

## Globe Valve, Metal

### Construction

The GEMÜ 532 pneumatically operated 2/2-way valve has a robust low maintenance 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.

### Features

- Suitable for inert and corrosive\* liquid and gaseous media
- Standard floating plug on spindle ensures excellent seat sealing
- Valve bodies available in SG iron and stainless steel
- Flanged versions
- Customized control valve versions available

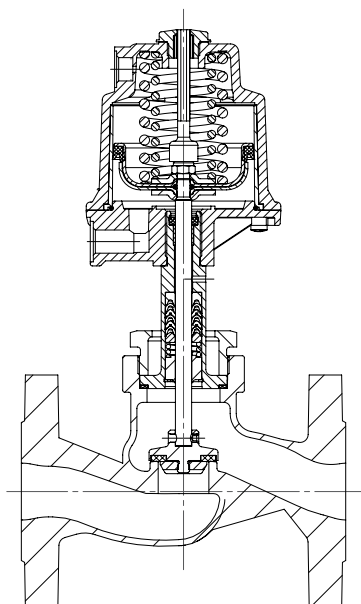
### Advantages

- 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
- Standard gland packing suitable for vacuum up to 20 mbar (abs.)

\*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 mm <sup>2</sup> /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 dm <sup>3</sup>  |
| Actuator size 1 and 4:                    | 0.125 dm <sup>3</sup> |
| Actuator size 2:                          | 0.625 dm <sup>3</sup> |

| Ambient conditions       |       |
|--------------------------|-------|
| Max. ambient temperature | 60 °C |

### Maximum permissible seat leakage rate

| Seat seal | Standard       | Test procedure | Leakage rate | Test medium |
|-----------|----------------|----------------|--------------|-------------|
| PTFE      | DIN EN 12266-1 | P12            | A            | air         |
| Metal     | DIN EN 12266-1 | P12            | F            | air         |

| Nominal size | Max. operating pressure [bar]<br>C. f. 1 Normally closed (NC) |                                      |                                      |                                      |                                       | Control pressure [bar]<br>C. f. 1 Normally closed (NC) |   |                 |   |                 | Kv values<br>[m <sup>3</sup> /h] |
|--------------|---|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|--|---|-----------------|---|-----------------|----------------------------------|
|              | Actuator size 0<br>piston<br>ø 50 mm                          | Actuator size 3<br>piston<br>ø 50 mm | Actuator size 1<br>piston<br>ø 70 mm | Actuator size 4<br>piston<br>ø 70 mm | Actuator size 2<br>piston<br>ø 120 mm | Actuator size 0  | Actuator size 3   | Actuator size 1 | Actuator size 4   | Actuator size 2 |                                  |
| 15           | 12.0  | 10.0                                 | 40.0                                 | 10.0                                 | -                                     | 4.7 - 10   | min. control pressure<br>see diagram<br>max. control pressure 7 bar | 5.5 - 10        | min. control pressure<br>see diagram<br>max. control pressure 8 bar | -               | 4.6                              |
| 20           | 6.0   | 10.0                                 | 20.0                                 | 10.0                                 | 40.0                                  | 4.7 - 10   |   | 5.5 - 10        |   | 4.0 - 8         | 8.0                              |
| 25           | 2.5   | 10.0                                 | 10.0                                 | 10.0                                 | 40.0                                  | 4.7 - 10   |   | 5.5 - 10        |   | 4.0 - 8         | 13.0                             |
| 32           | -   | -                                    | 7.0                                  | 10.0                                 | 22.0*                                 | -  |   | 5.5 - 10        |   | 4.0 - 8         | 22.0                             |
| 40           | -   | -                                    | 4.5                                  | 10.0                                 | 15.0*                                 | -  |   | 5.5 - 10        |   | 4.0 - 8         | 35.0                             |
| 50           | -   | -                                    | 3.0                                  | 10.0                                 | 10.0                                  | -  |   | 5.5 - 10        |   | 5.5 - 8         | 50.0                             |
| 65           | -   | -                                    | -                                    | -                                    | 7.0                                   | -  |   | -               |   | 5.5 - 8         | 90.0                             |
| 80           | -   | -                                    | -                                    | -                                    | 5.0                                   | -  |   | -               |   | 5.5 - 8         | 127.0                            |
| 100          | -   | -                                    | -                                    | -                                    | 2.5                                   | -  | -   | 5.5 - 8         | 200.0   |                 |                                  |

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

\* Higher operating pressures on request.

