



## Tank bottom diaphragm valve with manually operated actuator (FullFunction)

- Valve body and diaphragm are available in different materials and variants
- Wetted surfaces from  $Ra \leq 0.38 \mu m \dots \leq 1.6 \mu m$  (optionally electropolished)
- Available in all common connection sizes and variants
- Integrated locking
- Minimum and maximum stroke limitation

Product variants described in the data sheet may differ from the product presentation and description.

### Can be combined with



**Type SV02**  
Diaphragms



**Type 2935**

Tank bottom diaphragm valve with manually operated actuator (basic)



**Type 2973**

2/2-Wege diaphragm valve with manually operated actuator (FullFunction)



**Type 2974**

T-diaphragm valve with manually operated actuator (FullFunction)



**Type 2103**

2/2-Wege diaphragm valve with pneumatic stainless steel actuator (Type ELEMENT) for decentralised automation



**Type 8098**

FLOWave SAW flowmeter



### Type description

The Type 2975 manually operated diaphragm valve consists of a manually operated actuator, a diaphragm and a tank bottom valve body. The manual actuator with plastic handwheel ensures use in hygienic or aggressive ambient conditions. The flow-optimised valve body with minimum dead space enables high flow values and a wide range of possible applications. The valve body and the diaphragms are available in all common materials and variants. The actuator has a compact, autoclavable design and is compatible with all other Bürkert diaphragm valves. An explosion-proof ATEX/IECEx device variant is available. The manual actuator possesses a visual position indicator with reproducible stroke scale. The actuator also possesses an adjustable minimum and maximum stroke limitation and/or locking. The manual actuator can be optionally equipped with sensors for position feedback.

## Table of contents

|                                                     |           |
|-----------------------------------------------------|-----------|
| <b>1. General technical data</b>                    | <b>3</b>  |
| <b>2. Approvals and conformities</b>                | <b>4</b>  |
| 2.1. General notes .....                            | 4         |
| 2.2. Conformity .....                               | 4         |
| 2.3. Standards .....                                | 4         |
| 2.4. Explosion protection .....                     | 4         |
| 2.5. Foods and beverages/Hygiene .....              | 4         |
| 2.6. Others .....                                   | 5         |
| <b>3. Materials</b>                                 | <b>6</b>  |
| 3.1. Bürkert resistApp .....                        | 6         |
| 3.2. Material specifications .....                  | 6         |
| 3.3. Example of available diaphragm materials ..... | 7         |
| <b>4. Dimensions</b>                                | <b>8</b>  |
| 4.1. Manual actuator .....                          | 8         |
| Diaphragm size 15...25 .....                        | 8         |
| Diaphragm size 40...50 .....                        | 9         |
| Manual actuator with tank bottom body .....         | 10        |
| 4.2. Tank bottom body with welded connection .....  | 11        |
| 4.3. Tank bottom body with clamp connection .....   | 12        |
| <b>5. Performance specifications</b>                | <b>13</b> |
| 5.1. Medium pressure .....                          | 13        |
| <b>6. Ordering information</b>                      | <b>14</b> |
| 6.1. Bürkert eShop .....                            | 14        |
| 6.2. Bürkert product filter .....                   | 14        |
| 6.3. Bürkert Product Enquiry Form .....             | 14        |

