

## Angle Seat Globe Valve, Metal

### Construction

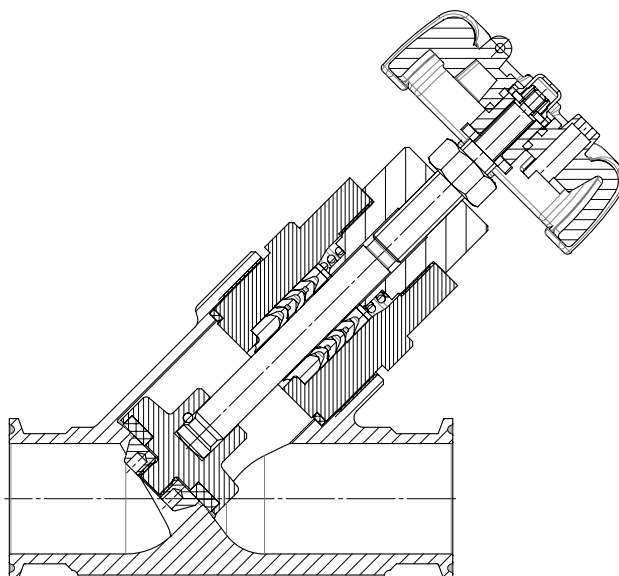
The GEMÜ 507 manually operated 2/2-way angle seat globe valve has an ergonomically designed plastic handwheel. The valve spindle is sealed by a self-adjusting gland packing providing low maintenance and reliable valve spindle sealing even after a long service life. The wiper ring fitted in front of the gland packing protects it against contamination and damage. A handwheel extension (not for bonnet size 0) is available as an option enabling full operator isolation.

### Advantages

- Good flow capability due to angle seat design
- Optionally suitable for contact with food according to Regulation (EC) No. 1935/2004 (K-No. 2013)
- Standard gland packing suitable for vacuum up to 20 mbar (abs.)
- Handwheel locknut as standard
- Optionally available as control valve with regulating cone



Sectional drawing



**GEMÜ® 507**

Connection code 80 /  
Valve body material code C2

## Technical data

### 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. perm. pressure of working medium see table

Medium temperature -10 °C to 180 °C

Max. permissible viscosity 600 mm<sup>2</sup>/s (cSt)

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

### Ambient conditions

Max. ambient temperature 60 °C

### Maximum permissible seat leakage rate / Open-Closed-Valve

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

### Maximum permissible seat leakage class / Control valve

| Seat seal | Standard       | Test procedure | Leakage rate | Test medium |
|-----------|----------------|----------------|--------------|-------------|
| PTFE      | DIN EN 60534-4 | 1              | VI           | air         |
| Metal     | DIN EN 60534-4 | 1              | IV           | air         |

### Pressure / temperature correlation for angle seat globe valve bodies

| Connection code | Material code | Max. allowable operating pressures in bar at temperature °C* |      |      |        |     |     |
|-----------------|---------------|--|------|------|--------|-----|-----|
|                 |               | RT   | 100  | 150  | 200    | 250 | 300 |
| 80 (DN 15 - 40) | C2            | 25.0   | 21.2 | 19.3 | 17.9** | -   | -   |
| 80 (DN 50 - 65) | C2            | 16.0   | 16.0 | 16.0 | 16.0** | -   | -   |

\* The valves can be used down to -10 °C      \*\* max. temperature 180 °C  
RT = Room Temperature      All pressures are gauge pressures.

| Nominal size | Kv values           | Max. operating pressure | Bonnet size | Bonnet weight |
|--------------|---------------------|-------------------------|-------------|---------------|
| DN           | [m <sup>3</sup> /h] | [bar]                   |             | [kg]          |
| 15           | 2.1                 | 25                      | 1K          | 1.0           |
| 20           | 4.1                 | 25                      | 1K          | 1.2           |
| 25           | 8.5                 | 25                      | 1K          | 1.4           |
| 40           | 18.5                | 25                      | 1K          | 2.6           |
| 50           | 33.8                | 16                      | 1K          | 3.8           |
| 65           | 37.9                | 16                      | 1K          | 4.2           |

Kv values determined acc. to DIN EN 60534.

### Correlation Kv value, operating pressure, regulating cone number

| Nominal size | Kv value            | Operating pressure | Actuator size | Regulating cone no. |                  |
|--------------|---------------------|--------------------|---------------|---------------------|------------------|
|              |                     |                    |               | linear              | equal-percentage |
| DN           | [m <sup>3</sup> /h] | [bar]              |               |                     |                  |
| 15           | 2                   | 25                 | 1K            | RS256               | RS266            |
| 20           | 4                   | 25                 | 1K            | RS257               | RS267            |
| 25           | 8                   | 25                 | 1K            | RS258               | RS268            |
| 40           | 17                  | 25                 | 1K            | RS259               | RS269            |
| 50           | 27                  | 16                 | 1K            | RS260               | RS270            |

Please always order standard regulating cone with special function "C" – rigid valve plug.

