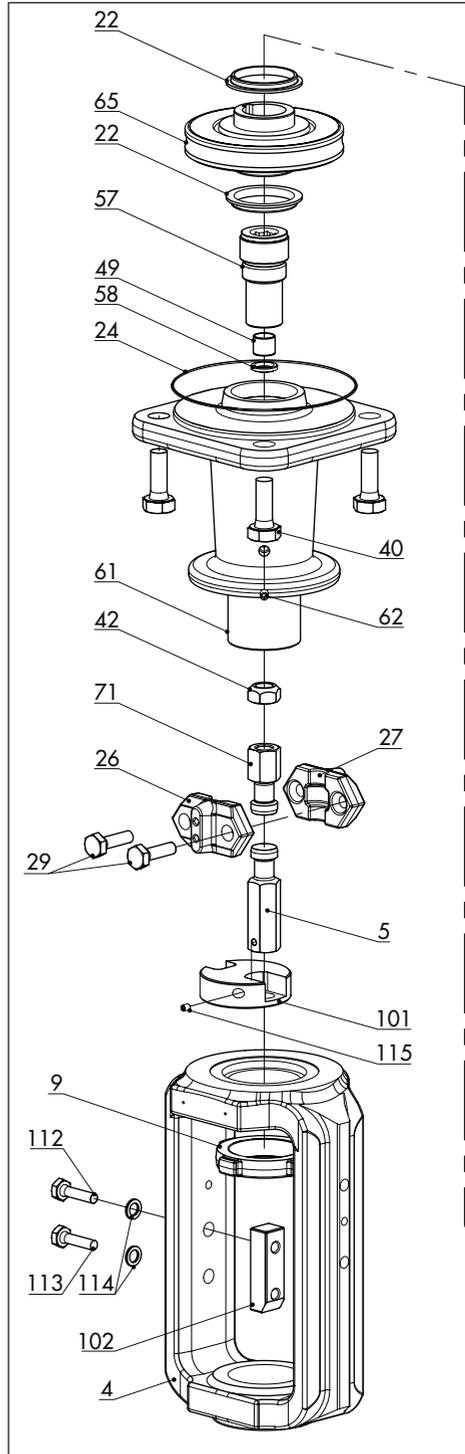
- Order number and position number in the order
- Type designation and model number
- Travel
- Connecting diameter (30 or 60 mm)
- Handwheel diameter (180 or 250 mm)
- Mounted valve (model and nominal size)
- Mounted actuator (model and actuator area)
- Installation drawing