## 1. General technical data

| Product properties                                                |                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions                                                        | Further information can be found in chapter "4. Dimensions" on page 8.                                                                                                                                                                      |
| <b>Material<sup>1.)</sup></b>                                     |                                                                                                                                                                                                                                             |
| Block body (VH) <sup>1.)</sup>                                    | Stainless steel block material 1.4435 according to DIN EN 10088 and 316L according to ASTM A479 / A479M                                                                                                                                     |
| Block body (VI) <sup>1.)</sup>                                    | Stainless steel block material 1.4435 according to DIN EN 10088 and 316L according to ASME BPE (Table MM- 2.1.1, Ed. 2024)<br>BN2 available on request                                                                                      |
| Diaphragm                                                         | EPDM (AD) <sup>1.)</sup> , PTFE/EPDM (EA) <sup>1.)</sup> , Advanced PTFE/EPDM (EU) <sup>1.)</sup> , laminate of GYLON® and EPDM (ER) <sup>1.)</sup>                                                                                         |
| Actuator (diaphragm bonnet/handwheel)                             | Stainless steel/PPS                                                                                                                                                                                                                         |
| Diaphragm size                                                    | 15...50 (65...100 see <b>Type 3235</b> ▶)                                                                                                                                                                                                   |
| <b>Standard surface quality<sup>2.)</sup></b>                     |                                                                                                                                                                                                                                             |
| Block body (VH/VI) <sup>1.)</sup>                                 | Internally electrically polished: Ra ≤ 0.38 µm (NO17) <sup>1.)</sup> (ASME BPE SF4/DIN HE4)<br>(externally: Ra ≤ 1.6 µm)<br>Internally mechanically polished: Ra ≤ 0.5 µm (NO14) <sup>1.)</sup> (ASME BPE SF1)<br>(externally: Ra ≤ 1.6 µm) |
| Medium data                                                       |                                                                                                                                                                                                                                             |
| Operating medium                                                  | Neutral gases and liquids, highly purified, sterile, aggressive or abrasive mediums<br>(see <b>resistance chart</b> ▶)                                                                                                                      |
| <b>Medium temperature</b>                                         |                                                                                                                                                                                                                                             |
| EPDM (AD) <sup>1.)</sup>                                          | - 10...+ 143 °C (steam sterilisation + 150 °C for 60 min)                                                                                                                                                                                   |
| PTFE/EPDM (EA) <sup>1.)</sup>                                     | - 10...+ 130 °C (steam sterilisation + 140 °C for 60 min)                                                                                                                                                                                   |
| Advanced PTFE/EPDM (EU) <sup>1.)</sup>                            | - 5...+ 143 °C (steam sterilisation + 150 °C for 60 min)                                                                                                                                                                                    |
| Laminate of GYLON® and EPDM (ER) <sup>1.)</sup>                   | - 5...+ 130 °C (steam sterilisation + 140 °C for 60 min)                                                                                                                                                                                    |
| Product connections                                               |                                                                                                                                                                                                                                             |
| <b>Port connection</b>                                            |                                                                                                                                                                                                                                             |
| Nominal diameter                                                  | DN 08...DN 65 (¼"...2½")                                                                                                                                                                                                                    |
| <b>Stainless steel valve body<sup>2.)</sup></b>                   |                                                                                                                                                                                                                                             |
| Welded connection <sup>2.)</sup>                                  | DIN EN ISO 1127 / ISO 4200 / DIN 11866 series B<br>DIN 11850 - 2 / DIN 11866 series A / DIN EN 10357 series A<br>ASME BPE / DIN 11866 series C                                                                                              |
| Clamp connection <sup>2.)</sup>                                   | DIN 32676 series A (DIN pipe)<br>DIN 32676 series B (ISO pipe)<br>ASME BPE                                                                                                                                                                  |
| Environment and installation                                      |                                                                                                                                                                                                                                             |
| Installation position                                             | See <b>operating instructions Type 2975</b> ▶                                                                                                                                                                                               |
| <b>Ambient temperature: actuator (diaphragm bonnet/handwheel)</b> |                                                                                                                                                                                                                                             |
| Stainless steel/PPS                                               | - 10...+ 130 °C (short-term up to + 150 °C), autoclavable                                                                                                                                                                                   |

1.) This information is part of the product key (see "6.3. Bürkert Product Enquiry Form" on page 14).

2.) Further variants are available on request.

## 2. Approvals and conformities

### 2.1. General notes

- The approvals and conformities listed below must be stated when making enquiries. This is the only way to ensure that the product complies with all required specifications.
- Not all available variants can be supplied with the below mentioned approvals or conformities.

### 2.2. Conformity

In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

### 2.3. Standards

The applied standards which are used to demonstrate compliance with the EU Directives are listed in the EU-Type Examination Certificate and/or the EU Declaration of Conformity.

