

Globe Valve, Metal

Construction

The GEMÜ 532 pneumatically operated 2/2-way globe valve has a pneumatic aluminium piston actuator. 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. The wiper ring fitted in front of the gland packing protects it against contamination and damage. The actuator does not require an actuator flange (as used in the GEMÜ 512).

Features

- Suitable for inert and corrosive* liquid and gaseous media
- Valve bodies available in SG iron and stainless steel
- Flanged versions
- Customized control valve versions available

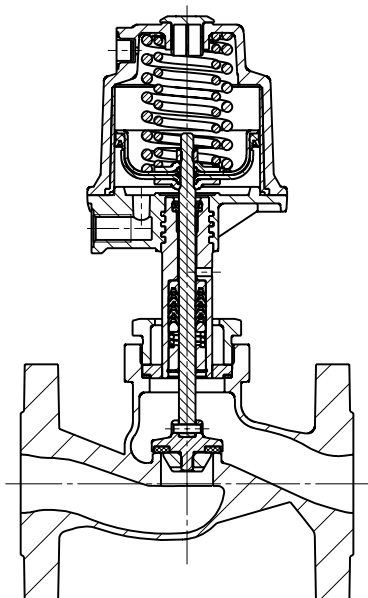
Advantages

- Robust aluminium actuator
- Good flow capability and compact design
- Accessories:
 - Electrical position indicators
 - Combi switchboxes
 - Electro-pneumatic positioners/process controllers (see data sheet GEMÜ 532 control valve)
 - Stroke limiter

*see information on working medium on page 2



Sectional drawing



Technical data

Working medium

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

Max. perm. pressure of working medium see table

Media temperature -10° to 180 °C

Max. permissible viscosity 600 mm²/s (cSt)

Other versions for lower/higher temperatures and higher viscosities on request

Control medium

Inert gases

Max. perm. temperature of control medium: 60 °C

Filling volume:

Actuator size 0 and 3: 0.05 dm³

Actuator size 1 and 4: 0.125 dm³

Actuator size 2: 0.625 dm³

Ambient conditions

Max. ambient temperature 60 °C

Leakage rate

Leakage rate A to P11/P12 EN 12266-1

| Nominal size [mm] | Max. operating pressure [bar] normally closed | | | | | Control pressure [bar] normally closed | | | | | Kv values [m ³ /h] |
|----------------------|--|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|---|--|-----------------|--|-----------------|----------------------------------|
| | Actuator size 0 piston ø 50 mm | Actuator size 3 piston ø 50 mm | Actuator size 1 piston ø 70 mm | Actuator size 4 piston ø 70 mm | Actuator size 2 piston ø 120 mm | Actuator size 0 | Actuator size 3 | Actuator size 1 | Actuator size 4 | Actuator size 2 | |
| 15 | 12.0 | 10 | 36.0 | 10 | - | 4.7 - 10 | min. control pressure see diagram max. control pressure 7 bar | 5.5 - 10 | min. control pressure see diagram max. control pressure 8 bar | - | 4.6 |
| 20 | 6.0 | 10 | 20.0 | 10 | 36.0 | 4.7 - 10 | | 5.5 - 10 | | 4.0 - 8 | 8.0 |
| 25 | 2.5 | 10 | 10.0 | 10 | 36.0 | 4.7 - 10 | | 5.5 - 10 | | 4.0 - 8 | 13.0 |
| 32 | - | - | 7.0 | 10 | 22.0 | - | | 5.5 - 10 | | 4.0 - 8 | 22.0 |
| 40 | - | - | 4.5 | 10 | 12.0 | - | | 5.5 - 10 | | 4.0 - 8 | 35.0 |
| 50 | - | - | 3.0 | 10 | 10.0 | - | | 5.5 - 10 | | 5.5 - 8 | 50.0 |

Operating pressure for seal material PTFE (code 5), for seal material steel (code 10) only 60% of the values indicated above.

