

## Tank Bottom Valve, Metal

### Construction

The 2/2-way metal tank bottom valve GEMÜ 643 is manually operated with a side mounted gear which has an optical position indicator as standard. The stainless steel valve body is machined from a single block (no welds) and is designed for welding directly into a tank bottom. The distance piece and the gearbox housing are made of stainless steel.

### Features

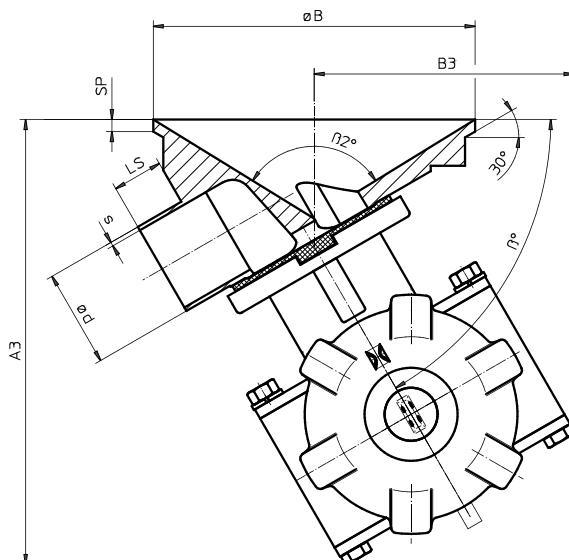
- Suitable for inert and corrosive\* liquid and gaseous media
- CIP/SIP cleaning and sterilizing capabilities

### Advantages

- Tanks can be optimally drained, cleaned and sterilized by using the GEMÜ 643
- The temperature resistant plastic handwheel prevents burns injuries at high operating temperatures
- Compact design (ideal when space is at a premium)
- Tank bottom valve body also available with pneumatic or motorized actuator on request
- Bonnet can be rotated through 360°

\*see information on working medium on page 2

Bonnet dimensions [mm]



| Nominal size | A3  | B3  | ø B | SP |
|--------------|-----|-----|-----|----|
| <b>DN</b>    |     |     |     |    |
| 15-25        | 166 | 104 | 120 | 6  |
| 32-40        | 190 | 110 | 160 | 6  |

For pipe dimensions or butt weld spigots see our aseptic diaphragm valves brochure. Other dimensions on request.



## 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 diaphragm material.

Maximum permissible pressure of working medium, applied upstream 10 bar

### Temperatures

Media temperature -10 ... 100 °C

#### Sterilisation temperature

EPDM (Code 13) 150 °C, max. 60 min

EPDM (Code 17) 150 °C, max. 180 min

PTFE (Code 52) Constant temperature\* 150 °C

PTFE (Code 5E) Constant temperature\* 150 °C

The sterilisation temperature is valid for steam or superheated water

\* The valves concerned must be serviced regularly if steam is applied continuously

| Nominal size | Bonnet | Operating pressure* | Weight |
|--------------|--------|---------------------|--------|
| [mm]         | size   | [bar]               | [kg]   |
| 15           | 2      | 10                  | 3,0    |
| 20           | 2      | 10                  | 3,0    |
| 25           | 2      | 10                  | 3,0    |
| 32           | 3      | 10                  | 6,0    |
| 40           | 3      | 10                  | 6,0    |

\* Operating pressure with EPDM and FPM diaphragms 10 bar, Operating pressure with PTFE diaphragms 6 bar

## Order data

| Body configuration | Code |
|--------------------|------|
| Tank valve body    | B    |

| Diaphragm material                      | Code           |
|---|----------------|
| EPDM                                    | 13             |
| EPDM                                    | 17             |
| PTFE/EPDM convex                        | PTFE loose 5E  |
| PTFE/EPDM                               | PTFE lamin. 52 |
| Material complies with FDA requirements |                |

| Connection                              | Code |
|---|------|
| <b>Butt weld spigots</b>                |      |
| Spigots DIN                             | 0    |
| Spigots DIN 11850, series 1             | 16   |
| Spigots DIN 11850, series 2             | 17   |
| Spigots DIN 11850, series 3             | 18   |
| Spigots DIN 11866, series A             | 1A   |
| Spigots DIN 11866, series B             | 1B   |
| Spigots SMS 3008                        | 37   |
| Spigots ASME BPE                        | 59   |
| Spigots EN ISO 1127                     | 60   |
| Spigots ANSI/ASME B36.19M, Schedule 10s | 63   |
| Spigots ANSI/ASME B36.19M, Schedule 40s | 65   |

