

## Angle Seat Globe Valve, Metal Aseptic

### Construction

The GEMÜ 555 pneumatically operated 2/2-way valve has a piston actuator and is designed for pure steam applications. The valve has a PTFE seat for tight shut off and the valve spindle is sealed by a stainless steel bellows.

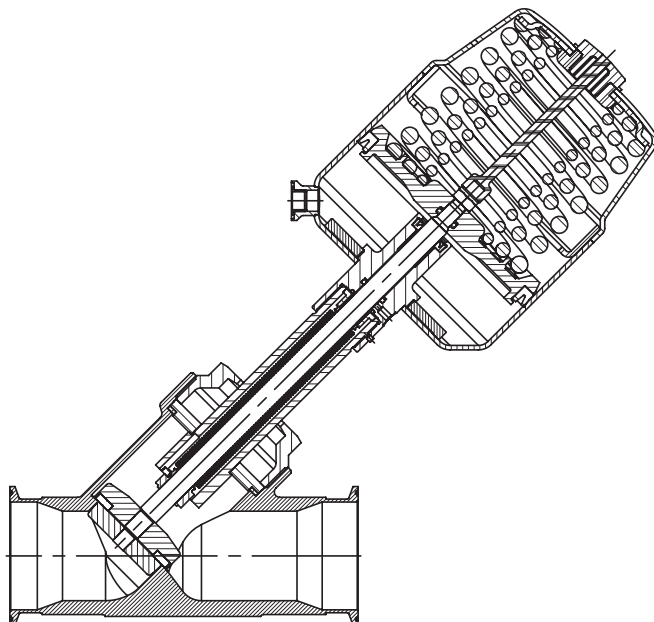
### Features

- Suitable for pure steam and gaseous media
- For control functions, materials and connections see the following pages
- Internal surface of valve body down to Ra 15 µm mechanically polished, optionally electropolished

### Advantages

- Free from non-ferrous metals
- Stainless steel bellows seal
- Welded valve plug
- Fixed seat plug (without threads)
- Fast actuator change possible
- Optical position indicator integrated as standard
- Traceability of all wetted parts
- Suitable for contact with food according to Regulation (EC) No. 1935/2004
- Versions according to ATEX on request
- Suitable for vacuum up to 0.59 inHg (a) as standard

Sectional drawing



**GEMÜ® 555**

Connection code 80 /  
Valve body material code C2

## Technical data

### Working medium

Pure steam and gaseous 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

Media temperature 14 to 356 °F

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

Other versions for lower/higher temperatures on request

### Control medium

Inert gases

Max. control pressure 116 psi

Max. perm. temperature of control medium: 140 °F

|                |                  |             |
|----------------|------------------|-------------|
| Filling volume | Actuator size 2: | 5.13 cu in  |
|                | Actuator size 3: | 14.95 cu in |
|                | Actuator size 4: | 26.67 cu in |
|                | Actuator size 5: | 48.7 cu in  |

### Ambient conditions

Max. ambient temperature 140 °F

### 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         |

| Actuator size | Nominal size | Max. operating pressure | Control pressure | Cv values |
|---------------|--------------|-------------------------|------------------|-----------|
|               | DN           | [psi]                   | [psi]            | [gpm]     |
| 2             | 15           | 150                     | 58 - 116         | 2.3       |
|               | 20           |                         |                  | 4.7       |
|               | 25           |                         |                  | 10.2      |
| 3             | 40           | 150                     | 58 - 116         | 20.5      |
| 4             | 50           | 150                     | 58 - 116         | 38        |
| 5             | 65           | 150                     | 73 - 116         | 38.6      |

Cv values determined with 1 psi pressure drop across valve. The Cv value data refers to control function 1 (NC) and the largest actuator for each nominal size.

The Cv values for other product configurations (e.g. other connections or body materials) may differ.