Kv values determined acc. to IEC 534 standard, flanges EN 1092.

The Kv value data refers to control function 1 (NC) and the largest actuator for each nominal size. Kv values may be different for other combinations.

| Nominal size DN | Max. operating pressure [bar] Normally open/ Double acting | | Control pressure [bar] Normally open/ Double acting | |
|--------------------|--|---------------------------------------|---|--|
| | Actuator size 1 piston ø 70 mm | Actuator size 2 piston ø 120 mm | Actuator size 1 | Actuator size 2 |
| 15 | 25 | - | max. 7 bar for values see diagram | max. 7 bar for values see diagram |
| 20 | 25 | 25 | | |
| 25 | 25 | 25 | | |
| 32 | 20 | 25 | | |
| 40 | 12 | 25 | | |
| 50 | 8 | 25 | | |

For max. operating pressures the pressure/temperature correlation must be observed (see table on page 3).

All pressures are gauge pressures.

Pressure / temperature correlation for globe valve bodies

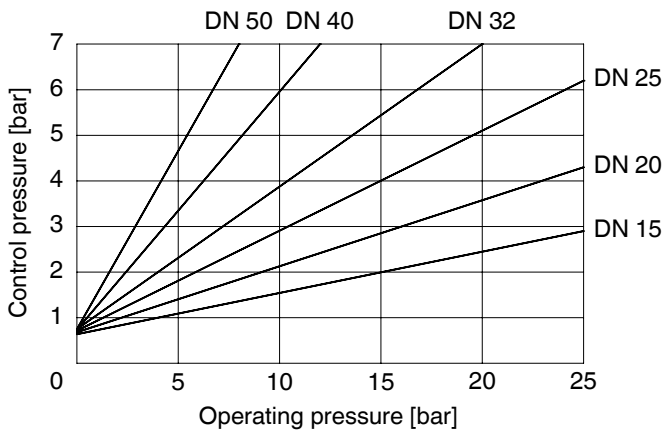
| Connection code | Material code | Max. allowable operating pressures in bar at temperature °C* | | | | | | |
|-----------------|---------------|--|------|------|------|------|------|------|
| | | RT | 50 | 100 | 150 | 200 | 250 | 300 |
| 8 | 37 | 14.6 | 13.9 | 12.4 | 11.2 | 10.3 | 9.6 | 9.0 |
| 10 | 37 | 25.0 | 23.7 | 21.3 | 19.2 | 17.7 | 16.4 | 15.4 |
| 11 | 37 | 36.4 | 34.7 | 31.1 | 28.1 | 25.8 | 24.0 | 22.6 |
| 39 | 37 | 19.0 | 19.0 | 16.0 | 14.8 | 13.6 | 12.1 | 10.2 |
| 8 | 90 | 16.0 | 16.0 | 16.0 | 15.5 | 14.7 | 13.9 | 11.2 |
| 39 | 90 | 17.2 | 17.0 | 16.0 | 14.8 | 13.9 | 12.1 | 10.2 |

* The valves can be used down to -10°C RT = Room Temperature All pressures are gauge pressures.
 Pressure-temperature correlation for connection code 48: DN 15 - 40 see connection code 10, DN 50 see connection code 8.

Operating pressure / Control pressure characteristics

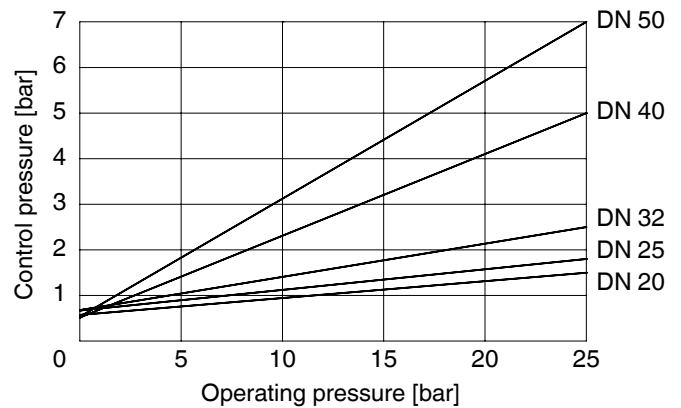
Actuator size 1 Normally open (NO) Double acting (DA)