### 2.4. Explosion protection

| Approval                                                                                                                                                                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   |                 |    |    |                             |          |          |          |                     |                 |                 |                 |                            |          |          |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------|----|----|-----------------------------|----------|----------|----------|---------------------|-----------------|-----------------|-----------------|----------------------------|----------|----------|----------|
| <br> | <p><b>Optional: Explosion protection (valid for the variable code PX51)</b><br/>As a category 2 device suitable for zone 1/21 and zone 2/22.</p> <p><b>ATEX:</b><br/>EPS 18 ATEX 2 008 X<br/>II 2G Ex h IIC T4...T2 Gb<br/>II 2D Ex h IIIC T135 °C...T300 °C Db</p> <p><b>IECEx:</b><br/>IECEx EPS 18.0007X<br/>Ex h IIC T4...T2 Gb<br/>Ex h IIIC T135 °C...T300 °C Db</p> <table><tr><td>Temperature class</td><td>T2</td><td>T3</td><td>T4</td></tr><tr><td>Maximum surface temperature</td><td>+ 300 °C</td><td>+ 200 °C</td><td>+ 135 °C</td></tr><tr><td>Ambient temperature</td><td>- 40...+ 130 °C</td><td>- 40...+ 130 °C</td><td>- 40...+ 100 °C</td></tr><tr><td>Maximum medium temperature</td><td>+ 285 °C</td><td>+ 185 °C</td><td>+ 125 °C</td></tr></table> <p><b>Note:</b> The ambient and medium temperature range may be limited by non-ex-relevant specifications. Observe the Operating Instructions.</p> | Temperature class | T2              | T3 | T4 | Maximum surface temperature | + 300 °C | + 200 °C | + 135 °C | Ambient temperature | - 40...+ 130 °C | - 40...+ 130 °C | - 40...+ 100 °C | Maximum medium temperature | + 285 °C | + 185 °C | + 125 °C |
| Temperature class                                                                                                                                                         | T2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | T3                | T4              |    |    |                             |          |          |          |                     |                 |                 |                 |                            |          |          |          |
| Maximum surface temperature                                                                                                                                               | + 300 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | + 200 °C          | + 135 °C        |    |    |                             |          |          |          |                     |                 |                 |                 |                            |          |          |          |
| Ambient temperature                                                                                                                                                       | - 40...+ 130 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | - 40...+ 130 °C   | - 40...+ 100 °C |    |    |                             |          |          |          |                     |                 |                 |                 |                            |          |          |          |
| Maximum medium temperature                                                                                                                                                | + 285 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | + 185 °C          | + 125 °C        |    |    |                             |          |          |          |                     |                 |                 |                 |                            |          |          |          |

### 2.5. Foods and beverages/Hygiene

| Conformity                                                                          | Description                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FDA                                                                                 | <p><b>FDA – Code of Federal Regulations</b><br/>The diaphragms made of EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU) and laminate of GYLON® and EPDM (ER) comply with the Code of Federal Regulations published by the FDA (Food and Drug Administration, USA).</p>                       |
| USP                                                                                 | <p><b>United States Pharmacopeial Convention (USP)</b><br/>The diaphragms made of EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU) and laminate of GYLON® and EPDM (ER) are tested according to USP Class VI.</p>                                                                            |
|  | <p><b>EC Regulation 1935/2004 of the European Parliament and of the Council</b><br/>The diaphragms made of EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU) and laminate of GYLON® and EPDM (ER) are suitable for use with food and beverages (according to EC Regulation 1935/2004/EC).</p> |

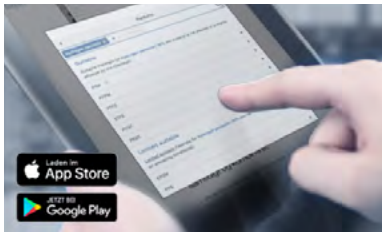
2.6. Others

| Approval | Description                                                                     |
|----------|---------------------------------------------------------------------------------|
| TA Luft  | Technical instruction on air quality control (valid for the variable code PM01) |

DTS 1000597501 EN Version: C Status: RL (released | freigegeben | valide) printed: 01.06.2026

3. Materials

3.1. Bürkert resistApp



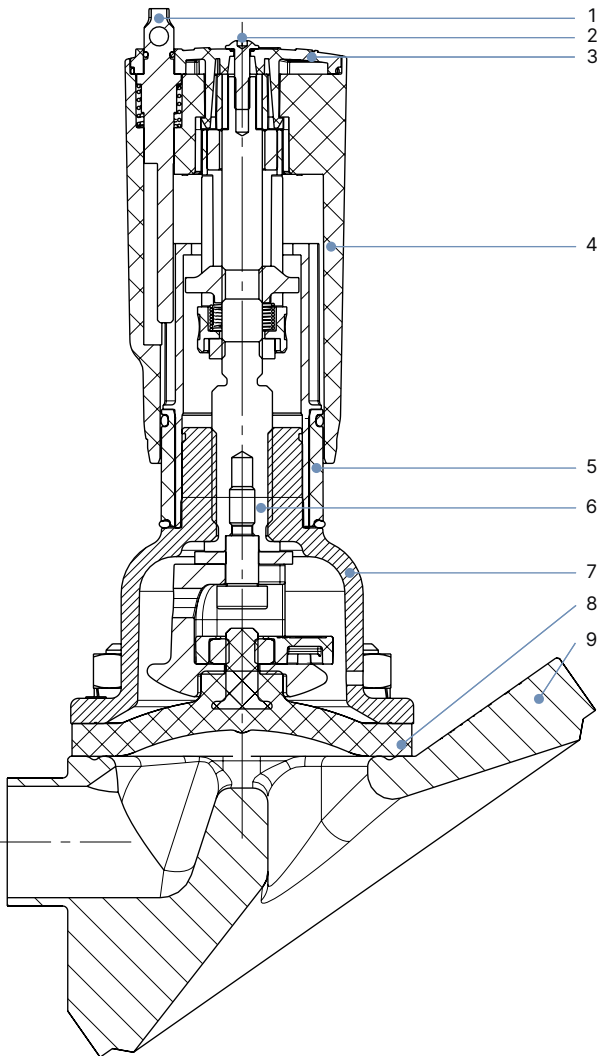
**Bürkert resistApp – Chemical resistance chart**