## Order data

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

| Nominal size |            | Code |
|--------------|------------|------|
| DN 15        | NPS 1/2"   | 15   |
| DN 20        | NPS 3/4"   | 20   |
| DN 25        | NPS 1"     | 25   |
| DN 32        | NPS 1 1/4" | 32   |
| DN 40        | NPS 1 1/2" | 40   |
| DN 50        | NPS 2"     | 50   |
| DN 65        | NPS 2 1/2" | 65   |

| Connection                                         | Code |
|----------------------------------------------------|------|
| Clamps ASME BPE for pipe ASME BPE, length ASME BPE | 80   |

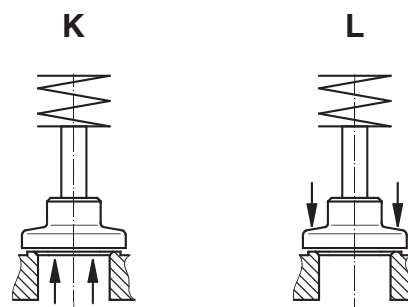
| Valve body material                                                                              | Code |
|--------------------------------------------------------------------------------------------------|------|
| 1.4435, Investment casting<br>Material equivalency 316 L, $\Delta$ Fe<2,0%                       | C2   |
| A surface finish from the order code table "K number" must be specified for valve body material. |      |

| Seat seal | Code |
|-----------|------|
| PTFE      | 5P   |

| Control function | Code |
|------------------|------|
| Normally closed  | 1    |

| Actuator size                           | Code |
|-----------------------------------------|------|
| Actuator 2 piston $\varnothing$ 2.36 in | 2    |
| Actuator 3 piston $\varnothing$ 3.15 in | 3    |
| Actuator 4 piston $\varnothing$ 3.94 in | 4    |
| Actuator 5 piston $\varnothing$ 5.12 in | 5    |

| Flow direction              | Code |
|-----------------------------|------|
| Under the seat              | K    |
| Over the seat (up to DN 50) | L    |



| Spring set | Code |
|------------|------|
| Standard   | 1    |

## Order data

| Version                                                                                                                             | Code |
|-------------------------------------------------------------------------------------------------------------------------------------|------|
| Surface finish                                                                                                                      |      |
| Ra ≤ 0,60 µm (25 µinch) for process contact surfaces, in accordance with ASME BPE SF2 + SF3, mechanically polished internal         | 1903 |
| Ra ≤ 0,80 µm (30 µinch) for process contact surfaces, in accordance with DIN 11866 H3, mechanically polished internal               | 1904 |
| Ra ≤ 0,40 µm (15 µinch) for process contact surfaces, in accordance with DIN 11866 H4, ASME BPE SF1, mechanically polished internal | 1909 |
| Ra ≤ 0,60 µm for process contact surfaces, in accordance with ASME BPE SF6, electropolished internal/external                       | 1953 |
| Ra ≤ 0,80 µm for process contact surfaces, in accordance with DIN 11866 HE3, electropolished internal/external                      | 1954 |
| Ra ≤ 0,40 µm for process contact surfaces, in accordance with DIN 11866 HE4/ASME BPE SF5, electropolished internal/external         | 1959 |

| Special version              | Code |
|------------------------------|------|
| Stainless steel bellows seal | F    |