Min. control pressure dependent on operating pressure
 (Flow direction: under the seat)



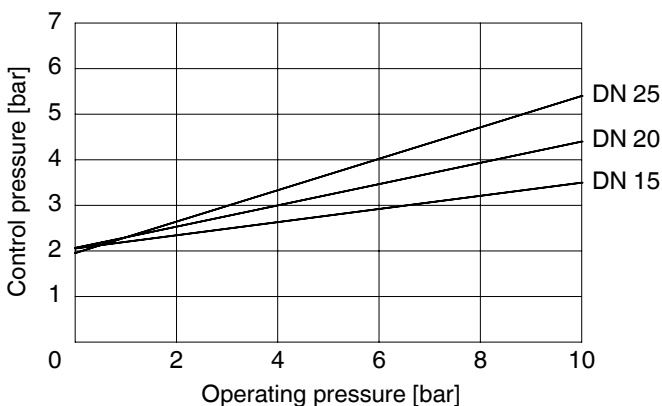
Actuator size 2 Normally open (NO) Double acting (DA)

Min. control pressure dependent on operating pressure
 (Flow direction: under the seat)



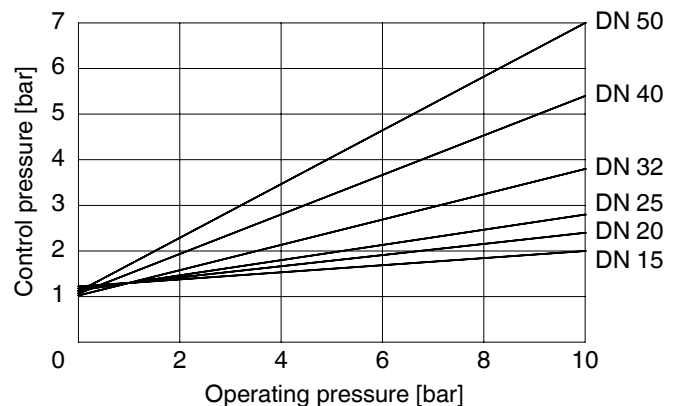
Actuator size 3 Normally closed (NC)

Min. control pressure dependent on operating pressure
 (Flow direction: over the seat)



Actuator size 4 Normally closed (NC)

Min. control pressure dependent on operating pressure
 (Flow direction: over the seat)



Order data

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

| Connection | Code |
|--|------|
| Flanges Flanges EN 1092 / PN16 / form B, length EN 558, series 1, ISO 5752, basic series 1 | 8 |
| Flanges EN 1092 / PN25 / form B, length EN 558, series 1 ISO 5752, basic series 1 | 10 |
| Flanges EN 1092 / PN40 / form B, length EN 558, series 1 ISO 5752, basic series 1 | 11 |
| Flanges ANSI CLASS 125/150 RF, length EN 558, series 1, ISO 5752, basic series 1 | 39 |
| Flanges drilled according to JIS 20K (DN 15 - 40), Flanges drilled according to JIS 10K (DN 50), length EN 558, series 10, ASME/ANSI B 16.10 table 1, column 16 | 48 |

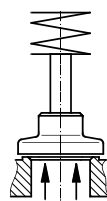
| Valve body material | Code |
|-------------------------------------|------|
| 1.4408, cast stainless steel | 37 |
| EN-GJS-400-18-LT (GGG 40.3) SG iron | 90 |

| Seat seal | Code |
|-----------------------------|------|
| PTFE | 5 |
| PTFE, glass filled | 5G |
| Steel | 10 |
| Other seat seals on request | |

| Control function | Code |
|--------------------------|------|
| Normally closed (NC) | 1 |
| Normally open (NO) | 2* |
| Double acting (DA) | 3* |
| *not with piston ø 50 mm | |