Kv values determined acc. to DIN EN 60534, flanges EN 1092. The Kv value data refers to control function 1 (NC) and the largest actuator for each nominal size. The Kv values for other product configurations (e.g. other connections or body materials) may differ.

| Nominal size | Max. operating pressure [bar]<br>C. f. 2 Normally open (NO) /<br>C. f. 3 Double acting (DA) |                                       | Control pressure [bar]<br>C. f. 2 Normally open (NO) /<br>C. f. 3 Double acting (DA) |  |
|--------------|---|---------------------------------------|--|--|
|              | Actuator size 1<br>piston<br>ø 70 mm  | Actuator size 2<br>piston<br>ø 120 mm | Actuator size 1  | Actuator size 2                                |
| 15           | 40.0  | -                                     | max. 5 bar   | max. 7 bar<br><br>for values<br>see<br>diagram |
| 20           | 40.0  | 40.0                                  | max. 7 bar<br><br>for values<br>see<br>diagram                                       |  |
| 25           | 32.0  | 40.0                                  |  |  |
| 32           | 20.0  | 40.0                                  |  |  |
| 40           | 12.0  | 40.0                                  |  |  |
| 50           | 8.0   | 30.0                                  |  |  |
| 65           | -   | 16.0                                  |  |  |
| 80           | -   | 12.0                                  |  |  |
| 100          | -   | 8.0                                   |  |  |

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

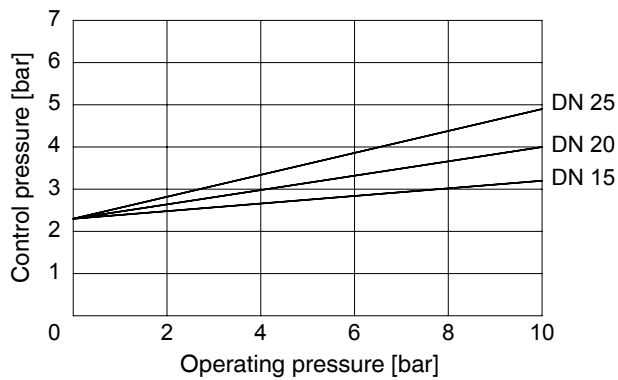
| Connection code | Material code | Max. allowable operating pressures in bar at temperature °C* |      |      |      |      |      |
|-----------------|---------------|--|------|------|------|------|------|
|                 |               | RT   | 100  | 150  | 200  | 250  | 300  |
| 8               | 37            | 16.0   | 16.0 | 14.5 | 13.4 | 12.7 | 11.8 |
| 10              | 37            | 25.0   | 25.0 | 22.7 | 21.0 | 19.8 | 18.5 |
| 11              | 37            | 40.0   | 40.0 | 36.3 | 33.7 | 31.8 | 29,7 |
| 39              | 37            | 19.0   | 16.0 | 14.8 | 13.6 | 12.0 | 10.2 |
| 8               | 90            | 16.0   | 16.0 | 15.5 | 14.7 | 13.9 | 11.2 |
| 39              | 90            | 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 Control function 1: normally closed (NC) / Flow direction: over the seat

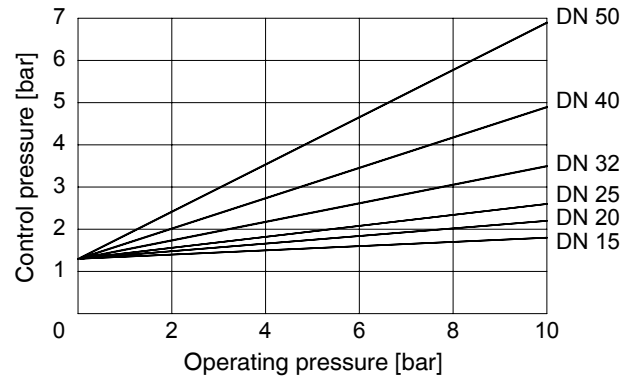
### Actuator size 3

min. control pressure dependent on operating pressure



### Actuator size 4

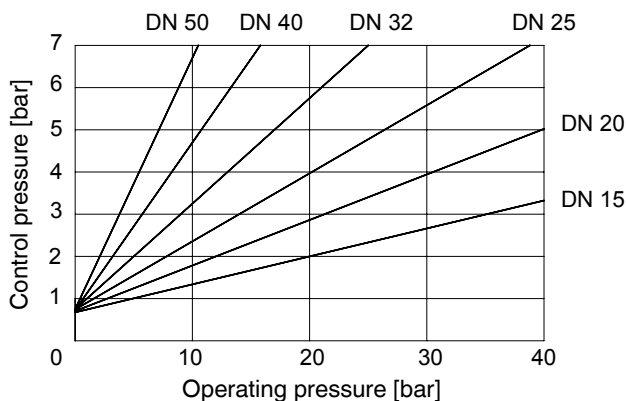
min. control pressure dependent on operating pressure