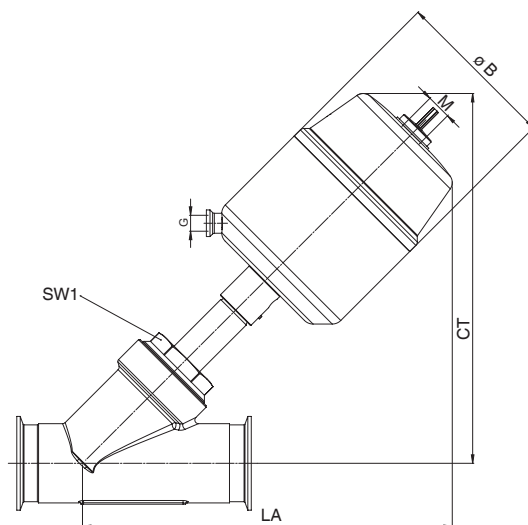
| Order example              | 555 | 15 | D | 80 | C2 | 5P | 1 | 2 | K | 1 | 1903 | F |
|----------------------------|-----|----|---|----|----|----|---|---|---|---|------|---|
| Type                       | 555 |    |   |    |    |    |   |   |   |   |      |   |
| Nominal size               |     | 15 |   |    |    |    |   |   |   |   |      |   |
| Body configuration (code)  |     |    | D |    |    |    |   |   |   |   |      |   |
| Connection (code)          |     |    |   | 80 |    |    |   |   |   |   |      |   |
| Valve body material (code) |     |    |   |    | C2 |    |   |   |   |   |      |   |
| Seat seal (code)           |     |    |   |    |    | 5P |   |   |   |   |      |   |
| Control function (code)    |     |    |   |    |    |    | 1 |   |   |   |      |   |
| Actuator size (code)       |     |    |   |    |    |    |   | 2 |   |   |      |   |
| Flow direction (code)      |     |    |   |    |    |    |   |   | G |   |      |   |
| Spring set (code)          |     |    |   |    |    |    |   |   |   | 1 |      |   |
| Version (code)             |     |    |   |    |    |    |   |   |   |   | 1903 |   |
| Special version (code)     |     |    |   |    |    |    |   |   |   |   |      | F |

| Version for food contact                                                           |
|------------------------------------------------------------------------------------|
| For food contact, the product must be ordered with the following ordering options: |
| Seat seal code 5P                                                                  |
| Valve body material code C2                                                        |

## Dimensions

### Actuator dimensions / Installation dimensions

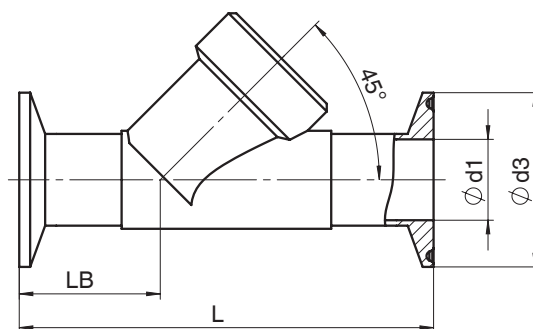
| Actuator size | DN | SW1 [mm] | ø B [in] | M       | G     | CT/LA [in] | Weight Actuator [lbs] | Weight Body [lbs] |
|---------------|----|----------|----------|---------|-------|------------|-----------------------|-------------------|
| 2             | 15 | 36       | 2.48     | M16x1   | G 1/8 | 7.20       | 2.9                   | 0.8               |
| 2             | 20 | 36       | 2.48     | M16x1   | G 1/8 | 7.01       | 3.1                   | 0.7               |
| 2             | 25 | 41       | 2.48     | M16x1   | G 1/8 | 7.52       | 3.3                   | 1.1               |
| 3             | 40 | 55       | 3.31     | M16x1   | G 1/4 | 8.27       | 5.9                   | 2.2               |
| 4             | 50 | 60       | 4.09     | M22x1.5 | G 1/4 | 11.02      | 10.1                  | 3.1               |
| 5             | 65 | 55       | 5.31     | M22x1.5 | G 1/4 | 11.73      | 22.5                  | 5.3               |



### Body dimensions [inch]

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

| DN | NPS    | LB   | L    | ø d1  | ø d3  |
|----|--------|------|------|-------|-------|
| 15 | 1/2"   | 1.12 | 3.5  | 0.370 | 0.984 |
| 20 | 3/4"   | 1.38 | 4.00 | 0.620 | 0.984 |
| 25 | 1"     | 1.30 | 4.50 | 0.870 | 1.988 |
| 40 | 1 1/2" | 1.57 | 5.50 | 1.370 | 1.988 |
| 50 | 2"     | 1.73 | 6.25 | 1.870 | 2.520 |
| 65 | 2 1/2" | 2.14 | 7.63 | 2.370 | 3.051 |



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