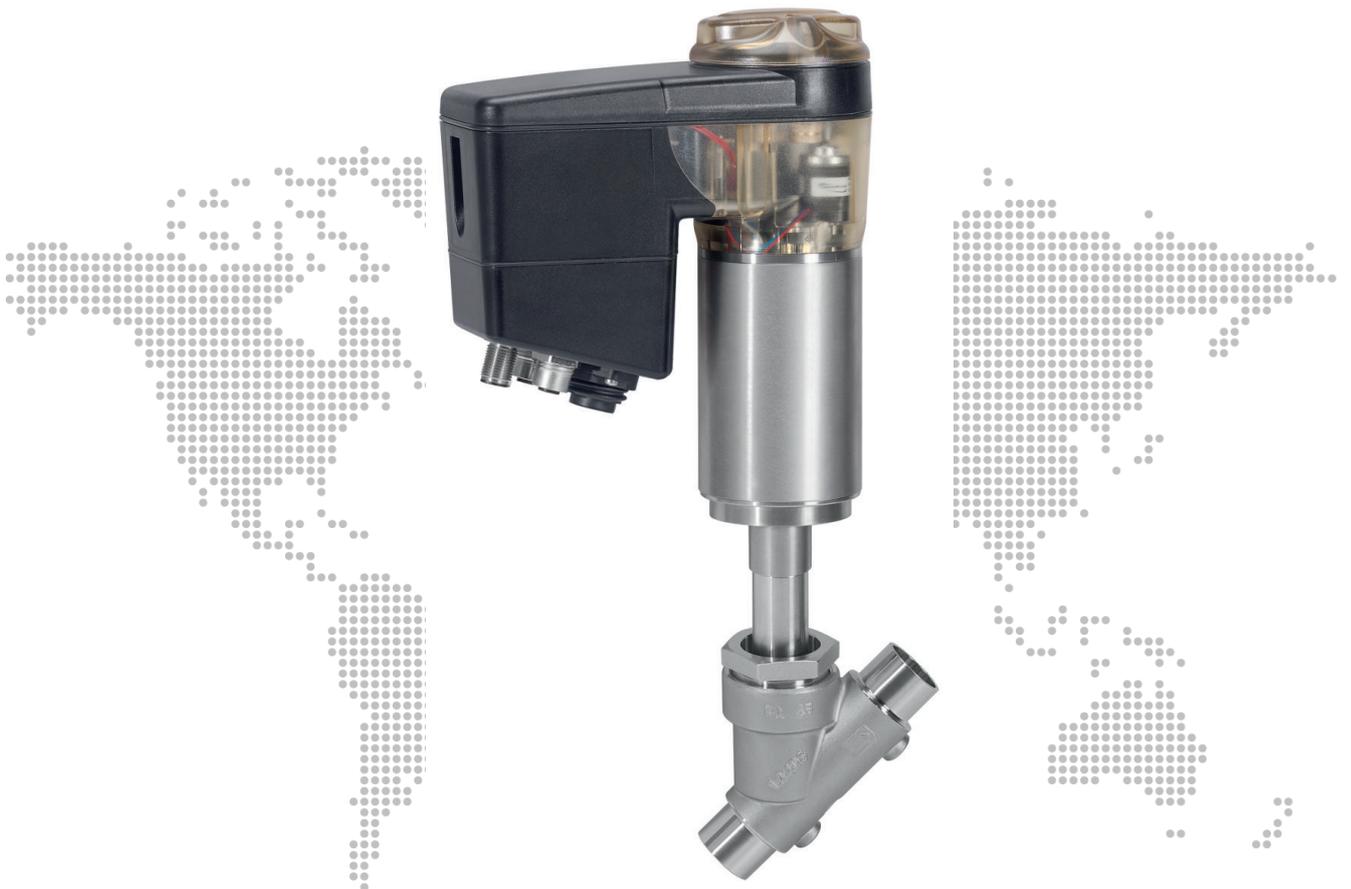


GEMÜ 549 eSyDrive

Motorized angle seat globe valve

EN

Operating instructions



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08.10.2020

Contents

| | | |
|-----------|---|-----------|
| 1 | General information | 4 |
| 1.1 | Information | 4 |
| 1.2 | Symbols used | 4 |
| 1.3 | LED symbols | 4 |
| 1.4 | Definition of terms | 4 |
| 1.5 | Warning notes | 4 |
| 2 | Safety information | 4 |
| 3 | Product description | 5 |
| 4 | Order data | 8 |
| 5 | Technical data | 10 |
| 6 | Dimensions | 18 |
| 7 | Delivery | 33 |
| 8 | Transport | 33 |
| 9 | Storage | 33 |
| 10 | Electrical connection | 33 |
| 11 | Installation in piping | 34 |
| 11.1 | Preparing for installation | 34 |
| 11.2 | Installation position | 35 |
| 11.3 | Installation with butt weld spigots | 35 |
| 11.4 | Installation with threaded sockets | 35 |
| 11.5 | Installation with threaded spigots | 35 |
| 11.6 | Installation with flanged connections | 36 |
| 12 | Network connection | 36 |
| 12.1 | Network settings | 36 |
| 12.2 | Connecting the network | 36 |
| 12.3 | Resetting the network settings | 36 |
| 13 | Commissioning | 36 |
| 14 | Operation | 36 |
| 14.1 | Operation on the device | 36 |
| 14.2 | Operation via the web server | 37 |
| 14.3 | Manual override | 37 |
| 15 | Inspection and maintenance | 38 |
| 15.1 | Spare parts | 38 |
| 15.2 | Removing the actuator | 38 |
| 15.3 | Replacing the seals | 39 |
| 15.4 | Mounting the actuator | 39 |
| 16 | Troubleshooting | 40 |
| 17 | Removal from piping | 41 |
| 18 | Disposal | 41 |
| 19 | Returns | 41 |
| 20 | Declaration of Incorporation according to 2006/42/ EC (Machinery Directive) | 42 |
| 21 | Declaration of conformity according to 2014/68/EU (Pressure Equipment Directive) | 43 |
| 22 | Declaration of conformity according to 2014/30/EU (EMC Directive) | 44 |

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 LED symbols

The following LED symbols are used in the documentation:

| Symbol | LED conditions |
|--------|----------------|
| ○ | Off |
| ● | Lit (on) |
| ⦿ | Flashing |

1.4 Definition of terms

Working medium

The medium that flows through the GEMÜ product.

1.5 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 |
|---|---|
|  | Danger of explosion |
|  | Hot actuator parts! |
|  | Corrosive chemicals! |
|  | Hot plant components! |
|  | Rotating cover! |
|  | Incorrect combination of actuator and valve body! |

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 Buttons for on-site control

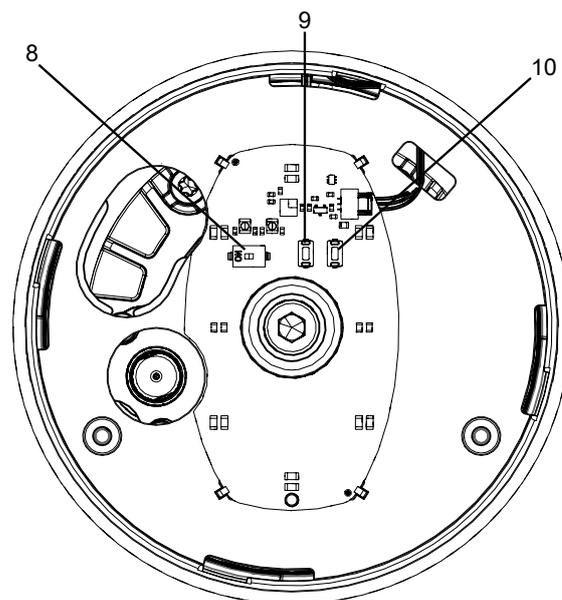


Fig. 1: Position of the buttons

| Item | Name | Function |
|------|-------------------------------|--|
| 8 | DIP switch, "ON-site" control | Switches the on-site control on the device on or off |
| 9 | "OPEN" button | Moves actuator to the open position Resets the network settings |
| 10 | "INIT/CLOSE" button | Moves actuator to the closed position Starting initialisation |

3.2 LED displays

3.2.1 On-site status LEDs

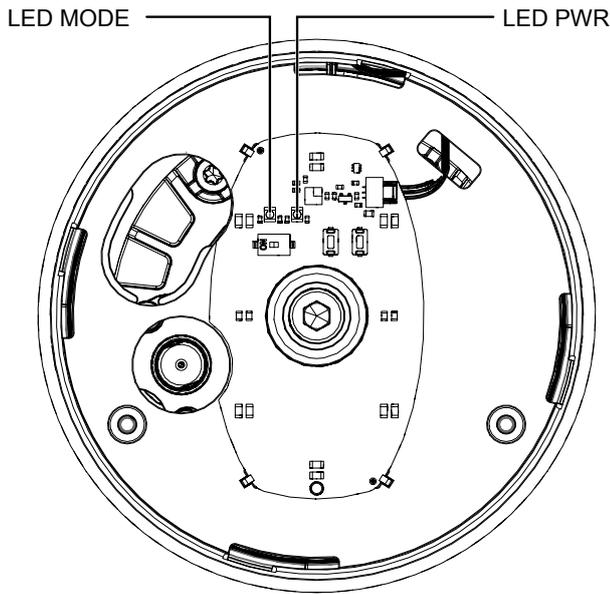


Fig. 2: Position of the status LEDs

The user checks the following conditions directly on-site at the valve using LED MODE and LED PWR:

| Function | LED MODE | | LED PWR | |
|-----------------------------------|-------------|------|---------|-----|
| | Yellow | Blue | Green | Red |
| Automatic operation | ● | ○ | ● | ○ |
| Manual operation | ☀ | ○ | ● | ○ |
| Actuator switched off (OFF mode) | ○ | ○ | ● | ○ |
| Manual operation (on-site) | ○ | ● | ● | ○ |
| Software update | ☀ | ☀ | ● | ○ |
| | alternating | | | |
| On-site initialisation (buttons) | ○ | ☀ | ● | ○ |
| Remote initialisation (via DigIn) | ● | ○ | ● | ○ |

| Function | LED MODE | | LED PWR | |
|---|----------|------|---------|-----|
| | Yellow | Blue | Green | Red |
| Operation via emergency power supply module | | | ☀ | |

3.2.2 High visibility LEDs

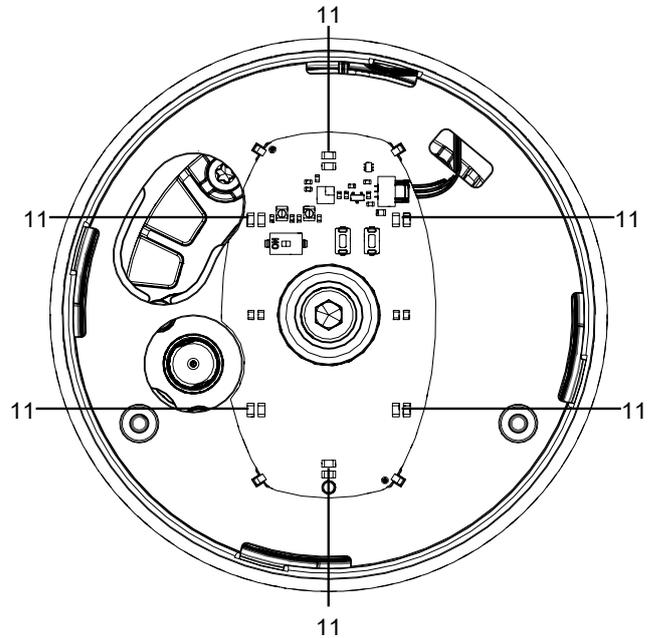
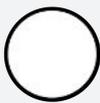


Fig. 3: Position of the high visibility LEDs

| Item | | Name | |
|------|--|----------------------|--|
| 11 | | High visibility LEDs | |

| Function | | High visibility LED | |
|-----------------------------|-----------------------------------|---------------------|--------|
| | | Green | Orange |
| OPEN position | Position indicator LEDs, standard | ○ | ● |
| OPEN position | Position indicator LEDs, inversed | ● | ○ |
| CLOSED position | Position indicator LEDs, standard | ● | ○ |
| CLOSED position | Position indicator LEDs, inversed | ○ | ● |
| Position unknown (e.g. 50%) | | ○ | ○ |
| Initialisation | | ☀ | ☀ |
| | | alternating | |

| Function | High visibility LED | |
|-------------------|---|---|
| | Green | Orange |
| Location function |  |  |

Description

The GEMÜ 549 eSyDrive is a motorized 2/2-way angle seat globe valve with a hollow shaft electric actuator. The eSyDrive hollow shaft actuator can be operated as ON/OFF or with integrated positioner or process controller. The valve spindle is sealed by a self-adjusting gland packing providing low maintenance and reliable valve spindle sealing even after a long service life. A wiper ring fitted in front of the gland packing protects the seal against contamination and damage. An integral optical and electrical position indicator is standard.