## Operating pressure / Control pressure characteristics Control function 2: normally open (NO) / Control function 3: double acting (DA) Flow direction: under the seat

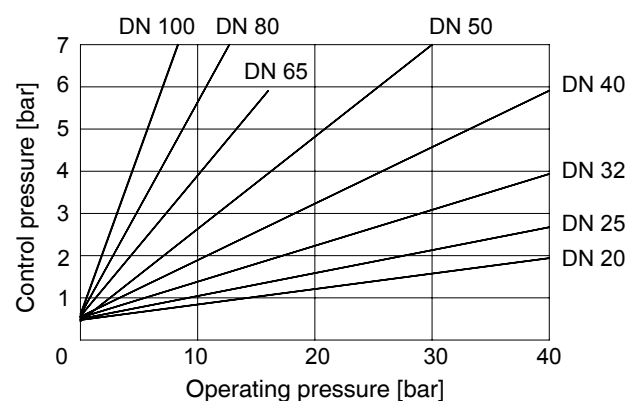
### Actuator size 1

min. control pressure dependent on operating pressure



### Actuator size 2

min. control pressure dependent on operating pressure



## Order data

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

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

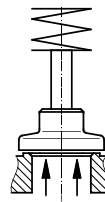
| Valve body material                 | Code |
|-------------------------------------|------|
| 1.4408, Investment casting          | 37   |
| EN-GJS-400-18-LT (GGG 40.3) SG iron | 90   |

| Seat seal                    | Code |
|------------------------------|------|
| PTFE                         | 5    |
| PTFE, glass fibre reinforced | 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 |      |

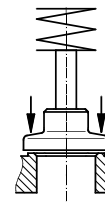
| Actuator size   | Flow                | Code |
|---|---------------------|------|
| Actuator 0 piston ø 50 mm   | Flow under the seat | 0*   |
| Actuator 1 piston ø 70 mm   | Flow under the seat | 1*   |
| Actuator 2 piston ø 120 mm  | Flow under the seat | 2*   |
| Actuator 3 piston ø 50 mm   | Flow 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

## Order data

| Version  | Code |
|--|------|
| Gland packing PTFE / PTFE<br>suitable for contact with food according to EU Regulation 1935/2004 | 2013 |
| Media temperature -10 to 210 °C (only with seat seal Code 5G and 10)                             | 2023 |

| Special version  | Code |
|--|------|
| Rigid plug fixing, special version for oxygen  | B    |
| Rigid plug fixing  | C    |
| Special version for oxygen (max. temperature 60 °C, max. operating pressure 10 bar),<br>Flow direction: under the seat | S    |

| Order example              | 532 | 25 | D | 8 | 90 | 5 | 1 | 1 | - | B |
|----------------------------|-----|----|---|---|----|---|---|---|---|---|
| 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 |   |   |
| Version (code)             |     |    |   |   |    |   |   |   | - |   |
| Special version (code)     |     |    |   |   |    |   |   |   |   | B |

### Version for food contact

For food contact, the product must be ordered with the following ordering options:

Version code 2013

Seat seal code 5, 5G, 10

Valve body material code 37

## Dimensions [mm]

### Actuator dimensions

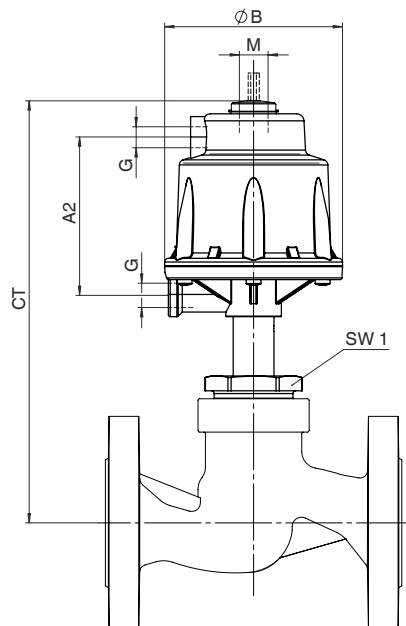
| Actuator size | øB  | M       | A2    | G     |
|---------------|-----|---------|-------|-------|
| 0 + 3         | 71  | M16x1   | -     | G 1/4 |
| 1 + 4         | 96  | M16x1   | 85.5  | G 1/4 |
| 2             | 164 | M22x1.5 | 123.0 | G 1/4 |