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

[Start chemical resistance check](#)

3.2. Material specifications

**Note:**  
Your product variant may differ from this illustration depending on the body and interface options.



| No. | Element                   | Material                                                                             |
|-----|---------------------------|--------------------------------------------------------------------------------------|
| 1   | Lock pin                  | Stainless steel 1.4305                                                               |
| 2   | Screw                     | Stainless steel A2                                                                   |
| 3   | Handwheel cover           | Polyamide (PA)                                                                       |
| 4   | Handwheel                 | Polyphenylene sulphide (PPS)                                                         |
| 5   | Visual position indicator | Polyamide (PA)                                                                       |
| 6   | Valve spindle             | Stainless steel 1.4305                                                               |
| 7   | Diaphragm socket          | Stainless steel 1.4308                                                               |
| 8   | Diaphragm                 | EPDM (AD), PTFE/EPDM (EA), Advanced PTFE/EPDM (EU), laminate of GYLON® and EPDM (ER) |
| 9   | Valve body                | See "1. General technical data" on page .                                            |

### 3.3. Example of available diaphragm materials

The diaphragms have been developed to meet the unique challenges of hygienic and sterile requirements. Bürkert offers diaphragms with precise material composition and high accuracy. Bürkert diaphragms are available in a wide range of materials which have been tested and proven in applications in the food and beverage, biotechnology, pharmaceutical and cosmetics industries. The diaphragms are tested during development and production to ensure reliability under difficult process conditions.



- EPDM (AD)
- PTFE/EPDM (EA)
- Advanced PTFE/EPDM (EU)
- Laminate of GYLON® and EPDM (ER)