3.3 Function

The product controls or regulates (depending on version) a flowing medium by being closed or opened by a motorized actuator.

The product has an optical position indicator as standard. The optical position indicator indicates the OPEN and CLOSED positions.

3.4 Correct use

|  DANGER | |
|---|---|
|  | Danger of explosion <ul style="list-style-type: none"> ▶ Risk of death or severe injury. ● Do not use the product in potentially explosive zones. |

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

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

The product is not intended for use in potentially explosive areas.

- Use the product in accordance with the technical data.

4 Order data

The order data provide an overview of standard configurations.

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

Order codes

| 1 Type | Code |
|---|------|
| Angle seat globe valve, motorized, electro-mechanical hollow shaft actuator, eSyDrive | 549 |

| 2 DN | Code |
|-------|------|
| DN 10 | 10 |
| DN 15 | 15 |
| DN 20 | 20 |
| DN 25 | 25 |
| DN 32 | 32 |
| DN 40 | 40 |
| DN 50 | 50 |
| DN 65 | 65 |
| DN 80 | 80 |

| 3 Body configuration | Code |
|----------------------|------|
| 2/2-way body | D |
| Angle valve body | E |

| 4 Connection type | Code |
|--|------|
| Spigot | |
| Spigot DIN | 0 |
| Spigot EN 10357 series B, formerly DIN 11850 series 1 | 16 |
| Spigot EN 10357 series A (formerly DIN 11850 series 2)/DIN 11866 series A | 17 |
| Spigot DIN 11850 series 3 | 18 |
| Spigot SMS 3008 | 37 |
| Spigot ASME BPE | 59 |
| Spigot ISO 1127/EN 10357 series C/DIN 11866 series B | 60 |
| Spigot ANSI/ASME B36.19M schedule 10s | 63 |
| Spigot ANSI/ASME B36.19M schedule 40s | 65 |
| Threaded connection | |
| Threaded socket DIN ISO 228 | 1 |
| Threaded socket Rc ISO 7-1, EN 10226-1, JIS B 0203, BS 21, end-to-end dimension ETE DIN 3202-4 series M8 | 3C |
| Threaded socket NPT, end-to-end dimension ETE DIN 3202-4 series M8 | 3D |
| Threaded spigot DIN ISO 228 | 9 |
| Flange | |
| Flange EN 1092, PN 25, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1 | 10 |
| Flange EN 1092, PN 25, form B | 13 |

| 4 Continuation of Connection type | Code |
|--|------|
| Flange ANSI Class 150 RF | 47 |
| Clamp | |
| Clamp ASME BPE, face-to-face dimension FTF ASME BPE | 80 |
| Clamp DIN 32676 series B, face-to-face dimension FTF EN 558 series 1 | 82 |
| Clamp DIN 32676 series A, face-to-face dimension FTF EN 558 series 1 | 86 |
| Clamp ASME BPE, face-to-face dimension FTF EN 558 series 1 | 88 |

| 5 Valve body material | Code |
|-----------------------------|------|
| 1.4435, investment casting | 34 |
| 1.4408, investment casting | 37 |
| 1.4435 (F316L), forged body | 40 |
| 1.4435, investment casting | C2 |

| 6 Seat seal | Code |
|------------------------------|------|
| PTFE | 5 |
| PTFE, glass fibre reinforced | 5G |
| 1.4404 | 10 |

| 7 Voltage/frequency | Code |
|---------------------|------|
| 24 V DC | C1 |

| 8 Control module | Code |
|---|------|
| OPEN/CLOSE, positioner and process controller | L0 |

| 9 Regulating cone | Code |
|---|------|
| Please find the number of the optional regulating cone (R-No.) for the linear or equal-percentage modified regulating cone in the Kv value table. | R... |

| 10 Actuator version | Code |
|---------------------|------|
| Actuator size 0 | 0A |
| Actuator size 1 | 1A |
| Actuator size 2 | 2 A |

| 11 Type of design | Code |
|--|------|
| Ra ≤ 0.6 µm (25 µinch) for media wetted surfaces, in accordance with ASME BPE SF2 + SF3 mechanically polished internal | 1903 |
| Ra ≤ 0.8 µm (30 µinch) for media wetted surfaces, in accordance with DIN 11866 H3, mechanically polished internal | 1904 |
| Ra ≤ 0.4 µm (15 µinch) for media wetted surfaces, in accordance with DIN 11866 H4, ASME BPE SF1 mechanically polished internal | 1909 |

| 12 Special version | Code |
|---|------|
| Special version for oxygen, maximum medium temperature: 60 °C, media wetted seal materials and auxiliary materials with BAM testing | S |

| 13 CONEXO | Code |
|---|------|
| without | |
| Integrated RFID chip for electronic identification and traceability | C |

Order example

| Order option | Code | Description |
|-----------------------|-------|---|
| 1 Type | 549 | Angle seat globe valve, motorized, electro-mechanical hollow shaft actuator, eSyDrive |
| 2 DN | 50 | DN 50 |
| 3 Body configuration | D | 2/2-way body |
| 4 Connection type | 1 | Threaded socket DIN ISO 228 |
| 5 Valve body material | 37 | 1.4408, investment casting |
| 6 Seat seal | 5 | PTFE |
| 7 Voltage/frequency | C1 | 24 V DC |
| 8 Control module | L0 | OPEN/CLOSE, positioner and process controller |
| 9 Regulating cone | RS916 | 60 m ³ /h - mod.EQ |
| 10 Actuator version | 2 A | Actuator size 2 |
| 11 Type of design | | |
| 12 Special version | S | Special version for oxygen, maximum medium temperature: 60 °C, media wetted seal materials and auxiliary materials with BAM testing |
| 13 CONEXO | | without |

5 Technical data

5.1 Medium

Working medium: Corrosive, inert, gaseous and liquid media which have no negative impact on the physical and chemical properties of the body and seal material.

Max. permissible viscosity: 600 mm²/s (cSt)
Other versions for lower/higher temperatures and higher viscosities on request.

5.2 Temperature

Media temperature: -10 to 180 °C

Ambient temperature: -10 to 60 °C

5.3 Pressure

Operating pressure:

| DN | Actuator version 0A | Actuator version 1A | Actuator version 2A |
|----|---------------------|---------------------|---------------------|
| 10 | 0 - 25 | - | - |
| 15 | 0 - 25 | - | - |
| 20 | 0 - 20 | 0 - 25 | - |
| 25 | 0 - 12 | 0 - 25 | - |
| 32 | - | 0 - 20 | - |
| 40 | - | 0 - 12 | 0 - 25 |
| 50 | - | 0 - 8 | 0 - 16 |
| 65 | - | 0 - 5 | 0 - 10 |
| 80 | - | 0 - 4 | 0 - 6 |

Pressures in bar
All pressures are gauge pressures.
For max. operating pressures the pressure / temperature correlation must be observed.
Higher operating pressures on request

Leakage rate:

Open/Close valve

| Seat seal | Standard | Test procedure | Leakage rate | Test medium |
|-----------------|----------------|----------------|--------------|-------------|
| Metal | DIN EN 12266-1 | P12 | F | Air |
| EPDM, FKM, PTFE | DIN EN 12266-1 | P12 | A | Air |

Control valve

| Seat seal | Standard | Test procedure | Leakage rate | Test medium |
|-----------------|----------------|----------------|--------------|-------------|
| Metal | DIN EN 60534-4 | 1 | IV | Air |
| PTFE, FKM, EPDM | DIN EN 60534-4 | 1 | VI | Air |

Pressure/temperature correlation:

| Connection types code ¹⁾ | Material code ²⁾ | Max. allowable operating pressures in bar at temperature in °C | | | | | |
|-------------------------------------|-----------------------------|--|------|-------|------|------|------|
| | | RT | 100 | 150 | 200 | 250 | 300 |
| 1, 9, 17, 37, 60, 63, 3C, 3D | 37 | 25.0 | 23.8 | 21.4 | 18.9 | 17.5 | 16.1 |
| 0, 16, 17, 18, 37, 59, 60, 65 | 34 | 25.0 | 24.5 | 22.4 | 20.3 | 18.2 | 16.1 |
| 13 (DN 15 - DN 50) | 34 | 25.0 | 23.6 | 21.5 | 19.8 | 18.6 | 17.2 |
| 80, 88 (DN 15 - DN 40) | 34 | 25.0 | 21.2 | 19.3* | - | - | - |
| 80, 88 (DN 50 - DN 80) | 34 | 16.0 | 16.0 | 16.0* | - | - | - |
| 82 (DN 15 - DN 32) | 34 | 25.0 | 21.2 | 19.3* | - | - | - |
| 82 (DN 40 - DN 65) | 34 | 16.0 | 16.0 | 16.0* | - | - | - |
| 86 (DN 15 - DN 40) | 34 | 25.0 | 21.2 | 19.3* | - | - | - |
| 86 (DN 50 - DN 65) | 34 | 16.0 | 16.0 | 16.0* | - | - | - |
| 10 (DN 15 - DN 50) | 37 | 25.0 | 25.0 | 22.7 | 21.0 | 19.8 | 18.5 |
| 47 (DN 15 - DN 50) | 34 | 15.9 | 13.3 | 12.0 | 11.1 | 10.2 | 9.7 |
| 0, 16, 17, 18, 59, 60 | 40 | 25.0 | 20.6 | 18.7 | 17.1 | 15.8 | 14.8 |
| 17, 59, 60 | C2 | 25.0 | 21.2 | 19.3 | 17.9 | 16.8 | 15.9 |

* max. temperature 140 °C

1) Connection type

- Code 0: Spigot DIN
- Code 1: Threaded socket DIN ISO 228
- Code 3C: Threaded socket Rc ISO 7-1, EN 10226-1, JIS B 0203, BS 21, end-to-end dimension ETE DIN 3202-4 series M8
- Code 3D: Threaded socket NPT, end-to-end dimension ETE DIN 3202-4 series M8
- Code 9: Threaded spigot DIN ISO 228
- Code 10: Flange EN 1092, PN 25, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1
- Code 13: Flange EN 1092, PN 25, form B
- Code 16: Spigot EN 10357 series B, formerly DIN 11850 series 1
- Code 17: Spigot EN 10357 series A (formerly DIN 11850 series 2)/DIN 11866 series A
- Code 18: Spigot DIN 11850 series 3
- Code 37: Spigot SMS 3008
- Code 47: Flange ANSI Class 150 RF
- Code 59: Spigot ASME BPE
- Code 60: Spigot ISO 1127/EN 10357 series C/DIN 11866 series B
- Code 63: Spigot ANSI/ASME B36.19M schedule 10s
- Code 65: Spigot ANSI/ASME B36.19M schedule 40s
- Code 80: Clamp ASME BPE, face-to-face dimension FTF ASME BPE
- Code 82: Clamp DIN 32676 series B, face-to-face dimension FTF EN 558 series 1
- Code 86: Clamp DIN 32676 series A, face-to-face dimension FTF EN 558 series 1
- Code 88: Clamp ASME BPE, face-to-face dimension FTF EN 558 series 1

2) Valve body material

- Code 34: 1.4435, investment casting
- Code 37: 1.4408, investment casting
- Code 40: 1.4435 (F316L), forged body
- Code C2: 1.4435, investment casting

Kv values:**Open/Close valve**

| | Butt weld spigot DIN 11850 | Butt weld spigot DIN 11866 | Threaded socket DIN ISO 228 |
|-----------|-------------------------------|-------------------------------|--------------------------------|
| DN | | | |
| 10 | - | - | - |
| 15 | 2.4 | 5.5 | 5.4 |
| 20 | - | 11.7 | 10.0 |
| 25 | - | 20.5 | 15.2 |
| 32 | - | 33.0 | 23.0 |
| 40 | - | 51.0 | 41.0 |
| 50 | - | 61.0 | 68.0 |
| 65 | - | 110.0 | 95.0 |
| 80 | - | 117.0 | 130.0 |

Kv values determined in accordance with DIN EN 60534. The Kv value specifications refer to the largest actuator for the respective nominal size. The Kv values for other product configurations (e.g. other connections or body materials) may differ.