| Control function  | Code |
|-------------------|------|
| Manually operated | 0    |

| Bonnet size                | Code |
|----------------------------|------|
| Bonnet size 2 (DN 15 - 25) | 2    |
| Bonnet size 3 (DN 32 - 40) | 3    |

| Valve body material                     | Code |
|---|------|
| 1.4435 (316L), Block material           | 41   |
| 1.4435 (BN2), Block material Fe < 0.5 % | 43   |
| Other valve body material on request    |      |

For further order data see page 3

## Order data

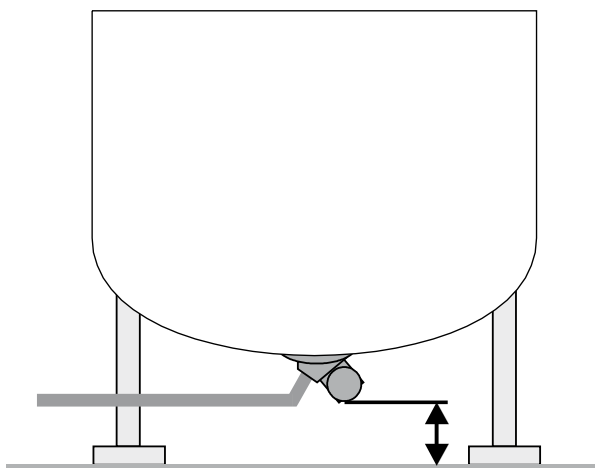
### Valve body surface finish, internal contour

|              |  | Block material<br>Code 41, 43 | Code |
|--------------|--|-------------------------------|------|
| Ra ≤ 6.3 µm  | blasted internal/external                        | -                             | 1500 |
| Ra ≤ 6.3 µm  | optical electropolishing                         | -                             | 1509 |
| Ra ≤ 0.8 µm  | mechanically polished internal, blasted external | X                             | 1502 |
| Ra ≤ 0.8 µm  | electropolished internal/external                | X                             | 1503 |
| Ra ≤ 0.6 µm  | mechanically polished internal, blasted external | X                             | 1507 |
| Ra ≤ 0.6 µm  | electropolished internal/external                | X                             | 1508 |
| Ra ≤ 0.4 µm  | mechanically polished internal, blasted external | X                             | 1536 |
| Ra ≤ 0.4 µm  | electropolished internal/external                | X                             | 1537 |
| Ra ≤ 0.25 µm | mechanically polished internal, blasted external | X                             | 1527 |
| Ra ≤ 0.25 µm | electropolished internal/external                | X                             | 1516 |

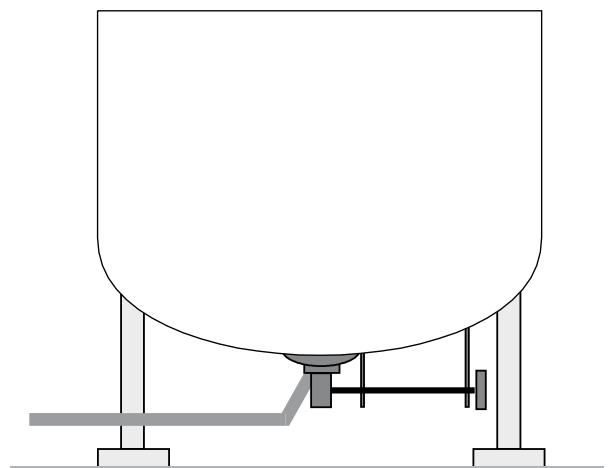
Ra acc. to DIN 4768; at defined reference points  
Surface finish data refer to medium wetted surfaces

| Order example              | 643 | 25 | B | 60 | 41 | 13 | 0 | 2 | 1503 |
|----------------------------|-----|----|---|----|----|----|---|---|------|
| Type                       | 643 |    |   |    |    |    |   |   |      |
| Nominal size               |     | 25 |   |    |    |    |   |   |      |
| Body configuration (code)  |     |    | B |    |    |    |   |   |      |
| Connection (code)          |     |    |   | 60 |    |    |   |   |      |
| Valve body material (code) |     |    |   |    | 41 |    |   |   |      |
| Diaphragm material (code)  |     |    |   |    |    | 13 |   |   |      |
| Control function (code)    |     |    |   |    |    |    | 0 |   |      |
| Bonnet size (code)         |     |    |   |    |    |    |   | 2 |      |
| Surface finish (code)      |     |    |   |    |    |    |   |   | 1503 |