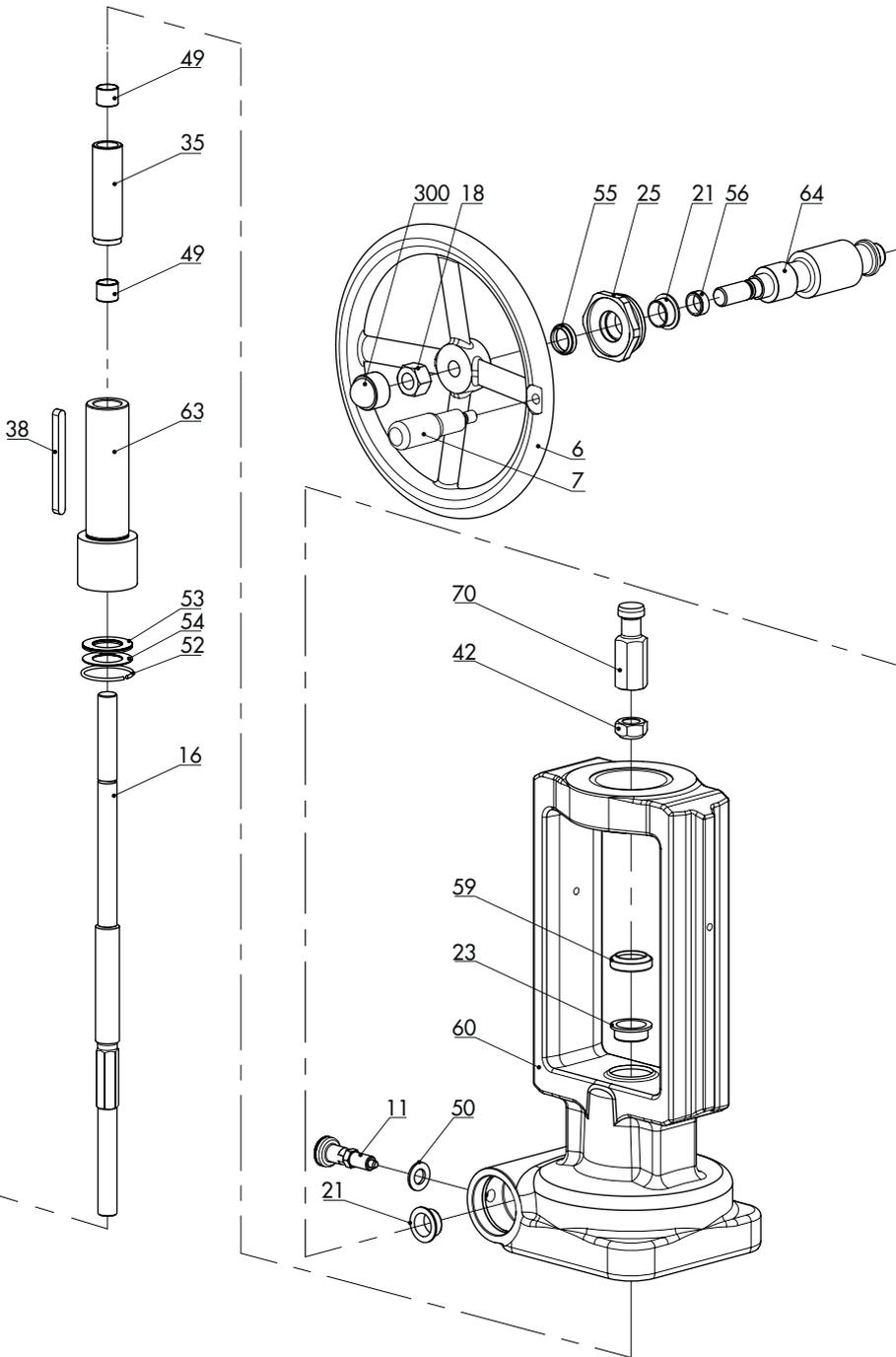
10.2 Spare parts

- 4 Yoke ¹⁾
- 5 Stem connector nut ²⁾
- 6 Handwheel
- 7 Handle
- 9 Fastening nut
- 11 Locking bolt
- 16 Threaded rod
- 18 Hexagon nut
- 21 Plain bearing
- 22 Plain bearing
- 23 Plain bearing
- 24 O-ring
- 25 Bonnet
- 26 Stem connector clamp
- 27 Stem connector clamp
- 29 Hex screw
- 35 Guide tube (neutral position)
- 38 Key drive
- 40 Hex screw
- 42 Lock nut
- 49 Plain bearing
- 50 Shim
- 52 Snap ring
- 53 Axial needle bearing
- 54 Axial disk
- 55 Wiper ring
- 56 Ring
- 57 Connection nipple
- 58 Wiper ring

- 59 Wiper ring
- 60 Top bonnet (with yoke)
- 61 Bottom bonnet
- 62 Screw
- 63 Spindle nut
- 64 Worm shaft
- 65 Worm-gear wheel
- 70 Stem connector nut
- 71 Stem connector nut
- 101 Anti-rotation fixture (optional)
- 102 Holder (optional)
- 112 Screw (optional)
- 113 Screw (optional)
- 114 Washer (optional)
- 115 Screw (optional)
- 300 Protective cap

- 1) Replaces the flange of the valve (2)
- 2) Replaces the stem connector nut of the valve (9)







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