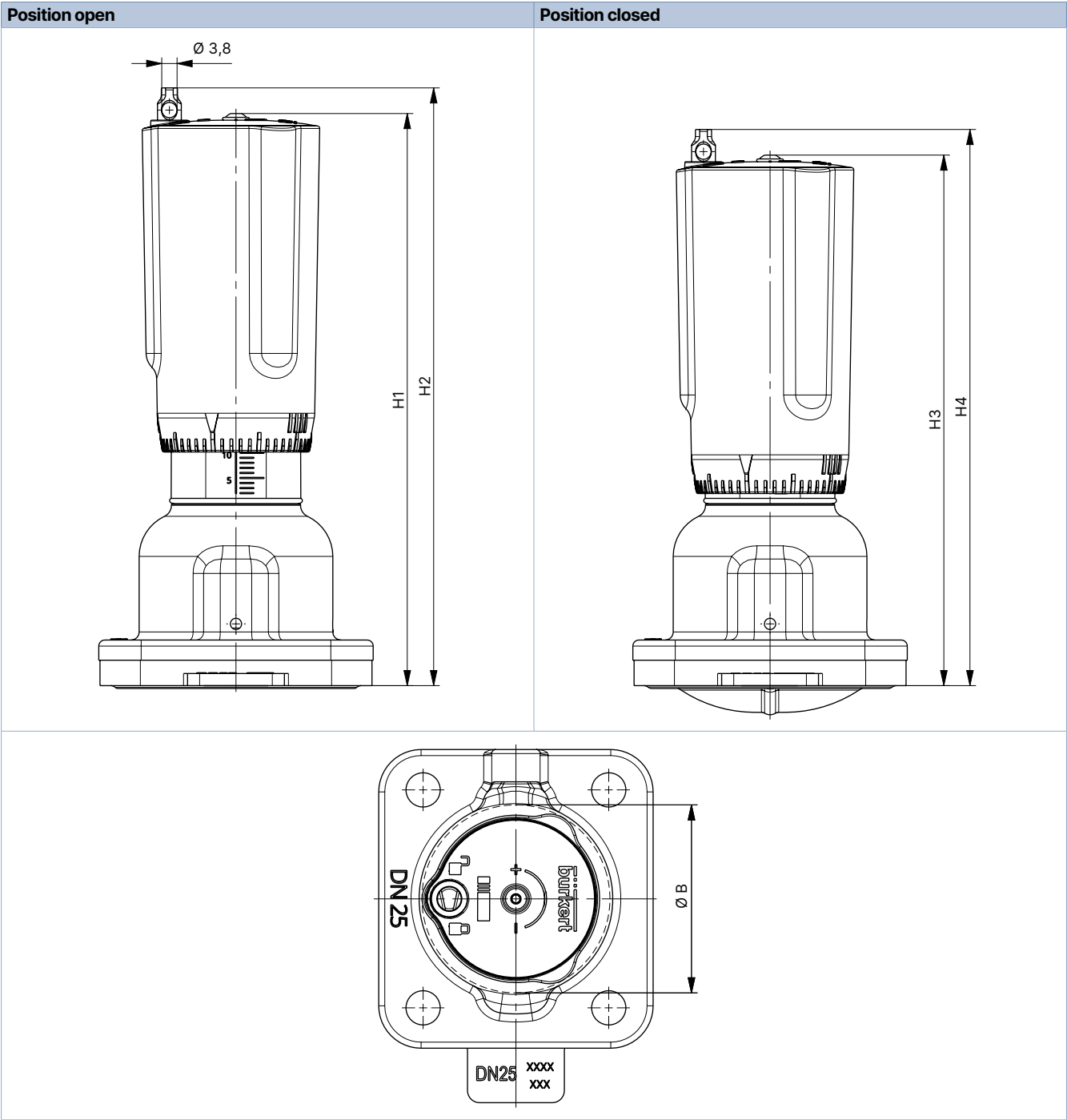
Further information can be found in our flyer "Diaphragm competence for hygienic applications" on our **website** ►.

4. Dimensions

4.1. Manual actuator

Diaphragm size 15...25

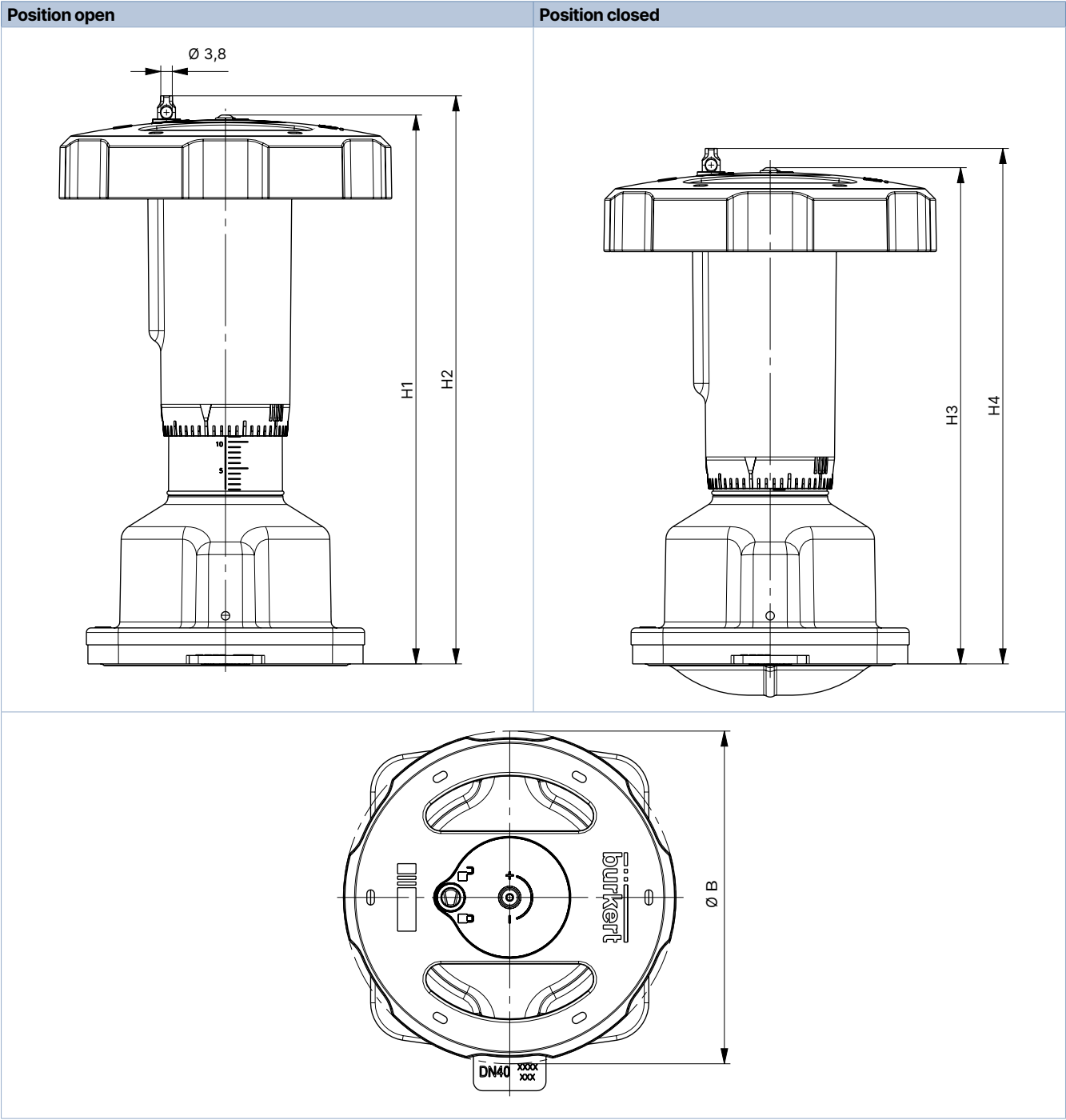
**Note:**  
Dimensions in mm, unless otherwise stated