### Installation dimensions / weight of valve, connection code 8, 10, 39, 48

|     |            | Actuator size 0 + 3 |             | Actuator size 1 + 4 |             | Actuator size 2 |             |
|-----|------------|---------------------|-------------|---------------------|-------------|-----------------|-------------|
| DN  | SW1 metric | CT                  | Weight [kg] | CT                  | Weight [kg] | CT              | Weight [kg] |
| 15  | 36         | 197                 | 3.25        | 207                 | 4.1         | -               | -           |
| 20  | 41         | 204                 | 4.25        | 214                 | 5.1         | 291             | -           |
| 25  | 46         | 215                 | 5.15        | 225                 | 6.0         | 302             | -           |
| 32  | 55         | -                   | -           | 230                 | 8.2         | 307             | -           |
| 40  | 60         | -                   | -           | 241                 | 9.5         | 318             | -           |
| 50  | 75         | -                   | -           | 249                 | 12.3        | 326             | -           |
| 65  | 75         | -                   | -           | -                   | -           | 349             | -           |
| 80  | 75         | -                   | -           | -                   | -           | 369             | -           |
| 100 | 75         | -                   | -           | -                   | -           | 390             | -           |

### Installation dimensions / weight of valve, connection code 11

|    |            | Actuator size 0 + 3 |             | Actuator size 1 + 4 |             | Actuator size 2 |             |
|----|------------|---------------------|-------------|---------------------|-------------|-----------------|-------------|
| DN | SW1 metric | CT                  | Weight [kg] | CT                  | Weight [kg] | CT              | Weight [kg] |
| 15 | 36         | 197                 | 3.25        | 207                 | 4.1         | -               | -           |
| 20 | 41         | 204                 | 4.25        | 214                 | 5.1         | 291             | -           |
| 25 | 46         | 215                 | 5.15        | 225                 | 6.0         | 302             | -           |
| 32 | 55         | -                   | -           | 230                 | 8.2         | 307             | -           |
| 40 | 60         | -                   | -           | 241                 | 9.5         | 318             | -           |
| 50 | 75         | -                   | -           | 261                 | 12.3        | 338             | -           |

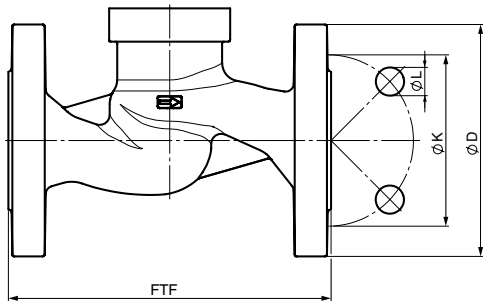


## Dimensions [mm]

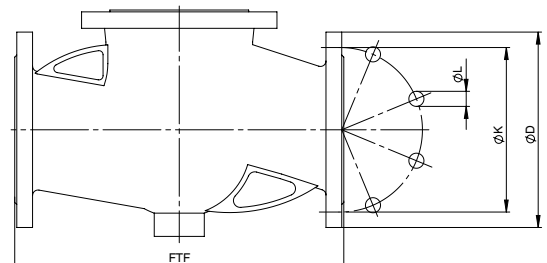
### Flanges, connection code 8 Valve body material 1.4408 (code 37), EN-GJS-400-18-LT (code 90)

| DN  | Material code 37 |     |     |     |     | Material code 90 |     |     |     |     | Weight [kg] |
|-----|------------------|-----|-----|-----|-----|------------------|-----|-----|-----|-----|-------------|
|     | Number of bolts  | FTF | ø D | ø K | ø L | Number of bolts  | FTF | ø D | ø K | ø L |             |
| 15  | -                | -   | -   | -   | -   | 4                | 130 | 95  | 65  | 14  | 2.2         |
| 20  | -                | -   | -   | -   | -   | 4                | 150 | 105 | 75  | 14  | 3.0         |
| 25  | -                | -   | -   | -   | -   | 4                | 160 | 115 | 85  | 14  | 3.7         |
| 32  | -                | -   | -   | -   | -   | 4                | 180 | 140 | 100 | 18  | 5.3         |
| 40  | -                | -   | -   | -   | -   | 4                | 200 | 150 | 110 | 18  | 6.3         |
| 50  | 4                | 230 | 165 | 125 | 18  | 4                | 230 | 165 | 125 | 18  | 8.4         |
| 65  | 4                | 290 | 185 | 145 | 18  | 4                | 290 | 185 | 145 | 18  | 12.7        |
| 80  | 8                | 310 | 200 | 160 | 18  | 8                | 310 | 200 | 160 | 18  | 15.4        |
| 100 | 8                | 350 | 220 | 180 | 18  | 8                | 350 | 220 | 180 | 18  | 23.0        |