## Order data

| Body configuration | Code | Control function                          | Code |
|--------------------|------|---|------|
| 2/2-way body       | D    | Manually operated with handwheel lock nut | 0    |

| Connection   | Code | Bonnet size              | Code |
|--|------|--------------------------|------|
| Clamps ASME BPE for pipe ASME BPE, length ASME BPE | 80   | Handwheel diameter 90 mm | 1K   |
|  |      | Handwheel diameter 90 mm | 1KE  |
|  |      | Handwheel extension      |      |

| Valve body material  | Code | Regulating cone  | R-No. |
|--|------|--|-------|
| 1.4435, Investment casting<br>Material equivalency 316 L, Δ Fe<2,0%                              | C2   | For the regulating cone no. (R-No.) - linear or equal-percentage (mod.)- please refer to the table |       |
| A surface finish from the order code table "K number" must be specified for valve body material. |      |  |       |

| Seat seal                    | Code |
|------------------------------|------|
| PTFE                         | 5    |
| PTFE, glass fibre reinforced | 5G   |
| PTFE, USP Class VI           | 5P   |

| 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 |
| Surface finish for valve body material C2   |      |
| Ra ≤ 0.6 μm (25 μinch) for process contact surfaces, in accordance with ASME BPE SF2 + SF3, mechanically polished internal        | 1903 |
| Ra ≤ 0.8 μm (30 μinch) for process contact surfaces, in accordance with DIN 11866 H3, mechanically polished internal              | 1904 |
| Ra ≤ 0.4 μm (15 μinch) for process contactsurfaces, in accordance with DIN 11866 H4, ASME BPE SF1, mechanically polished internal | 1909 |
| Ra ≤ 0.6 μm for process contact surfaces, in accordance with ASME BPE SF6, electropolished internal/external                      | 1953 |
| Ra ≤ 0.8 μm for process contact surfaces, in accordance with DIN 11866 HE3, electropolished internal/external                     | 1954 |
| Ra ≤ 0.4 μm for process contact surfaces, in accordance with DIN 11866 HE4/ASME BPE SF5, electropolished internal/external        | 1959 |

| Special version   | Code |
|-------------------|------|
| Rigid plug fixing | C    |

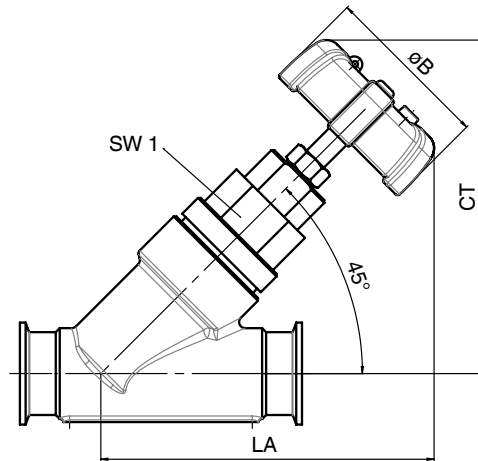
| Order example              | 507 | 25 | D | 80 | C2 | 5 | 0 | 1K | RS268 | - | C |
|----------------------------|-----|----|---|----|----|---|---|----|-------|---|---|
| Type                       | 507 |    |   |    |    |   |   |    |       |   |   |
| Nominal size               |     | 25 |   |    |    |   |   |    |       |   |   |
| Body configuration (code)  |     |    | D |    |    |   |   |    |       |   |   |
| Connection (code)          |     |    |   | 80 |    |   |   |    |       |   |   |
| Valve body material (code) |     |    |   |    | C2 |   |   |    |       |   |   |
| Seat seal (code)           |     |    |   |    |    | 5 |   |    |       |   |   |
| Control function (code)    |     |    |   |    |    |   | 0 |    |       |   |   |
| Bonnet size (code)         |     |    |   |    |    |   |   | 1K |       |   |   |
| Regulating cone (R-No.)    |     |    |   |    |    |   |   |    | RS268 |   |   |
| Version (code)             |     |    |   |    |    |   |   |    |       | - |   |
| Special version (code)     |     |    |   |    |    |   |   |    |       |   | C |

| 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   |
| Valve body material code C2  |

## Dimensions [mm]

### Actuator dimensions / Installation dimensions

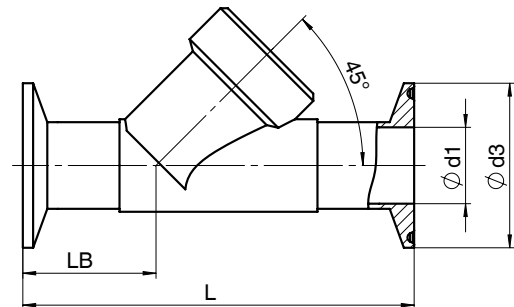
| Actuator size | DN | SW1 |             | øB | CT/LA<br>(max. height) |
|---------------|----|-----|-------------|----|------------------------|
| 1K / 1KE      | 15 | 41  | hexagonal   | 90 | 141                    |
| 1K / 1KE      | 20 | 41  | hexagonal   | 90 | 141                    |
| 1K / 1KE      | 25 | 46  | hexagonal   | 90 | 147                    |
| 1K / 1KE      | 40 | 41  | double flat | 90 | 164                    |
| 1K / 1KE      | 50 | 41  | double flat | 90 | 178                    |
| 1K / 1KE      | 65 | 41  | double flat | 90 | 188                    |



## Body dimensions [mm]

### Clamp connections, connection code 80 Valve body material: 1.4435 (code C2)

| DN | NPS    | LB   | L     | ø d1  | ø d3 |
|----|--------|------|-------|-------|------|
| 15 | 1/2"   | 28.5 | 88.9  | 9.40  | 25.0 |
| 20 | 3/4"   | 35.0 | 101.6 | 15.75 | 25.0 |
| 25 | 1"     | 33.0 | 114.3 | 22.10 | 50.5 |
| 40 | 1 1/2" | 40.0 | 139.7 | 34.80 | 50.5 |
| 50 | 2"     | 44.0 | 158.8 | 47.50 | 64.0 |
| 65 | 2 1/2" | 54.3 | 193.8 | 60.20 | 77.5 |



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