| Diaphragm size | H1  | H2  | H3  | H4  | Ø B |
|----------------|-----|-----|-----|-----|-----|
| 15             | 127 | 133 | 121 | 127 | 45  |
| 20             | 138 | 144 | 129 | 135 | 45  |
| 25             | 143 | 149 | 133 | 139 | 45  |

Diaphragm size 40...50

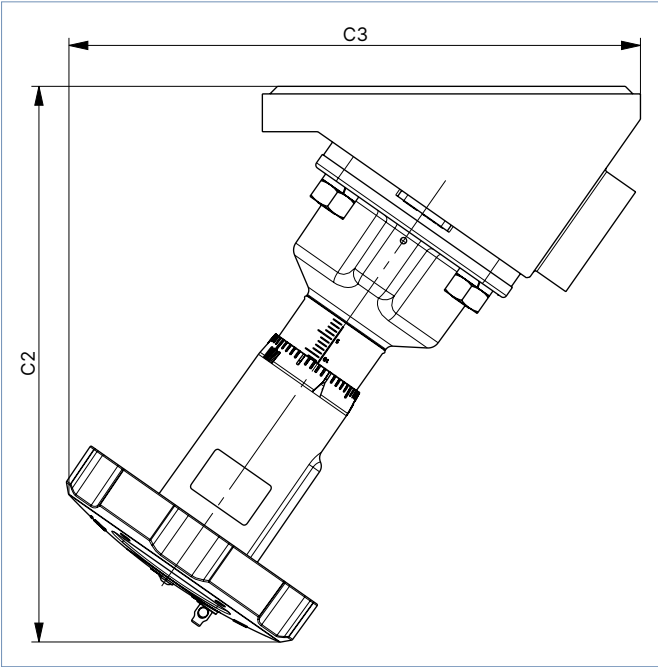
**Note:**  
Dimensions in mm, unless otherwise stated



| Diaphragm size | H1  | H2  | H3  | H4  | Ø B |
|----------------|-----|-----|-----|-----|-----|
| 40             | 182 | 188 | 164 | 170 | 110 |
| 50             | 197 | 203 | 173 | 179 | 110 |

Manual actuator with tank bottom body

**Note:**  
Dimensions in mm, unless otherwise stated

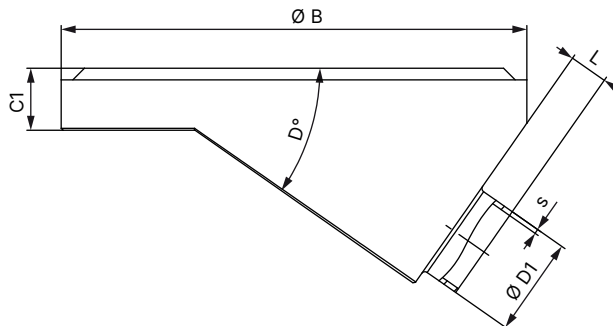


| Diaphragm size | C2  | C3  |
|----------------|-----|-----|
| 15             | 139 | 127 |
| 20             | 152 | 141 |
| 25             | 163 | 154 |
| 40             | 221 | 228 |
| 50             | 243 | 245 |