For materials see overview on page 8



DN 15 - 50

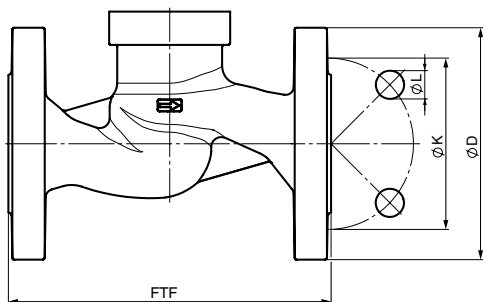


65 - 100

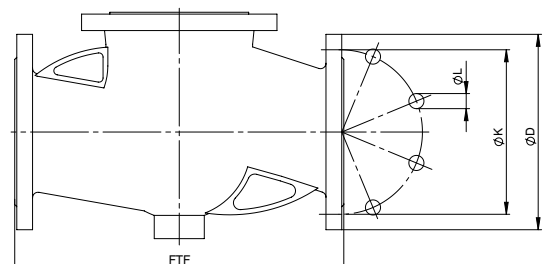
### Flanges, connection code 10, 11, 48 Ventilkörperwerkstoff 1.4408 (code 37)

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

For materials see overview on page 8



DN 15 - 50 code 10, 48  
DN 15 - 40 code 11



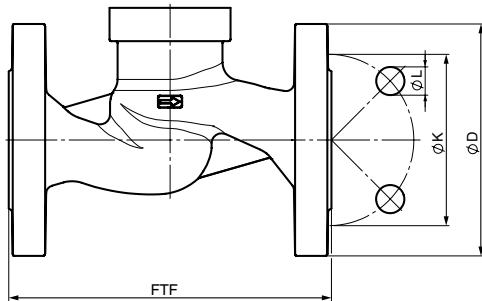
DN 50 code 11

## Dimensions [mm]

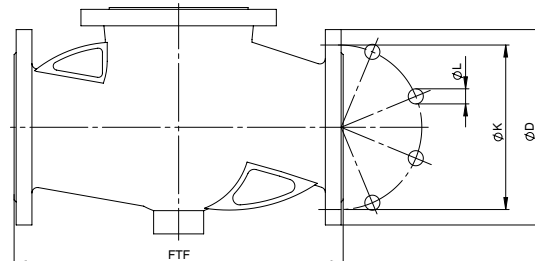
### Flanges, connection code 39 Valve body material 1.4408 (code 37), EN-GJS-400-18-LT (code 90)

| DN  | Number of bolts | FTF | ø D | ø K   | ø L  | Weight [kg] |
|-----|-----------------|-----|-----|-------|------|-------------|
| 15  | 4               | 130 | 90  | 60.3  | 15.9 | 2.2         |
| 20  | 4               | 150 | 100 | 69.9  | 15.9 | 3.0         |
| 25  | 4               | 160 | 110 | 79.4  | 15.9 | 3.7         |
| 32  | 4               | 180 | 115 | 88.9  | 15.9 | 5.3         |
| 40  | 4               | 200 | 125 | 98.4  | 15.9 | 6.3         |
| 50  | 4               | 230 | 150 | 120.7 | 19.0 | 8.4         |
| 65  | 4               | 290 | 180 | 139.7 | 19.0 | 12.7        |
| 80  | 4               | 310 | 190 | 152.4 | 19.0 | 15.4        |
| 100 | 8               | 350 | 230 | 190.5 | 19.0 | 23.0        |

For materials see overview on page 8



DN 15 - 50



65 - 100

### Overview of metal bodies for GEMÜ 532

| Connection code | 8  |    | 10 | 11 | 39 |    | 48 |
|-----------------|----|----|----|----|----|----|----|
|                 | 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  | X  | -  |
| DN 40           | -  | X  | X  | X  | X  | X  | X  |
| DN 50           | X  | X  | -  | X  | X  | X  | X  |
| DN 65           | X  | X  | -  | -  | X  | X  | -  |
| DN 80           | X  | X  | -  | -  | X  | X  | -  |
| DN 100          | X  | X  | -  | -  | X  | X  | -  |

For further globe valves, accessories and other products, please see our Product Range catalogue and Price List.  
Contact GEMÜ.

**GEMÜ** VALVES, MEASUREMENT  
AND CONTROL SYSTEMS