Kv values in m³/h

Control valve:**Standard regulating cone (DIN)**

| DN | Kv values | Operating pressure | Actuator version | linear | equal percentage |
|-----------|-----------|--------------------|------------------|--------|------------------|
| 15 | 5.0 | 32.0 | 0A | RS920 | RS930 |
| 20 | 10.0 | 20.0 | 0A | RS921 | RS931 |
| 25 | 15.0 | 12.0 | 0A | RS922 | RS932 |
| | 15.0 | 32.0 | 1A | RS923 | RS933 |
| 32 | 24.0 | 20.0 | 1A | RS924 | RS934 |
| 40 | 38.0 | 12.0 | 1A | RS925 | RS935 |
| | 38.0 | 20.0 | 2 A | RS905 | RS915 |
| 50 | 50.0 | 8.0 | 1A | RS926 | RS936 |
| | 60.0 | 20.0 | 2 A | RS906 | RS916 |
| 65 | 60.0 | 5.0 | 1A | - | RS937 |
| | 60.0 | 15.0 | 2 A | - | RS917 |
| 80 | 80.0 | 4.0 | 1A | - | RS938 |
| | 80.0 | 6.0 | 2 A | - | RS918 |

Kv values in m³/h

Control valve:**Standard regulating cone (ANSI)**

| DN | Kv values | Operating pressure | Actuator version | linear | equal percentage |
|-----------|-----------|--------------------|------------------|--------|------------------|
| 15 | 2.7 | 32.0 | 0A | RS961 | RS971 |
| 20 | 6.3 | 20.0 | 0A | RS962 | RS972 |
| 25 | 13.3 | 12.0 | 0A | RS963 | RS973 |
| | 13.3 | 32.0 | 1A | RS964 | RS974 |
| 40 | 35.6 | 12.0 | 1A | RS965 | RS975 |
| | 35.6 | 20.0 | 2 A | RS945 | RS955 |
| 50 | 50.0 | 8.0 | 1A | RS966 | RS976 |
| | 58.0 | 20.0 | 2 A | RS946 | RS956 |
| 65 | 60.0 | 5.0 | 1A | - | RS977 |
| | 60.0 | 15.0 | 2 A | - | RS957 |
| 80 | 80.0 | 4.0 | 1A | - | RS978 |
| | 80.0 | 6.0 | 2 A | - | RS958 |

Kv values in m³/h

Control valve:**Standard regulating cone with reduced seat**

| DN | Kv values | Operating pressure | Actuator version | linear | equal percentage |
|-----------|--------------------|--------------------|------------------|--------|------------------|
| 15 | 0.10 ¹⁾ | 25.0 | 0A | RA204 | RA407 |
| | 0.16 ¹⁾ | 25.0 | 0A | RB210 | RA408 |
| | 0.25 ¹⁾ | 25.0 | 0A | RB211 | RB407 |
| | 0.40 ¹⁾ | 25.0 | 0A | RB212 | RB408 |
| | 0.63 ¹⁾ | 25.0 | 0A | RC207 | RC408 |
| | 1.00 ¹⁾ | 25.0 | 0A | RC208 | RC409 |
| | 1.60 | 25.0 | 0A | RD209 | RD409 |
| | 2.50 ²⁾ | 25.0 | 0A | RE210 | RE410 |
| 20 | 1.60 | 25.0 | 0A | RD210 | RD410 |
| | 2.50 | 25.0 | 0A | RE211 | RE411 |
| | 4.00 | 25.0 | 0A | RF212 | RF412 |
| | 6.30 ²⁾ | 25.0 | 0A | RG213 | RG413 |
| 25 | 2.50 | 25.0 | 0A | RE212 | RE412 |
| | 4.00 | 25.0 | 0A | RF213 | RF413 |
| | 6.30 | 25.0 | 0A | RG214 | RG414 |
| | 10.0 ²⁾ | 18.0 | 0A | RH213 | RH413 |
| 32 | 4.00 | 25.0 | 0A | RF214 | RF414 |
| | 6.30 | 25.0 | 0A | RG215 | RG415 |
| | 10.00 | 20.0 | 0A | RH214 | RH414 |
| | 16.00 | 12.0 | 0A | RJ210 | RJ410 |
| 40 | 6.30 | 25.0 | 0A | RG216 | RG416 |
| | 10.00 | 20.0 | 0A | RH215 | RH415 |
| | 16.00 | 12.0 | 0A | RJ211 | RJ411 |
| | 25.00 | 18.0 | 1A | RK207 | RK407 |
| 50 | 10.00 | 18.0 | 0A | RH216 | RH416 |
| | 16.00 | 12.0 | 0A | RJ212 | RJ412 |
| | 25.00 | 19.0 | 1A | RK208 | RK408 |
| | 40.00 | 12.0 | 1A | RM204 | RM404 |

1) metal seated

2) not for connection codes 37, 59, 80, 88

Kv values in m³/h

5.4 Product compliance

Food: Regulation (EC) No. 1935/2004*
 Regulation (EC) No. 10/2011*
 FDA*
 * depending on version and/or operating parameters

Pressure Equipment Directive: 2014/68/EU

Machinery Directive: 2006/42/EU

5.5 Mechanical data

Protection class: IP 65 acc. to EN 60529 Actuator version 0A, 2A
 IP 61 acc. to EN 60529 Actuator version 1A

Weight: **Actuator**
 Actuator version 0A 1.8 kg
 Actuator version 1A 3.0 kg
 Actuator version 2A 9.0 kg

Body

| Connection types | 0, 16, 17, 18, 37, 59, 60, 63, 65 | 1, 31, 3B | 9 | 10, 13, 47 | 80, 82, 86, 88 |
|------------------|-----------------------------------|-----------------|-----------------|-------------|----------------|
| Valve body | Spigot K514 | Threaded socket | Threaded spigot | Flange K514 | Clamp |
| DN | | | | | |
| 15 | 0.24 | 0.35 | 0.31 | 1.80 | 0.37 |
| 20 | 0.50 | 0.35 | 0.50 | 2.50 | 0.63 |
| 25 | 0.50 | 0.35 | 0.65 | 3.10 | 0.63 |
| 32 | 0.90 | 0.75 | 1.00 | 4.60 | 1.08 |
| 40 | 1.10 | 0.98 | 1.30 | 5.10 | 1.28 |
| 50 | 1.80 | 1.70 | 1.80 | 7.20 | 2.07 |
| 65 | 3.40 | 3.20 | 3.40 | - | 3.69 |
| 80 | 4.20 | 4.10 | 4.40 | - | 4.60 |

Weights in kg

Operating time: Actuator version 0A 6 mm/s
 Actuator version 1A 6 mm/s
 Actuator version 2A 4 mm/s

5.6 Electrical data

Supply voltage:

| | Actuator size 0 | Actuator size 1 | Actuator size 2 |
|---|--------------------------------|-----------------|-----------------|
| Voltage | U _v = 24 V DC ± 10% | | |
| Rating | Max. 28 W | Max. 65 W | Max. 120 W |
| Operating mode (OPEN/CLOSE operation) | Continuous duty | | |
| Operating mode (control operation) | Class C acc. to EN 15714-2 | | |
| Reverse battery protection | Yes | | |

5.6.1 Analogue input signals

5.6.1.1 Set value

| | |
|--|--|
| Input signal: | 0/4 - 20 mA; 0 – 10 V DC (selectable using software) |
| Input type: | passive |
| Input resistance: | 250 Ω |
| Accuracy/linearity: | ≤ ±0.3% of full flow |
| Temperature drift: | ≤ ±0.1% / 10°K |
| Resolution: | 12 bit |
| Reverse battery protection: | No |
| Overload proof: | Yes (up to ± 24 V DC) |

5.6.1.2 Process actual value

| | |
|--|--|
| Input signal: | 0/4 - 20 mA; 0 – 10 V DC (selectable using software) |
| Input type: | passive |
| Input resistance: | 250 Ω |
| Accuracy/linearity: | ≤ ±0.3% of full flow |
| Temperature drift: | ≤ ±0.1% / 10°K |
| Resolution: | 12 bit |
| Reverse battery protection: | No |
| Overload proof: | Yes (up to ± 24 V DC) |

5.6.2 Digital input signals

| | |
|-------------------------|---------------------------|
| Digital inputs: | 3 |
| Function: | selectable using software |
| Voltage: | 24 V DC |
| Logic level "1": | >14 V DC |
| Logic level "0": | < 8 V DC |
| Input current: | typ. 2.5 mA (at 24 V DC) |

5.6.3 Analogue output signals**5.6.3.1 Actual value**

| | |
|-----------------------------|--|
| Output signal: | 0/4 - 20 mA; 0 – 10 V DC (selectable using software) |
| Output type: | Active (AD5412) |
| Accuracy: | ≤ ±1% of full flow |
| Temperature drift: | ≤ ±0.1% / 10°K |
| Load resistor: | ≤ 750 kΩ |
| Resolution: | 10 bit |
| Overload proof: | Yes (up to ± 24 V DC) |
| Short-circuit proof: | Yes |

5.6.4 Digital output signals**5.6.4.1 Switching outputs 1 and 2**

| | |
|-----------------------|--|
| Design: | 2x change-over contact, potential-free |
| Switch rating: | 125 V AC / 2 A 48 V DC / 2 A |
| Switch points: | Adjustable 0 - 100 % |

5.6.4.2 Switching output 3

| | |
|------------------------------|------------------------|
| Function: | Signal fault |
| Type of contact: | Push-Pull |
| Switching voltage: | Supply voltage |
| Switching current: | ≤ 0.1 A |
| Drop voltage: | Max. 2.5 V DC at 0.1 A |
| Overload proof: | Yes (up to ± 24 V DC) |
| Short-circuit proof: | Yes |
| Pull-Down resistance: | 120 kΩ |

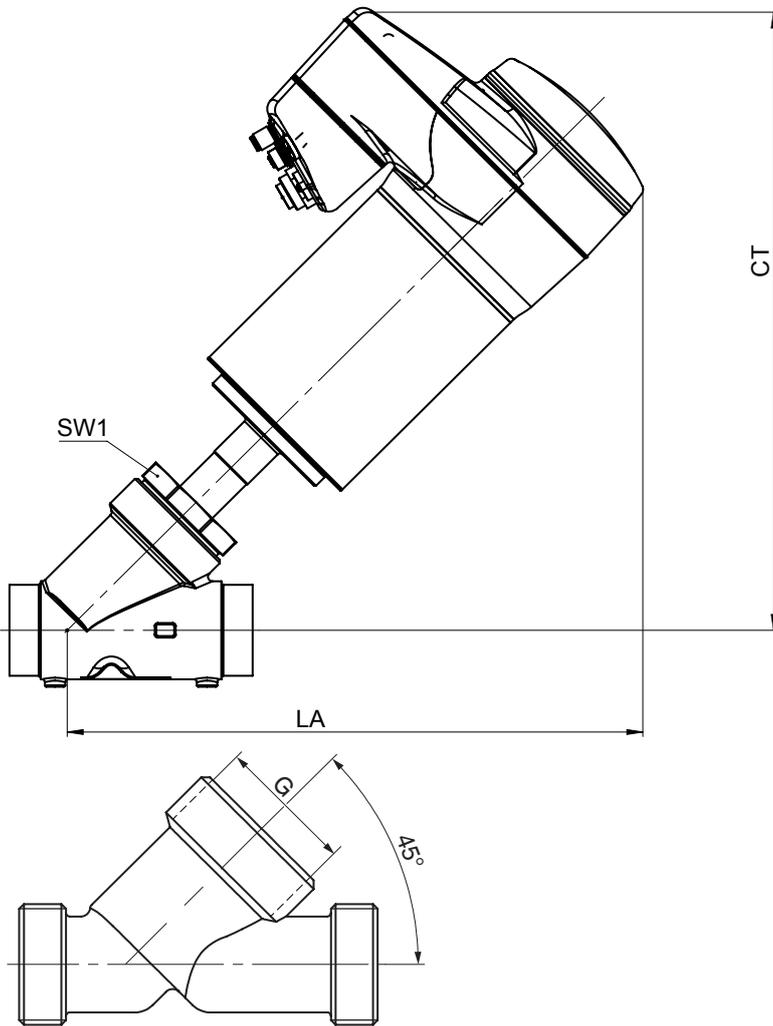
5.6.5 Communication

- Interface:** Ethernet
- Function:** Parameterisation via web browser
- IP address:** 192.168.2.1 alterable via web browser
- Subnet screen:** 255.255.252.0 alterable via web browser

The actuator and the PC must be in the same network to use the web server. The IP address of the actuator is entered in the web browser and the actuator can then be parametrised. In order to use more than one actuator, a definitive IP address must be assigned to each actuator in the same network.