## 4.2. Tank bottom body with welded connection

**Note:**

Dimensions in mm, unless otherwise stated



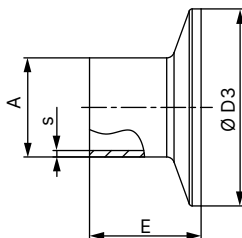
| Diaphragm size                                                    | Port connection DN | Ø B | C1 | D   | Ø D1           | s    | L   | Product key <sup>1)</sup> |
|-------------------------------------------------------------------|--------------------|-----|----|-----|----------------|------|-----|---------------------------|
| <b>DIN EN ISO 1127 / ISO 4200 / DIN 11866 series B</b>            |                    |     |    |     |                |      |     |                           |
| 15                                                                | 15                 | 65  | 12 | 35° | 21.3           | 1.6  | 4   | SA42                      |
|                                                                   |                    | 85  |    |     |                |      | 8   | SA42                      |
| 20                                                                | 20                 | 85  | 12 | 35° | 26.9           | 1.6  | 5.6 | SA43                      |
| 25                                                                | 25                 | 120 | 16 | 35° | 33.7           | 2    | 8   | SA44                      |
| 40                                                                | 32                 | 150 | 18 | 35° | 42.4 (Port 32) | 2    | 20  | SA45                      |
|                                                                   | 40                 |     |    |     | 48.3           |      | 15  | SA46                      |
| 50                                                                | 50                 | 180 | 22 | 35° | 60.3           | 2    | 12  | SA47                      |
| <b>DIN 11850 - 2 / DIN 11866 series A / DIN EN 10357 series A</b> |                    |     |    |     |                |      |     |                           |
| 15                                                                | 15                 | 85  | 12 | 35° | 19             | 1.5  | 8   | SD42                      |
| 20                                                                | 20                 | 85  | 12 | 35° | 23             | 1.5  | 7   | SD43                      |
| 25                                                                | 25                 | 120 | 16 | 35° | 29             | 1.5  | 8   | SD44                      |
| 40                                                                | 40                 | 150 | 18 | 35° | 41             | 1.5  | 20  | SD46                      |
| 50                                                                | 50                 | 180 | 22 | 35° | 53             | 1.5  | 15  | SD47                      |
| <b>ASME BPE / DIN 11866 series C</b>                              |                    |     |    |     |                |      |     |                           |
| 15                                                                | 1/2"               | 85  | 12 | 35° | 12.7           | 1.65 | 10  | SA92                      |
| 20                                                                | 3/4"               | 85  | 12 | 35° | 19.05          | 1.65 | 8   | SA93                      |
| 25                                                                | 1"                 | 120 | 16 | 35° | 25.4           | 1.65 | 12  | SODF                      |
| 40                                                                | 1 1/2"             | 150 | 18 | 35° | 38.1           | 1.65 | 15  | SODH                      |
| 50                                                                | 1 1/2"             | 180 | 22 | 35° | 38.1           | 1.65 | 25  | SODH                      |
|                                                                   | 2"                 |     |    |     | 50.8           |      | 15  | SODI                      |
|                                                                   | 2 1/2"             |     |    |     | 63.5           |      | 11  | SODJ                      |
| <b>SMS 3008</b>                                                   |                    |     |    |     |                |      |     |                           |
| 25                                                                | 25                 | 120 | 16 | 35° | 25             | 1.2  | 8   | SA60                      |
| 40                                                                | 40                 | 150 | 18 | 35° | 38             | 1.2  | 20  | SA62                      |
| 50                                                                | 50                 | 180 | 22 | 35° | 51             | 1.2  | 15  | SA63                      |

1.) This information is part of the product key (see "6.3. Bürkert Product Enquiry Form" on page 14).