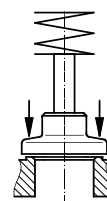
| Actuator size | Flow | Code |
|---|---------------------|------|
| Actuator 0 piston ø 50 mm | Flow under the seat | 0* |
| Actuator 1 piston ø 70 mm | Flow under the seat | 1* |
| Actuator 2 piston ø 120 mm | Flow under the seat | 2* |
| Actuator 3 piston ø 50 mm | Flow over the seat | 3** |
| Actuator 4 piston ø 70 mm | Flow over the seat | 4** |
| * Preferred flow direction with incompressible liquid media to avoid "water hammer" | | |
| ** only control function NC | | |

GEMÜ 532
Actuators 0, 1, 2



Flow
under the seat

GEMÜ 532
Actuator 3, 4



Flow
over the seat

| Special versions | K-No. |
|------------------|-------|
| On request | - |

| Note |
|---|
| Overview available valve bodies see table on page 6 |

| Order example | 532 | 25 | D | 8 | 90 | 5 | 1 | 1 | - |
|----------------------------|-----|----|---|---|----|---|---|---|---|
| Type | 532 | | | | | | | | |
| Nominal size | | 25 | | | | | | | |
| Body configuration (code) | | | D | | | | | | |
| Connection (code) | | | | 8 | | | | | |
| Valve body material (code) | | | | | 90 | | | | |
| Seat seal (code) | | | | | | 5 | | | |
| Control function (code) | | | | | | | 1 | | |
| Actuator size (code) | | | | | | | | 1 | |
| K number (code) | | | | | | | | | - |

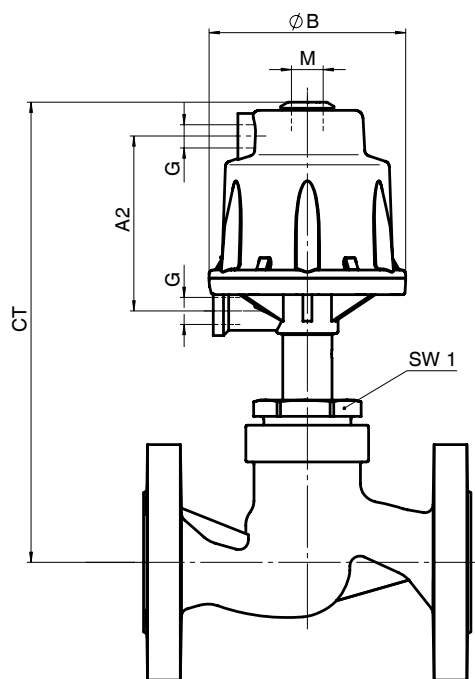
Dimensions [mm]

Actuator dimensions

| Actuator size | $\varnothing B$ | M | A2 | G |
|---------------|-----------------|---------|-------|-------|
| 0 + 3 | 71 | M16x1 | - | G 1/4 |
| 1 + 4 | 96 | M16x1 | 85.5 | G 1/4 |
| 2 | 164 | M22x1.5 | 123.0 | G 1/4 |

Installation dimensions [mm] / weight of valve [kg]

| DN | SW1 metric | Actuator size 0 + 3 | | Actuator size 1 + 4 | | Actuator size 2 | |
|----|------------|---------------------|--------|---------------------|--------|-----------------|--------|
| | | CT | Weight | CT | Weight | CT | Weight |
| 15 | 36 | 191 | 3.25 | 201 | 4.1 | - | - |
| 20 | 41 | 198 | 4.25 | 208 | 5.1 | 283 | - |
| 25 | 46 | 209 | 5.15 | 219 | 6.0 | 294 | - |
| 32 | 55 | - | - | 224 | 8.2 | 299 | - |
| 40 | 60 | - | - | 235 | 9.5 | 310 | - |
| 50 | 75 | - | - | 243 | 12.3 | 318 | - |