6 Dimensions

6.1 Installation dimensions - Valve with 2/2-way body

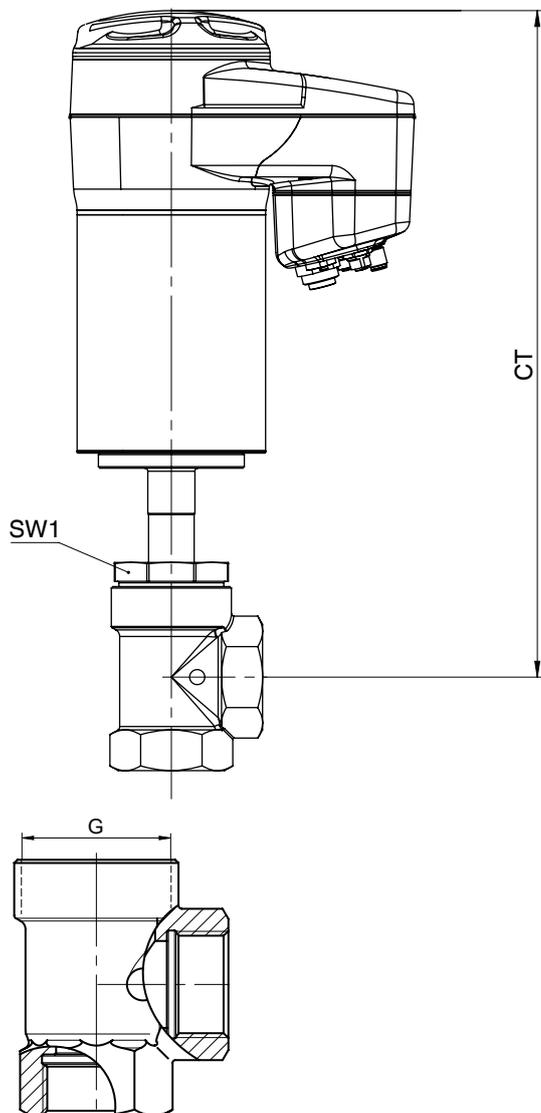


| DN | SW1 | G | Actuator version 0A | | Actuator version 1A | | Actuator version 2A | |
|----|-----|----------|---------------------|-------|---------------------|-------|---------------------|-------|
| | | | CT | LA | CT | LA | CT | LA |
| 10 | 36 | - | 287.0 | 242.0 | - | - | - | - |
| 15 | 36 | M 34x1.5 | 290.0 | 245.0 | - | - | - | - |
| 20 | 41 | M 40x1.5 | 300.0 | 255.0 | 341.0 | 299.0 | - | - |
| 25 | 46 | M 45x1.5 | 300.0 | 255.0 | 341.0 | 299.0 | - | - |
| 32 | 55 | M 52x1.5 | - | - | 349.0 | 307.0 | 402.0 | 368.0 |
| 40 | 60 | M 60x2.0 | - | - | 354.0 | 312.0 | 407.0 | 373.0 |

| DN | SW1 | G | Actuator version 0A | | Actuator version 1A | | Actuator version 2A | |
|----|-----|-----------|---------------------|----|---------------------|-------|---------------------|-------|
| | | | CT | LA | CT | LA | CT | LA |
| 50 | 75 | M 72x2.0 | - | - | 362.0 | 320.0 | 405.0 | 381.0 |
| 65 | 75 | M 90x2.0 | - | - | 375.0 | 333.0 | 428.0 | 394.0 |
| 80 | 75 | M 105x2.0 | - | - | - | - | 445.0 | 411.0 |

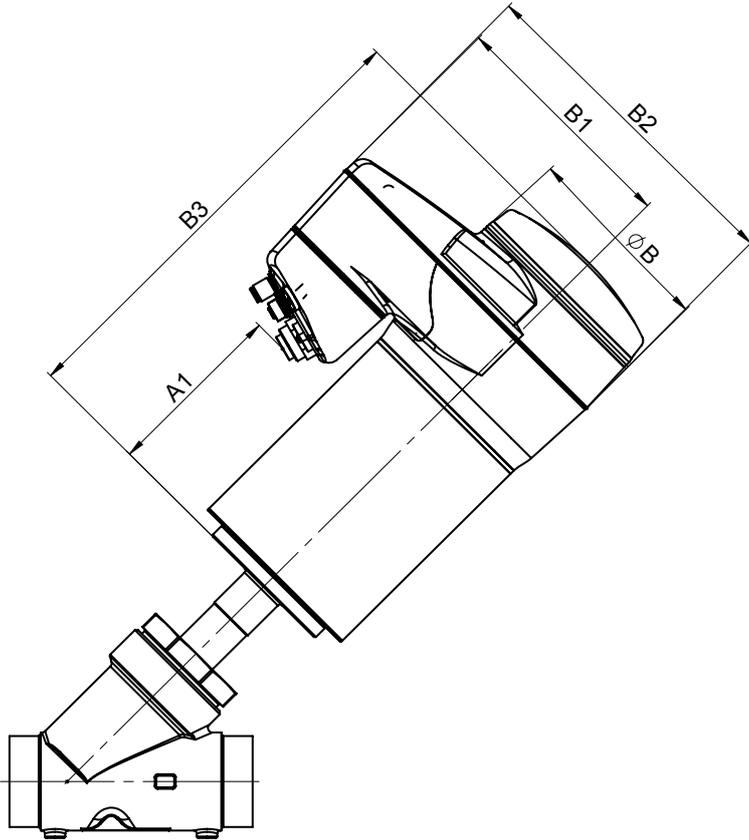
Dimensions in mm

6.2 Installation dimensions - Valve with angle valve body



| DN | SW1 | R | Actuator version 0A | Actuator version 1A | Actuator version 2A |
|----|-----|-----|---------------------|---------------------|---------------------|
| | | | CT | CT | CT |
| 15 | 36 | G ½ | 293.0 | - | - |
| 20 | 41 | G ¾ | 296.0 | 353.0 | - |
| 25 | 46 | G 1 | 300.0 | 357.0 | - |
| 32 | 55 | - | - | 360.0 | 429.0 |
| 40 | 60 | - | - | 365.0 | 434.0 |
| 50 | 75 | - | - | 372.0 | 441.0 |

Dimensions in mm

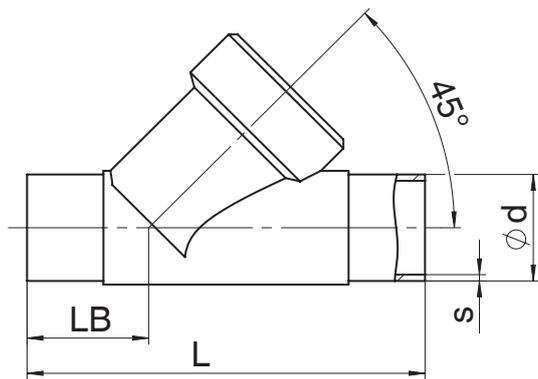
6.3 Actuator dimensions

| Actuator version | A1 | B | B1 | B2 | B3 |
|------------------|-------|-------|-------|-------|-------|
| 0A | 45.0 | 68.0 | 126.0 | 160.0 | 193.0 |
| 1A | 86.0 | 82.0 | 132.0 | 172.0 | 252.0 |
| 2A | 121.0 | 129.0 | 157.0 | 224.0 | 304.0 |

Dimensions in mm

6.4 Body dimensions

6.4.1 Spigot



| DN | Connection types code ¹⁾ | | | | | | | | | | | |
|----|-------------------------------------|------|------|-----|------|-----|------|-----|------|-----|------|-----|
| | 0 | | 16 | | 17 | | 18 | | 60 | | | |
| | Material code 34 ²⁾ | | | | | | | | | | | |
| | L | LB | ø d | s | ø d | s | ø d | s | ø d | s | ø d | s |
| 10 | 105.0 | 35.5 | - | - | 12.0 | 1.0 | 13.0 | 1.5 | 14.0 | 2.0 | 17.2 | 1.6 |
| 15 | 105.0 | 35.5 | 18.0 | 1.5 | 18.0 | 1.0 | 19.0 | 1.5 | 20.0 | 2.0 | 21.3 | 1.6 |
| 20 | 120.0 | 39.0 | 22.0 | 1.5 | 22.0 | 1.0 | 23.0 | 1.5 | 24.0 | 2.0 | 26.9 | 1.6 |
| 25 | 125.0 | 38.5 | 28.0 | 1.5 | 28.0 | 1.0 | 29.0 | 1.5 | 30.0 | 2.0 | 33.7 | 2.0 |
| 40 | 160.0 | 47.0 | 40.0 | 1.5 | 40.0 | 1.0 | 41.0 | 1.5 | 42.0 | 2.0 | 48.3 | 2.0 |
| 32 | 155.0 | 48.0 | - | - | 34.0 | 1.0 | 35.0 | 1.5 | 36.0 | 2.0 | 42.4 | 2.0 |
| 50 | 180.0 | 48.0 | 52.0 | 1.5 | 52.0 | 1.0 | 53.0 | 1.5 | 54.0 | 2.0 | 60.3 | 2.0 |

Dimensions in mm

1) Connection type

Code 0: Spigot DIN

Code 16: Spigot EN 10357 series B, formerly DIN 11850 series 1

Code 17: Spigot EN 10357 series A (formerly DIN 11850 series 2)/DIN 11866 series A

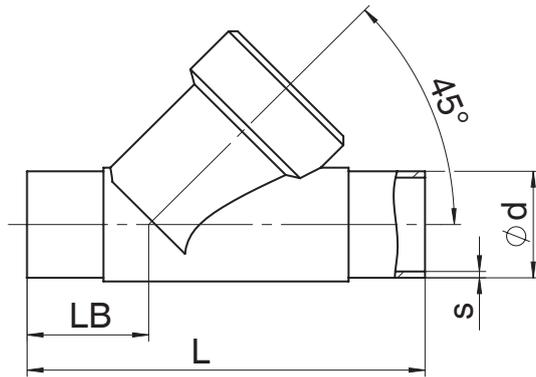
Code 18: Spigot DIN 11850 series 3

Code 60: Spigot ISO 1127/EN 10357 series C/DIN 11866 series B

2) Valve body material

Code 34: 1.4435, investment casting

6.4.2 Spigot



| DN | Connection types code ¹⁾ | | | | | | | |
|----|-------------------------------------|------|------|-----|-------|------|------|------|
| | 37 | | | | 59 | | 65 | |
| | Material code 34 ²⁾ | | | | | | | |
| | L | LB | ø d | s | ø d | s | ø d | s |
| 15 | 105.0 | 35.5 | - | - | 12.70 | 1.65 | 21.3 | 2.77 |
| 20 | 120.0 | 39.0 | - | - | 19.05 | 1.65 | 26.7 | 2.87 |
| 25 | 125.0 | 38.5 | 25.0 | 1.2 | 25.40 | 1.65 | 33.4 | 3.88 |
| 40 | 160.0 | 47.0 | 38.0 | 1.2 | 38.10 | 1.65 | 42.4 | 3.56 |
| 32 | 155.0 | 48.0 | - | - | - | - | 48.3 | 3.68 |
| 50 | 180.0 | 48.0 | 51.0 | 1.2 | 50.80 | 1.65 | 60.3 | 3.91 |

Dimensions in mm

1) **Connection type**

Code 37: Spigot SMS 3008

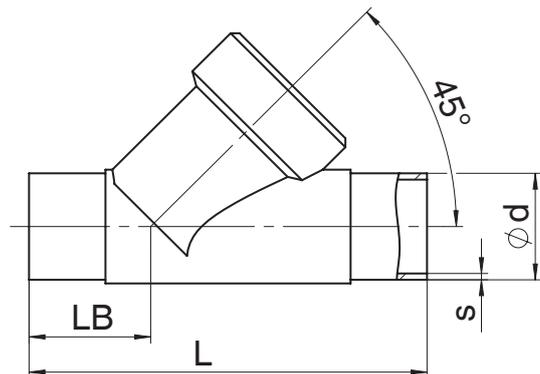
Code 59: Spigot ASME BPE

Code 65: Spigot ANSI/ASME B36.19M schedule 40s

2) **Valve body material**

Code 34: 1.4435, investment casting

6.4.3 Spigot



| DN | Connection types code ¹⁾ | | | | | | | | | | | |
|----|-------------------------------------|------|------|-----|------|-----|-------|------|------|-----|------|------|
| | | | 17 | | 37 | | 59 | | 60 | | 63 | |
| | Material code ²⁾ 37 | | | | | | | | | | | |
| | L | LB | ø d | s | ø d | s | ø d | s | ø d | s | ø d | s |
| 15 | 100.0 | 33.0 | 19.0 | 1.5 | - | - | - | - | 21.3 | 1.6 | 21.3 | 2.11 |
| 20 | 108.0 | 33.0 | 23.0 | 1.5 | - | - | - | - | 26.9 | 1.6 | 26.7 | 2.11 |
| 25 | 112.0 | 32.0 | 29.0 | 1.5 | - | - | - | - | 33.7 | 2.0 | 33.4 | 2.75 |
| 40 | 146.0 | 40.0 | 41.0 | 1.5 | - | - | - | - | 48.3 | 2.0 | - | - |
| 32 | 137.0 | 39.0 | 35.0 | 1.5 | - | - | - | - | 42.4 | 2.0 | 48.3 | 2.77 |
| 50 | 160.0 | 38.0 | 53.0 | 1.5 | - | - | - | - | 60.3 | 2.0 | 60.3 | 2.77 |
| 65 | 290.0 | 96.0 | 70.0 | 2.0 | 63.5 | 1.6 | 63.50 | 1.65 | 76.1 | 2.0 | 73.0 | 3.05 |
| 80 | 310.0 | 95.0 | 85.0 | 2.0 | 76.1 | 1.6 | 76.20 | 1.65 | 88.9 | 2.3 | 88.9 | 3.05 |