### 4.3. Tank bottom body with clamp connection

**Note:**

- Dimensions in mm, unless otherwise stated
- Clamp dimensions must be added to the welded connection dimensions.



| Port connection               |        | A     | s    | D3                  | E    | Product key <sup>1.)</sup> |
|-------------------------------|--------|-------|------|---------------------|------|----------------------------|
| DN                            | [inch] | [mm]  | [mm] | [mm]                | [mm] |                            |
| DIN 32676 series A (DIN pipe) |        |       |      |                     |      |                            |
| 15                            | –      | 19    | 1.5  | 34.0                | 18   | TD42                       |
| 20                            | –      | 23    | 1.5  | 34.0                | 18   | TD43                       |
| 25                            | –      | 29    | 1.5  | 50.5                | 21.5 | TD44                       |
| 32                            | –      | 35    | 1.5  | 50.5                | 21.5 | TD45                       |
| 40                            | –      | 41    | 1.5  | 50.5                | 21.5 | TD46                       |
| 50                            | –      | 53    | 1.5  | 64.0                | 21.5 | TD47                       |
| DIN 32676 series B (ISO pipe) |        |       |      |                     |      |                            |
| 15                            | –      | 21.3  | 1.6  | 34.0 <sup>2.)</sup> | 28.6 | TC42 <sup>2.)</sup>        |
| 15                            | –      | 21.3  | 1.6  | 50.5                | 28.6 | TC52                       |
| 20                            | –      | 26.9  | 1.6  | 50.5                | 28.6 | TC43                       |
| 25                            | –      | 33.7  | 2    | 50.5                | 28.6 | TC44                       |
| 32                            | –      | 42.4  | 2    | 50.5 <sup>2.)</sup> | 28.6 | TC45 <sup>2.)</sup>        |
| 40                            | –      | 48.3  | 2    | 64.0                | 28.6 | TC46                       |
| 50                            | –      | 60.3  | 2    | 77.5                | 28.6 | TC47                       |
| ASME BPE                      |        |       |      |                     |      |                            |
| 15                            | ½      | 12.7  | 1.65 | 25.0                | 28.6 | TG02                       |
| 20                            | ¾      | 19.05 | 1.65 | 25.0                | 28.6 | TG03                       |
| 25                            | 1      | 25.4  | 1.65 | 50.5                | 28.6 | TG04                       |
| 40                            | 1½     | 38.1  | 1.65 | 50.5                | 28.6 | TG05                       |
| 50                            | 2      | 50.8  | 1.65 | 64.0                | 28.6 | TG06                       |

1.) This information is part of the product key (see "6.3. Bürkert Product Enquiry Form" on page 14).

2.) Deviating from standard, because of different clamp outer diameter

## 5. Performance specifications

### 5.1. Medium pressure

**Note:**

- The following tightening torques refer to the static media pressures specified above. Excessive torque can shorten the service life of the diaphragm.
- Pressure data [bar]: Overpressure to atmospheric pressure. Static: When closed, the valve is pressurised on one side with the maximum operating pressure.
- A tolerance of + 10 % applies to the tightening torques specified.

| Diaphragm size | Maximum static operating pressure | Tightening torque for maximum static operating pressure |                                                            |
|----------------|-----------------------------------|---------------------------------------------------------|------------------------------------------------------------|
|                |                                   | EPDM, FKM                                               | PTFE/EPDM, advanced PTFE/EPDM, laminate of GYLON® and EPDM |
|                | [bar]                             | [Nm]                                                    | [Nm]                                                       |
| 15             | 10                                | 0.8                                                     | 1.7                                                        |
| 20             | 10                                | 0.9                                                     | 3                                                          |
| 25             | 10                                | 1.2                                                     | 3.5                                                        |
| 32             | 10                                | 2.5                                                     | 4                                                          |
| 40             | 10                                | 4.5                                                     | 7                                                          |
| 50             | 10                                | 6                                                       | 11                                                         |

## 6. Ordering information

### 6.1. Bürkert eShop



#### Bürkert eShop – Easy ordering and quick delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

[Order online now](#)

### 6.2. Bürkert product filter

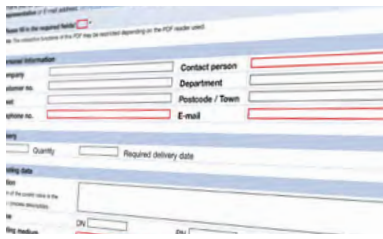


#### Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.

[Try out our product filter](#)

### 6.3. Bürkert Product Enquiry Form



#### Bürkert Product Enquiry Form – Your enquiry quickly and compactly

Would you like to make a specific product enquiry based on your technical requirements? Use our Product Enquiry Form for this purpose. There you will find all the relevant information for your Bürkert contact. This will enable us to provide you with the best possible advice.

[Fill out the form now](#)