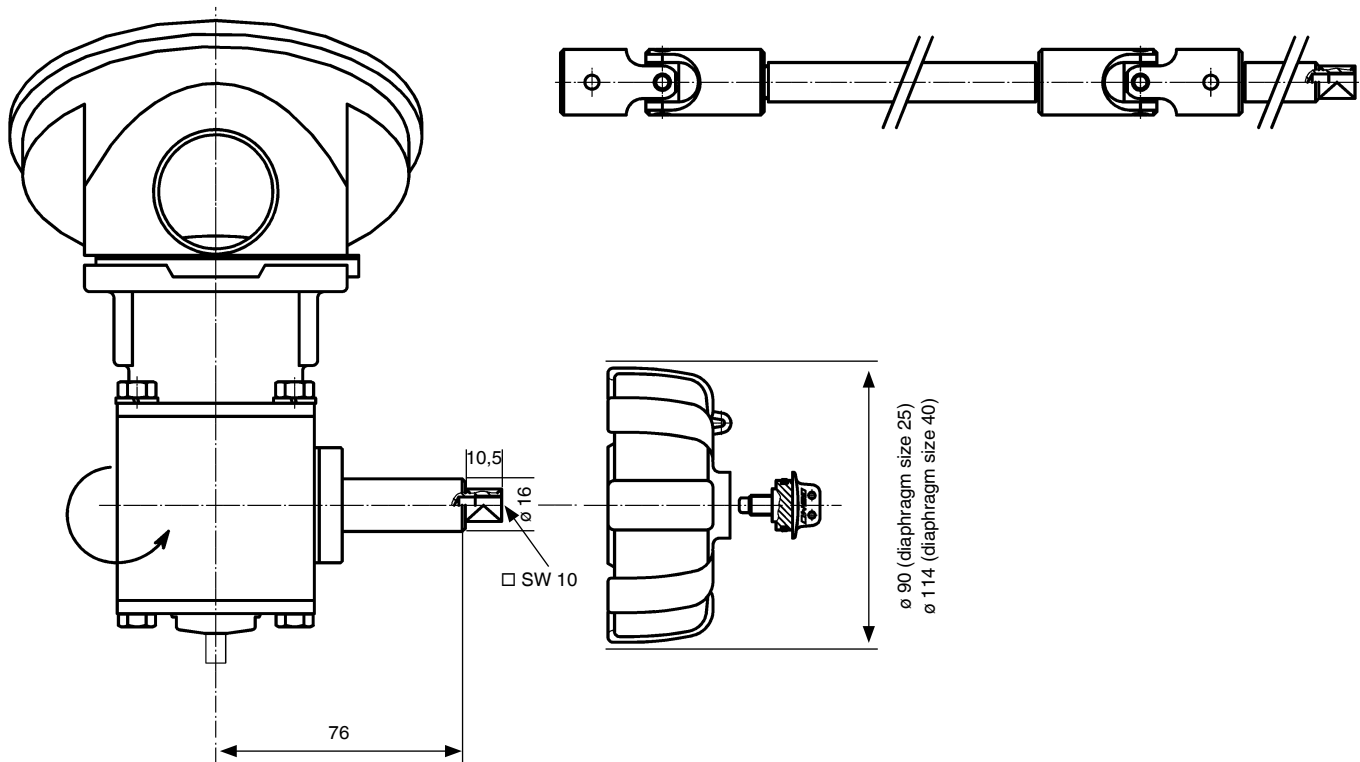
### Mounting position



### Mounting position (with handwheel extension by user)



## Shaft extension (by user)



### Attention!

When the user installs a handwheel extension care should be taken that it has sufficient bearing points.

### Torques for shaft extension:

|               |       |
|---------------|-------|
| Bonnet size 2 | 11 Nm |
| Bonnet size 3 | 14 Nm |

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

**GEMÜ**® VALVES, MEASUREMENT  
AND CONTROL SYSTEMS