Dimensions in mm

1) **Connection type**

Code 17: Spigot EN 10357 series A (formerly DIN 11850 series 2)/DIN 11866 series A

Code 37: Spigot SMS 3008

Code 59: Spigot ASME BPE

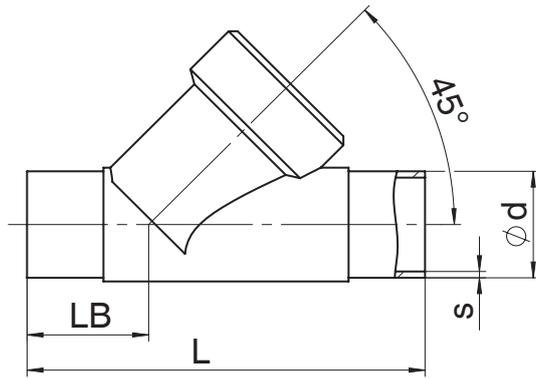
Code 60: Spigot ISO 1127/EN 10357 series C/DIN 11866 series B

Code 63: Spigot ANSI/ASME B36.19M schedule 10s

2) **Valve body material**

Code 37: 1.4408, investment casting

6.4.4 Spigot



| DN | Connection types code ¹⁾ | | | | | | | |
|-----------|-------------------------------------|------|------|-----|-------|------|------|-----|
| | 17 | | | | 59 | | 60 | |
| | Material code C2 ²⁾ | | | | | | | |
| | L | LB | ø d | s | ø d | s | ø d | s |
| 8 | 105.0 | 35.5 | - | - | - | - | 13.5 | 1.6 |
| 10 | 105.0 | 35.5 | 13.0 | 1.5 | - | - | 17.2 | 1.6 |
| 15 | 105.0 | 35.5 | 19.0 | 1.5 | 12.70 | 1.65 | 21.3 | 1.6 |
| 20 | 120.0 | 39.0 | 23.0 | 1.5 | 19.05 | 1.65 | 26.9 | 1.6 |
| 25 | 125.0 | 39.5 | 29.0 | 1.5 | 25.40 | 1.65 | 33.7 | 2.0 |
| 40 | 160.0 | 47.0 | 41.0 | 1.5 | 38.10 | 1.65 | 48.3 | 2.0 |
| 32 | 155.0 | 48.0 | 35.0 | 1.5 | - | - | 42.4 | 2.0 |
| 50 | 180.0 | 48.0 | 53.0 | 1.5 | 50.80 | 1.65 | 60.3 | 2.0 |
| 65 | 290.0 | 96.0 | 70.0 | 2.0 | 63.50 | 1.65 | 76.1 | 2.0 |
| 80 | 310.0 | 95.0 | 85.0 | 2.0 | 76.20 | 1.65 | 88.9 | 2.3 |

Dimensions in mm

1) **Connection type**

Code 17: Spigot EN 10357 series A (formerly DIN 11850 series 2)/DIN 11866 series A

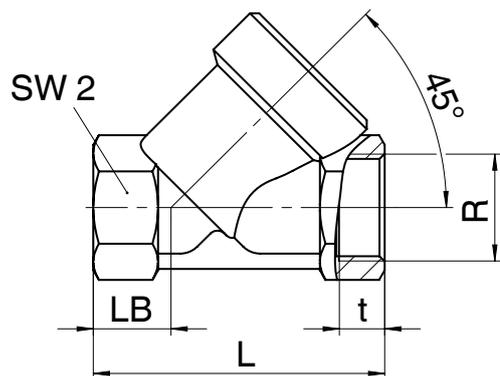
Code 59: Spigot ASME BPE

Code 60: Spigot ISO 1127/EN 10357 series C/DIN 11866 series B

2) **Valve body material**

Code C2: 1.4435, investment casting

6.4.5 Threaded socket, body configuration D



| DN | Connection types code 1 ¹⁾ | | | | |
|----|---------------------------------------|------|-------|-------|------|
| | Material code 37 ²⁾ | | | | |
| | L | LB | SW2 | R | t |
| 10 | 65.0 | 16.5 | 27.0 | G 3/8 | 11.4 |
| 15 | 65.0 | 16.5 | 27.0 | G 1/2 | 15.0 |
| 20 | 75.0 | 17.5 | 32.0 | G 3/4 | 16.3 |
| 25 | 90.0 | 24.0 | 41.0 | G 1 | 19.1 |
| 32 | 110.0 | 33.0 | 50.0 | G 1¼ | 21.4 |
| 40 | 120.0 | 30.0 | 55.0 | G 1½ | 21.4 |
| 50 | 150.0 | 40.0 | 70.0 | G 2 | 25.7 |
| 65 | 190.0 | 46.0 | 85.0 | G 2½ | 30.2 |
| 80 | 220.0 | 50.0 | 100.0 | G 3 | 33.3 |

Dimensions in mm

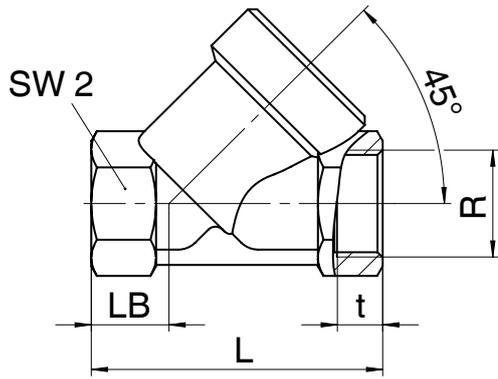
1) **Connection type**

Code 1: Threaded socket DIN ISO 228

2) **Valve body material**

Code 37: 1.4408, investment casting

6.4.6 Threaded socket, body configuration D



| DN | Connection types code ¹⁾ | | | | | | | | | |
|----|-------------------------------------|------|-------|--------|------|-------|------|-------|----------|------|
| | 3C | | | | | 3D | | | | |
| | Material code 37 ²⁾ | | | | | | | | | |
| | L | LB | SW2 | R | t | L | LB | SW2 | R | t |
| 15 | 65.0 | 16.5 | 27.0 | Rc 1/2 | 15.0 | 65.0 | 16.5 | 27.0 | 1/2" NPT | 13.6 |
| 20 | 75.0 | 17.5 | 32.0 | Rc 3/4 | 16.3 | 75.0 | 17.5 | 32.0 | 3/4" NPT | 14.1 |
| 25 | 90.0 | 24.0 | 41.0 | Rc 1 | 19.1 | 90.0 | 24.0 | 41.0 | 1" NPT | 17.0 |
| 32 | 110.0 | 33.0 | 50.0 | Rc 1¼ | 21.4 | 110.0 | 33.0 | 50.0 | 1¼" NPT | 17.5 |
| 40 | 120.0 | 30.0 | 55.0 | Rc 1½ | 21.4 | 120.0 | 30.0 | 55.0 | 1½" NPT | 17.3 |
| 50 | 150.0 | 40.0 | 70.0 | Rc 2 | 25.7 | 150.0 | 40.0 | 70.0 | 2" NPT | 17.8 |
| 65 | 190.0 | 46.0 | 85.0 | Rc 2½ | 30.2 | 190.0 | 46.0 | 85.0 | 2½" NPT | 23.7 |
| 80 | 220.0 | 50.0 | 100.0 | Rc 3 | 33.3 | 220.0 | 50.0 | 100.0 | 3" NPT | 25.8 |

Dimensions in mm

1) **Connection type**

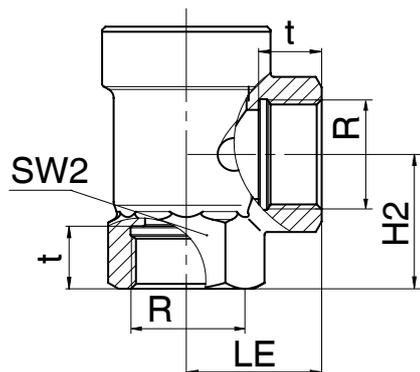
Code 3C: Threaded socket Rc ISO 7-1, EN 10226-1, JIS B 0203, BS 21, end-to-end dimension ETE DIN 3202-4 series M8

Code 3D: Threaded socket NPT, end-to-end dimension ETE DIN 3202-4 series M8

2) **Valve body material**

Code 37: 1.4408, investment casting

6.4.7 Threaded socket, body configuration E



| DN | Connection types code ¹⁾ | | | | | | | | | |
|----|-------------------------------------|------|------|-------|------|------|------|------|----------|------|
| | 1 | | | | | 3D | | | | |
| | Material code 37 ²⁾ | | | | | | | | | |
| | SW2 | LE | H2 | R | t | SW2 | LE | H2 | R | t |
| 15 | 27.0 | 30.0 | 30.0 | G 1/2 | 15.0 | 27.0 | 30.0 | 30.0 | 1/2" NPT | 13.6 |
| 20 | 32.0 | 35.0 | 37.5 | G 3/4 | 16.3 | 32.0 | 35.0 | 37.5 | 3/4" NPT | 14.1 |
| 25 | 41.0 | 41.0 | 41.0 | G 1 | 19.1 | 41.0 | 41.0 | 41.0 | 1" NPT | 17.0 |
| 32 | 50.0 | 50.0 | 48.0 | G 1¼ | 21.4 | 50.0 | 50.0 | 48.0 | 1¼" NPT | 17.5 |
| 40 | 55.0 | 50.0 | 55.0 | G 1½ | 21.4 | 55.0 | 50.0 | 55.0 | 1½" NPT | 17.3 |
| 50 | 70.0 | 60.0 | 62.0 | G 2 | 25.7 | 70.0 | 60.0 | 62.0 | 2" NPT | 17.8 |

Dimensions in mm

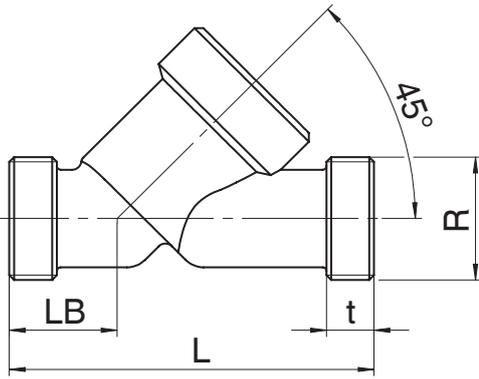
1) Connection type

Code 1: Threaded socket DIN ISO 228

Code 3D: Threaded socket NPT, end-to-end dimension ETE DIN 3202-4 series M8

2) Valve body material

Code 37: 1.4408, investment casting

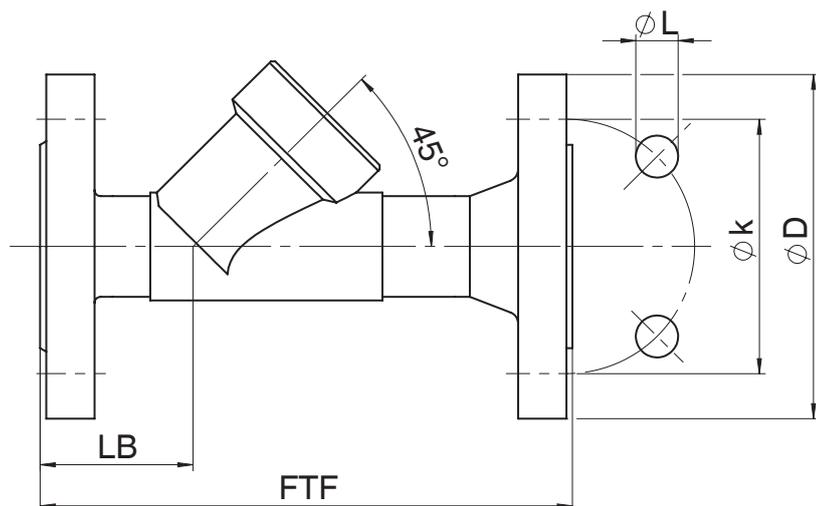
6.4.8 Threaded spigot

| DN | Connection types code 9 ¹⁾ | | | |
|----|---------------------------------------|------|-------|------|
| | Material code 37 ²⁾ | | | |
| | L | LB | R | t |
| 15 | 90.0 | 25.0 | G 3/4 | 12.0 |
| 20 | 110.0 | 30.0 | G 1 | 15.0 |
| 25 | 118.0 | 30.0 | G 1¼ | 15.0 |
| 32 | 130.0 | 38.0 | G 1½ | 13.0 |
| 40 | 140.0 | 35.0 | G 1¾ | 13.0 |
| 50 | 175.0 | 50.0 | G 2¾ | 15.0 |
| 65 | 216.0 | 52.0 | G 3 | 15.0 |
| 80 | 254.0 | 64.0 | G 3½ | 18.0 |