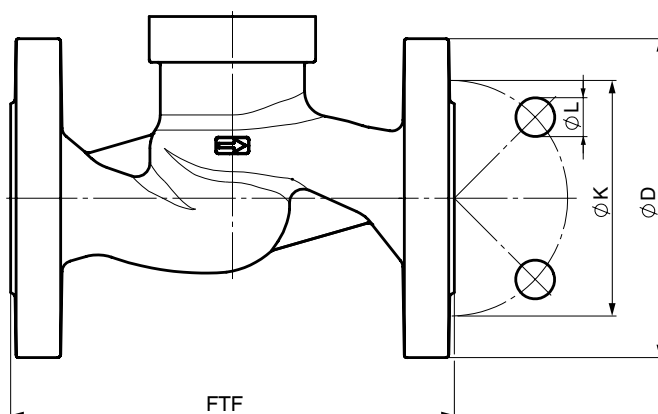


Body dimensions [mm]

Flanges. connection code 8, 10, 11, 39, 48
Valve body material: 1.4408 (code 37), EN-GJS-400-18-LT (code 90)

| DN | Number of bolts | Connection code 8, 10, 11 | | | | Connection code 39 | | | | Connection code 48 | | | | Weight [kg] |
|----|-----------------|---------------------------|-----------------|-----------------|-----------------|--------------------|-----------------|-----------------|-----------------|--------------------|-----------------|-----------------|-----------------|-------------|
| | | FTF | $\varnothing D$ | $\varnothing K$ | $\varnothing L$ | FTF | $\varnothing D$ | $\varnothing K$ | $\varnothing L$ | FTF | $\varnothing D$ | $\varnothing K$ | $\varnothing L$ | |
| 15 | 4 | 130 | 95 | 65 | 14 | 130 | 90 | 60.3 | 15.9 | 108 | 95 | 70 | 15 | 2.2 |
| 20 | 4 | 150 | 105 | 75 | 14 | 150 | 100 | 69.9 | 15.9 | 117 | 100 | 75 | 15 | 3.0 |
| 25 | 4 | 160 | 115 | 85 | 14 | 160 | 110 | 79.4 | 15.9 | 127 | 125 | 90 | 19 | 3.7 |
| 32 | 4 | 180 | 140 | 100 | 18 | 180 | 115 | 88.9 | 15.9 | - | - | - | - | 5.3 |
| 40 | 4 | 200 | 150 | 110 | 18 | 200 | 125 | 98.4 | 15.9 | 165 | 140 | 105 | 19 | 6.3 |
| 50 | 4 | 230 | 165 | 125 | 18 | 230 | 150 | 120.7 | 19.0 | 203 | 155 | 120 | 19 | 8.4 |

For materials see overview on last page



Overview of metal bodies for GEMÜ 532

| Connection code | 8 | | 10 | 11 | 39 | | 48 |
|-----------------|----|----|----|----|----|----|----|
| Material code | 37 | 90 | 37 | 37 | 37 | 90 | 37 |
| DN 15 | - | X | - | X | X | X | X |
| DN 20 | - | X | - | X | X | X | X |
| DN 25 | - | X | - | X | X | X | X |
| DN 32 | - | X | X | - | X | X | - |
| DN 40 | - | X | X | - | X | X | X |
| DN 50 | X | X | - | - | X | X | X |

Accessories - GEMÜ 532



GEMÜ 1436 cPos
Intelligent Positioner
and integrated process controller



GEMÜ 1435 ePos
Electro-pneumatic positioner



GEMÜ 1434 μPos
Electro-pneumatic positioner



GEMÜ 1201 - 1236
Electrical position indicators
with microswitches or proximity switches



GEMÜ 4222
Combi switchbox
with integrated pilot valve

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