Dimensions in mm

- 1) **Connection type**
Code 9: Threaded spigot DIN ISO 228
- 2) **Valve body material**
Code 37: 1.4408, investment casting

6.4.9 Flange, length EN 558, series 1



| DN | Connection types code 10 ¹⁾ | | | | | |
|----|--|------|----------|----------|----------|---|
| | Material code 37 ²⁾ | | | | | |
| | FTF | LB | ϕD | ϕL | ϕk | n |
| 15 | 130.0 | 33.0 | 95.0 | 14.0 | 65.0 | 4 |
| 20 | 150.0 | 45.0 | 105.0 | 14.0 | 75.0 | 4 |
| 25 | 160.0 | 44.0 | 115.0 | 14.0 | 85.0 | 4 |
| 32 | 180.0 | 51.0 | 140.0 | 18.0 | 100.0 | 4 |
| 40 | 200.0 | 52.0 | 150.0 | 18.0 | 110.0 | 4 |
| 50 | 230.0 | 50.0 | 165.0 | 18.0 | 125.0 | 4 |

Dimensions in mm

n = number of bolts

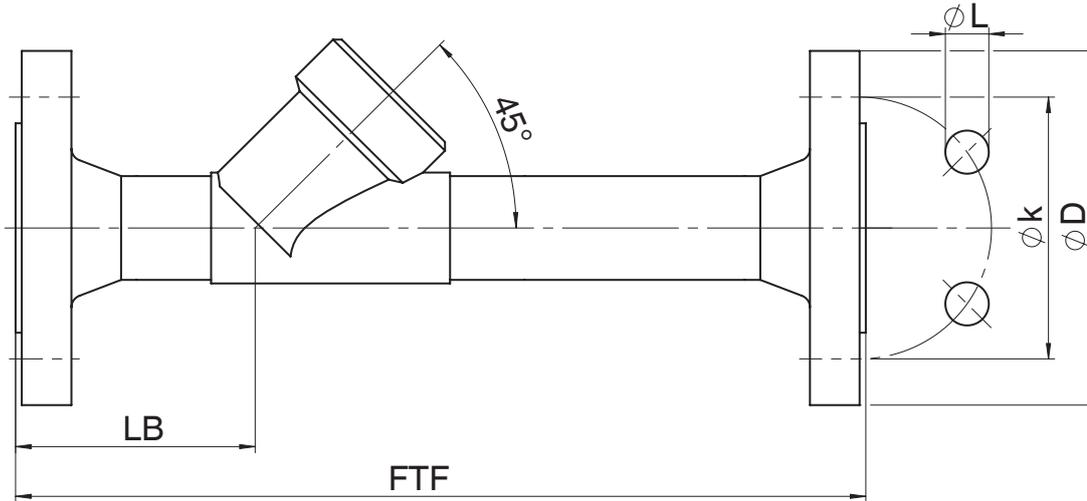
1) **Connection type**

Code 10: Flange EN 1092, PN 25, form B, face-to-face dimension FTF EN 558 series 1, ISO 5752, basic series 1

2) **Valve body material**

Code 37: 1.4408, investment casting

6.4.10 Flange, special length

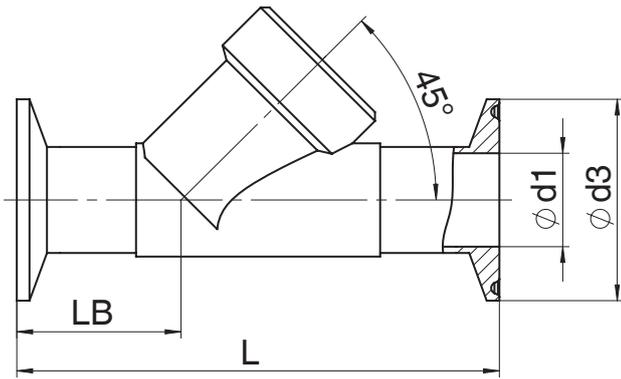


| DN | Connection types code ¹⁾ | | | | | | | | | |
|----|-------------------------------------|------|-------|------|-------|---|-------|------|-------|---|
| | 13 | | | | | | 47 | | | |
| | Material code 34 ²⁾ | | | | | | | | | |
| | FTF | LB | ø D | ø L | ø k | n | ø D | ø L | ø k | n |
| 15 | 210.0 | 72.0 | 95.0 | 14.0 | 65.0 | 4 | 89.0 | 15.7 | 60.5 | 4 |
| 20 | 280.0 | 78.0 | 105.0 | 14.0 | 75.0 | 4 | 98.6 | 15.7 | 69.8 | 4 |
| 25 | 280.0 | 77.0 | 115.0 | 14.0 | 85.0 | 4 | 108.0 | 15.7 | 79.2 | 4 |
| 32 | 310.0 | 89.0 | 140.0 | 18.0 | 100.0 | 4 | 117.3 | 15.7 | 88.9 | 4 |
| 40 | 320.0 | 91.0 | 150.0 | 18.0 | 110.0 | 4 | 127.0 | 15.7 | 98.6 | 4 |
| 50 | 330.0 | 95.0 | 165.0 | 18.0 | 125.0 | 4 | 152.4 | 19.1 | 120.7 | 4 |

Dimensions in mm
n = number of bolts

- 1) **Connection type**
Code 13: Flange EN 1092, PN 25, form B
Code 47: Flange ANSI Class 150 RF
- 2) **Valve body material**
Code 34: 1.4435, investment casting

6.4.11 Clamp DIN



| DN | Connection types code 82 ¹⁾ | | | | | | | | |
|----|--|------|-------|------|------|-------|-------|------|-------|
| | Material code ²⁾ | | | | | | | | |
| | | 34 | | | | C2 | | | |
| | NPS | LB | L | ø d1 | ø d3 | LB | L | ø d1 | ø d3 |
| 15 | 1/2" | 47.5 | 130.0 | 18.1 | 50.5 | 47.5 | 130.0 | 18.1 | 50.5 |
| 20 | 3/4" | 54.0 | 150.0 | 23.7 | 50.5 | 54.0 | 150.0 | 23.7 | 50.5 |
| 25 | 1" | 56.0 | 160.0 | 29.7 | 50.5 | 56.0 | 160.0 | 29.7 | 50.5 |
| 32 | 1¼" | 62.0 | 180.0 | 38.4 | 64.0 | 62.0 | 180.0 | 38.4 | 64.0 |
| 40 | 1½" | 67.0 | 200.0 | 44.3 | 64.0 | 67.0 | 200.0 | 44.3 | 64.0 |
| 50 | 2" | 73.0 | 230.0 | 56.3 | 77.5 | 73.0 | 230.0 | 56.3 | 77.5 |
| 65 | 2½" | - | - | - | - | 120.0 | 290.0 | 72.1 | 91.0 |
| 80 | 3" | - | - | - | - | 119.0 | 310.0 | 84.3 | 106.0 |

| DN | Connection types code 86 ¹⁾ | | | | | | | | |
|----|--|------|-------|------|------|-------|-------|------|-------|
| | Material code ²⁾ | | | | | | | | |
| | | 34 | | | | C2 | | | |
| | NPS | LB | L | ø d1 | ø d3 | LB | L | ø d1 | ø d3 |
| 15 | 1/2" | 47.5 | 130.0 | 16.0 | 34.0 | 47.5 | 130.0 | 16.0 | 34.0 |
| 20 | 3/4" | 54.0 | 150.0 | 20.0 | 34.0 | 54.0 | 150.0 | 20.0 | 34.0 |
| 25 | 1" | 56.0 | 160.0 | 26.0 | 50.5 | 56.0 | 160.0 | 26.0 | 50.5 |
| 32 | 1¼" | 62.0 | 180.0 | 32.0 | 50.5 | 62.0 | 180.0 | 32.0 | 50.5 |
| 40 | 1½" | 67.0 | 200.0 | 38.0 | 50.5 | 67.0 | 200.0 | 38.0 | 50.5 |
| 50 | 2" | 73.0 | 230.0 | 50.0 | 64.0 | 73.0 | 230.0 | 50.0 | 64.0 |
| 65 | 2½" | - | - | - | - | 120.0 | 290.0 | 66.0 | 91.0 |
| 80 | 3" | - | - | - | - | 119.0 | 310.0 | 81.0 | 106.0 |

Dimensions in mm

1) Connection type

Code 82: Clamp DIN 32676 series B, face-to-face dimension FTF EN 558 series 1

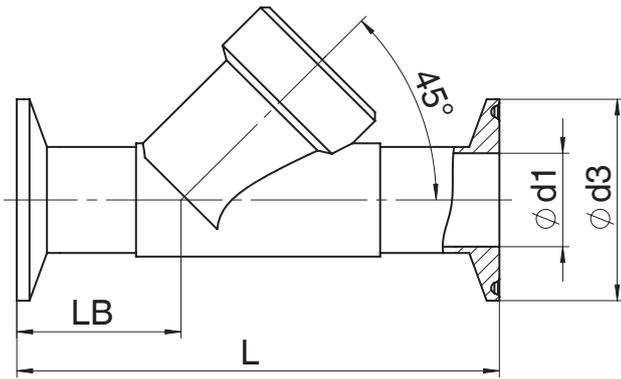
Code 86: Clamp DIN 32676 series A, face-to-face dimension FTF EN 558 series 1

2) Valve body material

Code 34: 1.4435, investment casting

Code C2: 1.4435, investment casting

6.4.12 Clamp ASME



| DN | Connection types code ¹⁾ | | | | | | | | | | | | |
|----|-------------------------------------|------|-------|-------|------|------|-------|-------|------|-------|-------|-------|------|
| | 80 | | | | | | 88 | | | | | | |
| | Material code ²⁾ | | | | | | | | | | | | |
| | NPS | 34 | | | | 34 | | | | C2 | | | |
| LB | | L | ø d1 | ø d3 | LB | L | ø d1 | ø d3 | LB | L | ø d1 | ø d3 | |
| 15 | 1/2" | 33.5 | 101.6 | 9.40 | 25.0 | 47.5 | 130.0 | 9.40 | 25.0 | 47.5 | 130.0 | 9.40 | 25.0 |
| 20 | 3/4" | 30.0 | 101.6 | 15.75 | 25.0 | 54.0 | 150.0 | 15.75 | 25.0 | 54.0 | 150.0 | 15.75 | 25.0 |
| 25 | 1" | 33.0 | 114.3 | 22.10 | 50.5 | 56.0 | 160.0 | 22.10 | 50.5 | 56.0 | 160.0 | 22.10 | 50.5 |
| 32 | 1 1/4" | - | - | - | - | - | - | - | - | - | - | - | - |
| 40 | 1 1/2" | 37.0 | 139.7 | 34.80 | 50.5 | 67.0 | 200.0 | 34.80 | 50.5 | 67.0 | 200.0 | 34.80 | 50.5 |
| 50 | 2" | 36.5 | 158.8 | 47.50 | 64.0 | 73.0 | 230.0 | 47.50 | 64.0 | 73.0 | 230.0 | 47.50 | 64.0 |
| 65 | 2 1/2" | - | - | - | - | - | - | - | - | 120.0 | 290.0 | 60.20 | 77.5 |
| 80 | 3" | - | - | - | - | - | - | - | - | 119.0 | 310.0 | 72.90 | 91.0 |

Dimensions in mm

1) Connection type

- Code 80: Clamp ASME BPE, face-to-face dimension FTF ASME BPE
- Code 88: Clamp ASME BPE, face-to-face dimension FTF EN 558 series 1

2) Valve body material

- Code 34: 1.4435, investment casting
- Code C2: 1.4435, investment casting

7 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 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.

9 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.

10 Electrical connection

NOTICE

Appropriate cable socket/appropriate mating connector!

- ▶ The appropriate cable socket and/or appropriate mating connector is included for X1, X3 and X4.
- ▶ The appropriate cable socket and/or appropriate mating connector is **not** included for X2.

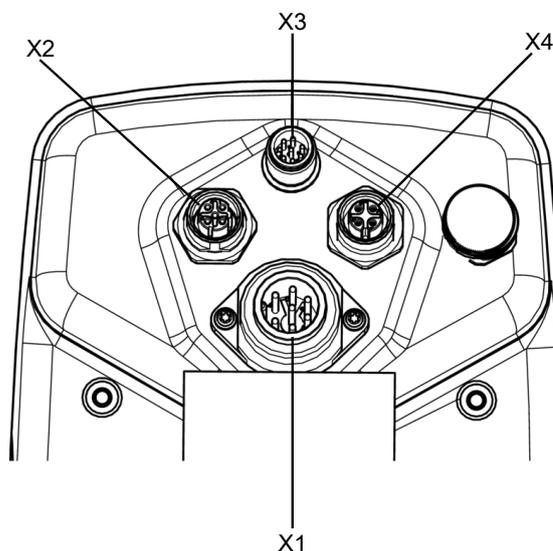
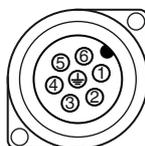


Fig. 4: Overview of electrical connections

10.1 Connection X1



7-pin plug, Binder, type 693

| Pin | Signal name |
|--------|-------------------------------|
| Pin 1 | Uv, 24 V DC supply voltage |
| Pin 2 | Uv GND |
| Pin 3 | Relay output K1, common |
| Pin 4 | Relay output K1, make contact |
| Pin 5 | Relay output K2, common |
| Pin 6 | Relay output K2, make contact |
| Pin PE | Function earth |

10.2 Connection X2



5-pin M12 built-in socket, D-coded

| Pin | Signal name |
|-------|-----------------|
| Pin 1 | Tx + (Ethernet) |
| Pin 2 | Rx + (Ethernet) |

| Pin | Signal name |
|-------|-----------------|
| Pin 3 | Tx - (Ethernet) |
| Pin 4 | Rx - (Ethernet) |
| Pin 5 | Shield |

10.3 Connection X3



8-pin M12 plug, A-coded

| Pin | Signal name |
|-------|--|
| Pin 1 | I + set value input |
| Pin 2 | I – set value input |
| Pin 3 | I + actual value output |
| Pin 4 | GND (actual value output, digital input 1 – 3, error message output) |
| Pin 5 | Error message output 24 V DC |
| Pin 6 | Digital input 3 |
| Pin 7 | Digital input 1 |
| Pin 8 | Digital input 2 |

10.4 Connection X4



4-pin M12 built-in socket, A-coded

| Pin | Signal name |
|-------|---|
| Pin 1 | UV, 24 V DC actual value supply |
| Pin 2 | n.c. |
| Pin 3 | GND (actual value supply, actual value input) |
| Pin 4 | X+, process actual value input |
| Pin 5 | n.c. |

10.5 Connecting the valve electrically

⚠ CAUTION

Do not clean valve with a high pressure cleaning device

- ▶ Valve is designed for IP 65. The actuator and the electric connections are damaged by the extremely high pressures of the high pressure cleaning device.

⚠ CAUTION

Hot actuator parts!

- ▶ Risk of burns!
- Only work on plant that has cooled down.
- If necessary, wear gloves when working on the electrical connection.

1. Protect the electrical connections from direct contact with rain water.
2. Lay the cables and pipework so that neither condensate nor rain water can get into the plug unions.
3. Check that all plug cable glands and fittings are mechanically secured.
 - ⇒ The cable must be held firmly on all sides.
4. Connect connections X1 to X4 in accordance with the overview.
 - ⇒ Electrical connection is completed.

11 Installation in piping

11.1 Preparing for installation

⚠ WARNING

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 suitable protective gear.
- Completely drain the plant.

⚠ CAUTION

Hot plant components!

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

⚠ 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).

⚠ 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.

NOTICE**Suitability of the product!**

- ▶ The product must be appropriate for the piping system operating conditions (medium, medium concentration, temperature and pressure) and the prevailing ambient conditions.

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.
 15. Please note the installation position (see chapter "Installation position").

11.2 Installation position

GEMÜ recommend installing the actuator vertically upright or vertically down to optimise the service life.

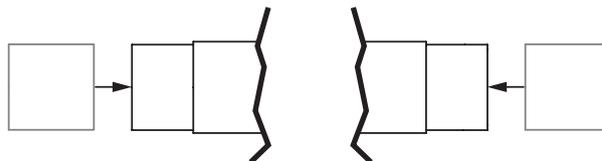
11.3 Installation with butt weld spigots

Fig. 5: Butt weld spigots

1. Carry out preparations for installation (see chapter "Preparing for installation").
2. Adhere to good welding practices!
3. Remove actuator **A** (see chapter "Removing the actuator").
4. Weld the body of the product in the piping.
5. Allow butt weld spigots to cool down.
6. Mount actuator **A** (see chapter "Mounting the actuator").
7. Re-attach or reactivate all safety and protective devices.
8. Flush the system.

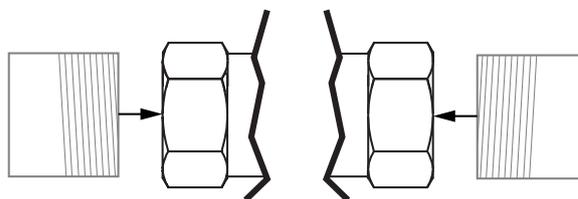
11.4 Installation with threaded sockets

Fig. 6: Threaded socket

NOTICE**Sealing material**

- ▶ The sealing material is not included in the scope of delivery.
 - Only use appropriate sealing material.
1. Keep thread sealant ready.
 2. Carry out preparations for installation (see chapter "Preparing for installation").
 3. Screw the threaded connections into the pipe in accordance with valid standards.
 4. Screw the body of the product onto the piping using appropriate thread sealant.
 5. Re-attach or reactivate all safety and protective devices.

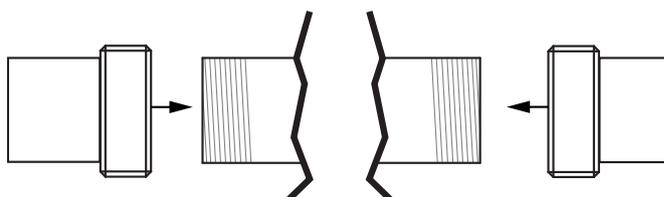
11.5 Installation with threaded spigots

Fig. 7: Threaded spigots

NOTICE**Thread sealant**

- ▶ The thread sealant is not included in the scope of delivery.
- Only use appropriate thread sealant.

1. Keep thread sealant ready.
2. Carry out preparations for installation (see chapter "Preparing for installation").
3. Screw the pipe into the threaded connection of the valve body in accordance with valid standards.
 - ⇒ Use appropriate thread sealant.
4. Re-attach or reactivate all safety and protective devices.

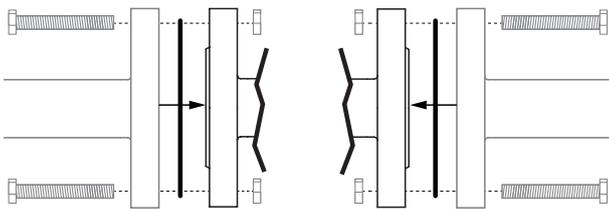
11.6 Installation with flanged connections

Fig. 8: Flanged connection

NOTICE**Sealing material**

- ▶ The sealing material is not included in the scope of delivery.
- Only use appropriate sealing material.

NOTICE**Connector elements**

- ▶ The connector elements are not included in the scope of delivery.
- Only use connector elements made of approved materials.
- Observe permissible tightening torque of the bolts.

1. Keep sealing material ready.
2. Carry out preparations for installation (see chapter "Preparing for installation").
3. Ensure clean, undamaged sealing surfaces on the connection flanges.
4. Align flanges carefully before installing them.
5. Clamp the product centrally between the piping with flanges.
6. Centre the gaskets.
7. Connect the valve flange and the piping flange using appropriate sealing materials and matching bolting.
8. Use all flange holes.
9. Tighten the bolts diagonally.
10. Re-attach or reactivate all safety and protective devices.

12 Network connection**12.1 Network settings**

The network interface has the following default settings:

IP address: 192.168.2.1

Subnet screen: 255.255.252.0

The default settings can be changed. See the eSy-Web operating instructions.

12.2 Connecting the network

1. Connect the network plug and cables with the electrical connection X2 of the product.
2. Change the IP address using the web server.

12.3 Resetting the network settings

1. Ensure that the "ON-Site" DIP switch **8** is not in the "ON" position.
2. Press and hold down the "OPEN" button **9** for at least 8 s.
 - ⇒ LED 1 flashes fast in blue.
3. Press the "INIT/CLOSE" button **10**.
 - ⇒ Network settings are reset in the default settings.

13 Commissioning**13.1 Commissioning on the device**

1. Ensure that the "ON-Site" DIP switch **8** is not in the "ON" position.
 2. Press and hold down the "INIT/CLOSE" button **10** for at least 8 s.
 - ⇒ Initialisation of the actuator begins.
 3. Green and orange LEDs flash alternately.
 - ⇒ Initialisation is completed.
- ⇒ Commissioning is completed.

13.2 Commissioning via the eSy-Web web interface

- See separate eSy-Web operating instructions.

13.3 Commissioning via digital input

- ✓ The function of input 3 is set to init.
1. Connect 24 V signal briefly (max. 2 s) to connection X3 on pins 7 and 4.
 - ⇒ Initialisation of the actuator begins.
 2. Green and orange LEDs flash alternately.
 - ⇒ Initialisation is completed.
- ⇒ Commissioning is completed.

14 Operation**14.1 Operation on the device****14.1.1 Moving the valve to the open position**

1. Move the "ON-Site" DIP switch **8** to the "ON" position.

- ⇒ Control on the device is activated.
- 2. Press the "OPEN" button **9**.
 - ⇒ The valve moves slowly to the open position.
- 3. Also press the "INIT/CLOSE" button **10**.
 - ⇒ The valve moves quickly to the open position.
 - ⇒ If the valve is fully opened, the high visibility LEDs are lit in green.
- 4. Move the "ON-Site" DIP switch **8** to the "OFF" position.
 - ⇒ Control on the device is deactivated.
- ⇒ The valve is in the open position.

14.1.2 Moving the valve to the closed position

1. Move the "ON-Site" DIP switch **8** to the "ON" position.
 - ⇒ Control on the device is activated.
2. Press the "INIT/CLOSE" button **10**.
 - ⇒ The valve moves slowly to the closed position.
3. Also press the "OPEN" button **9**.
 - ⇒ The valve moves quickly to the closed position.
 - ⇒ If the valve is fully closed, the high visibility LEDs are lit in orange.
4. Move the "ON-Site" DIP switch **8** to the "OFF" position.
 - ⇒ Control on the device is deactivated.
- ⇒ The valve is in the closed position.

14.2 Operation via the web server

See separate "eSy-Web" operating instructions.

14.3 Manual override

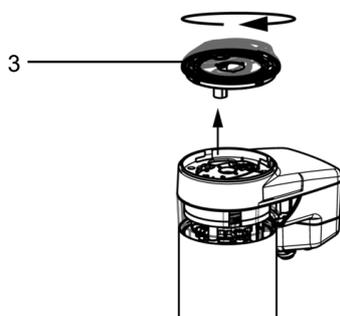
 **WARNING**



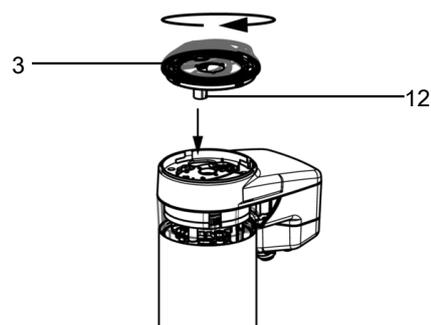
Rotating cover!

- ▶ Risk of crushing.
- Disconnect the power supply before using the manual override.

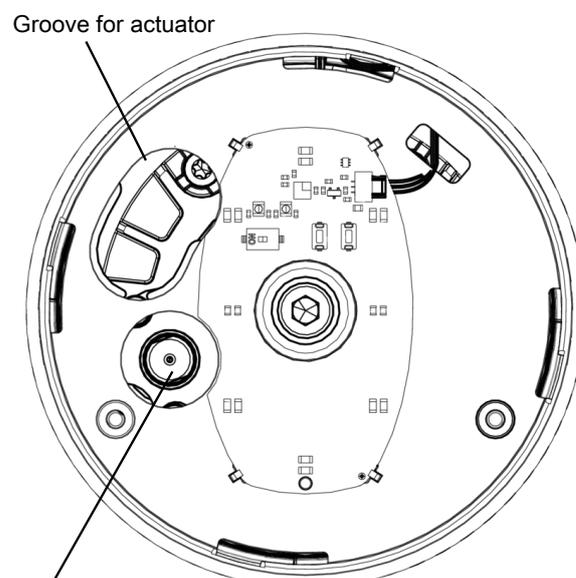
1. Disconnect the power supply.
2. Turn housing cover **3** clockwise.
3. Remove housing cover **3**.



4. Place the actuator of housing cover **12** in the starting point for manual override.



| Item | Name |
|------|------------------------|
| 3 | Housing cover |
| 12 | Housing cover actuator |



Starting point for manual override

5. Turn housing cover **3** anticlockwise.
 - ⇒ The product opens.
6. Turn housing cover **3** clockwise.
 - ⇒ The product closes.
7. Pull manual override off the starting point.
8. Ensure correct positioning of the O-ring.
9. Push actuator **12** into the groove provided for this purpose.
10. Turn housing cover **3** anticlockwise until it stops.
 - ⇒ The actuator cover is closed.
11. Reconnect the power supply.

15 Inspection and maintenance

⚠ WARNING

The equipment is subject to pressure!

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

⚠ CAUTION

Use of incorrect spare parts!

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

⚠ CAUTION



Hot plant components!

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

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 examination of the GEMÜ products depending on the operating conditions and the potential danger in order to prevent leakage and damage. The product also must be disassembled and checked for wear in the corresponding intervals.

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

15.1 Spare parts

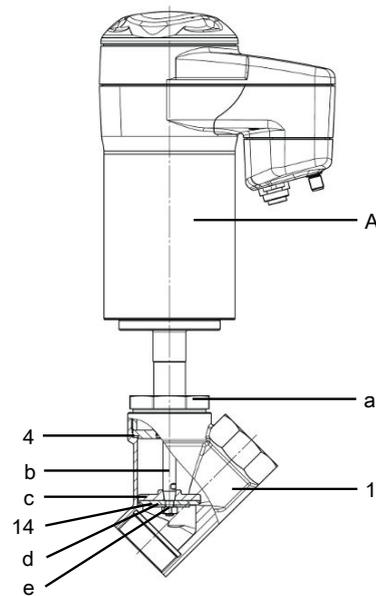


Fig. 9: Spare parts

| Item | Name | Order description |
|------|------------------|-------------------|
| 1 | Valve body | K514... |
| 4 | Sealing washer | 549...SVS... |
| 14 | Seat seal | |
| A | Actuator | 9549 |
| a | Union nut | - |
| b | Spindle | - |
| c | Valve plug | - |
| d | Retaining washer | - |
| e | Nut | - |

15.2 Removing the actuator

1. Move the actuator **A** to the open position.
2. Undo union nut **a**.
3. Lift actuator **A** off valve body **1**.
4. Clean all parts of contamination (do not damage parts during cleaning).
5. Check parts for potential damage, replace if necessary (only use genuine parts from GEMÜ).

15.3 Replacing the seals

1. Remove the actuator (see "Removing the actuator", page 38).
 2. Remove sealing washer **4** from the valve body.
 3. Loosen nut **e** on spindle **b** (hold spindle **b** with appropriate tool that will not damage the spindle surfaces).
 4. Clean all parts of contamination (do not damage parts during cleaning).
 5. Insert new seat seal **14**.
 6. Insert retaining washer **d**.
 7. Apply appropriate thread locking compound on the thread of spindle **b**.
 8. Fix spindle **b** in place with nut **e** (hold spindle **b** in place with appropriate tools which do not damage the spindle surfaces).
 9. Insert new sealing washer **4** in valve body **1**.
- Mount the actuator (see "Mounting the actuator", page 39).

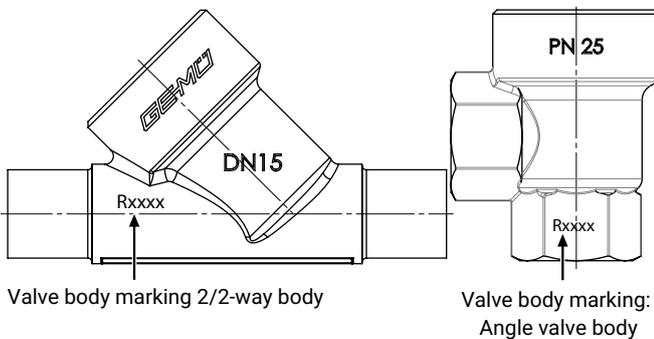
15.4 Mounting the actuator

⚠ CAUTION



Incorrect combination of actuator and valve body!

- ▶ Risk of damage to the actuator and valve body.
- For control valves with a reduced valve seat, make sure that the combination of actuator and valve body is correct.
- Compare the product label of the actuator with the valve body marking.



| Actuator product label | Valve body marking |
|------------------------|--------------------|
| RAxxx | R002 |
| RBxxx | R004 |
| RCxxx | R006 |
| RDxxx | R008 |
| RExxx | R010 |
| RFxxx | R012 |
| RGxxx | R015 |
| RHxxx | R020 |
| RJxxx | R025 |
| RKxxx | R032 |
| RMxxx | R040 |

1. Move the actuator **A** to the open position.
2. Lubricate the thread of the union nut **a** using a suitable lubricant.
3. Place actuator **A** on valve body **1** approx. 90° in front of the end position (orientation of the connections) and screw hand tight with union nut **a**.
4. Tighten union nut **a** with an open-end wrench (for torques, see table).
 - ⇒ This rotates the actuator clockwise approx. 90° to the desired position.

| Nominal size | Torque |
|--------------|--------|
| DN 10 | 90 Nm |
| DN 15 | 90 Nm |
| DN 20 | 100 Nm |
| DN 25 | 120 Nm |
| DN 32 | 120 Nm |
| DN 40 | 150 Nm |
| DN 50 | 200 Nm |
| DN 65 | 260 Nm |
| DN 80 | 280 Nm |

5. Move the actuator **A** to the closed position.
6. With the valve fully assembled, check the function and tightness.

16 Troubleshooting

| Error | Possible cause | Troubleshooting |
|---|--|--|
| The product leaks downstream (doesn't close or doesn't close fully) | Operating pressure too high | Operate the product with operating pressure specified in datasheet |
| | Valve body leaks or is damaged | Check valve body for potential damage, replace valve body if necessary |
| The product doesn't close or doesn't close fully | The actuator design is not suitable for the operating conditions | Use an actuator that is designed for the operating conditions |
| | Foreign matter in the product | Remove and clean the product |
| | Voltage is not connected | Connect voltage |
| The product doesn't open or doesn't open fully | Actuator defective | Replace the actuator |
| | Operating pressure too high | Operate the product with operating pressure specified in datasheet |
| | Foreign matter in the product | Remove and clean the product |
| | The actuator design is not suitable for the operating conditions | Use an actuator that is designed for the operating conditions |
| | Voltage is not connected | Connect voltage |
| | Cable ends incorrectly wired | Wire cable ends correctly |
| The product leaks between actuator and valve body | Bolting between valve body and actuator loose | Retighten bolting between valve body and actuator |
| | Actuator/valve body damaged | Replace actuator/valve body |
| The product leaks between actuator flange and valve body | Mounting parts loose | Retighten mounting parts |
| | Valve body / actuator damaged | Replace valve body/actuator |
| Body of the GEMÜ product is leaking | Body of the GEMÜ product is faulty or corroded | Check the body of the GEMÜ product for potential damage, replace body if necessary |
| | Incorrect installation | Check installation of valve body in piping |
| Valve body connection to piping leaks | Incorrect installation | Check installation of valve body in piping |
| LED 1 is not lit | No initialisation | Initialise valve |
| | Supply voltage too low | Check supply voltage |
| LED 1 lights up yellow | Set value signal outside of the area | Check set value signal |
| | Temperature error | Check temperature |
| LED 1 flashes yellow | Actual value signal outside of the area | Check actual value signal |
| LED 1 and 2 are flashing yellow and red simultaneously | No calibration | Contact GEMÜ |
| | Internal error | Contact GEMÜ |

17 Removal from piping

1. Remove in reverse order to installation.
2. Unscrew the electrical wiring.
3. Disassemble the product. Observe warning notes and safety information.

18 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.

19 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.

20 Declaration of Incorporation according to 2006/42/EC (Machinery Directive)

Declaration of Incorporation
according to the EC Machinery Directive 2006/42/EC, Annex II, 1.B for partly
completed machinery

We, GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG
Fritz-Müller-Straße 6-8
74653 Ingelfingen-Criesbach, Germany

declare that the following product

Make: GEMÜ Motorized angle seat globe valve

Commercial name: GEMÜ 549

meets the following essential requirements of the Machinery Directive 2006/42/EC:

1.1.2. a), 1.1.2. d), 1.1.3., 1.1.4., 1.1.5., 1.1.6., 1.1.7., 1.1.8., 1.2.1., 1.3., 1.3.2., 1.3.4., 1.3.5., 1.3.6., 1.3.7., 1.3.8., 1.3.9., 1.5.1., 1.5.3., 1.5.5., 1.5.6., 1.5.7., 1.6.1., 1.6.3., 1.6.5., 2.1.1., 2.3., 3.2.1., 3.2.2., 3.3.2., 3.3.4., 4.1.2.1., 4.1.2.3., 4.1.2.4., 4.1.2.5., 4.1.2.6. a), 4.1.2.6. c), 4.1.2.6. d), 4.1.2.6. e), 4.1.3., 4.2.1.4., 4.2.2., 4.2.3., 4.3.1., 4.3.2., 4.3.3., 4.4.1., 4.4.2., 5.2., 5.3., 5.4., 6.1.1., 6.3.1., 6.4.3.

We also declare that the specific technical documentation has been compiled in accordance with part B of Annex VII.

The manufacturer or his authorised representative undertake to transmit, in response to a reasoned request by the national authorities, relevant information on the partly completed machinery. This transmission takes place:

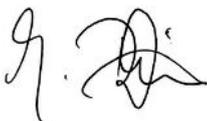
Electronically

Authorised documentation officer **GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG**
Fritz-Müller-Straße 6-8
74653 Ingelfingen, Germany

This does not affect the industrial property rights!

Important note! The partly completed machinery may be put into service only if it was determined, where appropriate, that the machinery into which the partly completed machinery is to be installed meets the provisions of this Directive.

2019-10-02



Joachim Brien
Head of Technical Department

21 Declaration of conformity according to 2014/68/EU (Pressure Equipment Directive)

EU Declaration of Conformity

in accordance with 2014/68/EU (Pressure Equipment Directive)

We, GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG
Fritz-Müller-Straße 6-8
74653 Ingelfingen-Criesbach, Germany

declare that the product listed below complies with the safety requirements of the Pressure Equipment Directive 2014/68/EU.

Description of the pressure equipment: GEMU 549
Notified body: TÜV Rheinland Industrie Service GmbH
Number: 0035
Certificate no.: 01 202 926/Q-02 0036
Conformity assessment procedure: Module H
Technical standard used: EN 1983, AD 2000

Note for products with a nominal size \leq DN 25:

The products are developed and produced according to GEMÜ process instructions and quality standards which comply with the requirements of ISO 9001 and ISO 14001.

According to Article 4, Paragraph 3 of the Pressure Equipment Directive 2014/68/EU these products must not be identified by a CE-label.

2020-06-22



Joachim Brien
Head of Technical Department

22 Declaration of conformity according to 2014/30/EU (EMC Directive)

EU Declaration of Conformity

in accordance with 2014/30/EU (EMC Directive)

We, GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG
Fritz-Müller-Straße 6-8
74653 Ingelfingen-Criesbach, Germany

declare that the product listed below complies with the safety requirements of the EMC Directive 2014/30/EU.

Description of the product: GEMÜ 549

Technical standards used:

Interference resistance:

- DIN EN 61326-1 (industrial processes)
- DIN EN 61800-3

Interference emission:

- DIN EN 61800-3

2020-08-13



Joachim Brien
Head of Technical Department



GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG
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Subject to alteration

10.2020 | 88614476

