



## 2/2-way Diaphragm Valve with stainless steel design, weld end or clamp connection, DN 8-25

- Hermetical separation of fluids from the operating mechanism by diaphragm
- Zero dead volume
- Various surface finishes
- Certified according to **FDA**
- Clean design for optimal use in hygienic environment

Type 2103 can be combined with...



**Type 8690**

Pneum. control unit with feedback



**Type 8691**

Control head



**Type 8692/8693**

Positioner / Process Controller TopControl



**Type 8694**

Positioner TopControl Basic



**Type 8645**

Automation system FreeLINE



**Type 8110**

Level sensor

The externally piloted diaphragm valve consists of a pneumatically operated piston actuator, a diaphragm and a 2-way valve housing made of forged stainless steel. The high-quality actuator with a stainless steel cover is designed for usage in hygienic or aggressive environments.

The flow optimised and zero dead volume valve body makes high flow rates possible and a variety of applications to be realised.

The design enables the easy integration of automation modules whether they are electrical/optical position feedback, pneumatic control units, an integrated fieldbus interface or even an explosion proof feedback.

The fully integrated system has a compact and smooth design, integrated pneumatic lines, IP65/67/NEMA4X protection class and superior chemical resistance.

| Technical data               |   |
|------------------------------|---|
| <b>Orifice</b>               | 8 to 25   |
| <b>Body material</b>         | Forged stainless steel 316L / 1.4435/BN2<br>Fe < 0.5% / C ≤ 0.03%                 |
| <b>Actuator material</b>     |   |
| Actuator                     | PPS   |
| Cover                        | Stainless steel 1.4561 (316Ti)  |
| <b>Diaphragm materials</b>   | EPDM, PTFE/EPDM (FKM on request)  |
| <b>Media</b>                 | Neutral gases and liquids, high purity, sterile, aggressive or abrasive fluids    |
| <b>Viscosity</b>             | up to viscous   |
| <b>Surface finishes</b>      | (average surface finish)  |
| internal mechanical polished | Ra ≤ 0.5 µm   |
| internal electro polished    | Ra ≤ 0.4 µm   |
| internal mirror finished     | Ra ≤ 0.25 µm (on request)   |
| <b>Media temperatures</b>    |   |
| EPDM                         | -10 to +130 °C (briefly up to +150°C for steam sterilisation)                     |
| PTFE/EPDM                    | -10 to +130°C   |
| <b>Ambient temperature</b>   | +5 to +60 °C  |
| <b>Control medium</b>        | Neutral gases, air  |
| <b>Max. pilot pressure</b>   | max. 10 bar   |
| <b>Port connections</b>      |   |
| Welded acc.                  | EN ISO 1127/ISO 4200, DIN 11850 Series 2, ASME BPE, BS4825, SMS 3008 (on request) |
| Clamp acc.                   | DIN 32676, ASME BPE, ISO 2852 (on request)  |
| Sterile threaded ports       | on request  |
| <b>Pilot air ports</b>       | Push-in connector for external ø 6 mm or 1/4" tube, thread G1/8 (on request)      |
| <b>Installation</b>          | as required, preferably with actuator in upright position                         |

### Content

| Valve specifications                   | System spec. On/Off ELEMENT   | System spec. Continuous ELEMENT                                      |
|--|---|--|
| <b>Type 2103</b>                       | <b>Type 8801-DF</b>   | <b>Type 8802-DF</b>  |
| Technical data & ordering info. p. 1-8 | Ordering info. & technical data Request for quotation p. 9-13 p. 14 | Ordering info. & technical data Request for quotation p. 15-19 p. 20 |

## Technical data valves

### Kv-value

| Orifice |        | Kv value water<br>(m <sup>3</sup> /h) | Actuator size Ø<br>[mm] | Permitted pilot pressure<br>[bar] |      | Max. operating pressure [bar]<br>for seal material |                 |
|---------|--------|---------------------------------------|-------------------------|-----------------------------------|------|--|-----------------|
| [mm]    | [inch] |                                       |                         | min.                              | max. | EPDM [bar]   | PTFE/EPDM [bar] |
| 8       | 1/4"   | 1.0                                   | 50                      | 5                                 | 10   | 10   | 10              |
| 10      | 3/8"   | 1.0                                   | 50                      | 5                                 | 10   | 10   | 10              |
| 15      | 1/2"   | 5.5                                   | 70                      | 5                                 | 10   | 10   | 10              |
| 20      | 3/4"   | 10.0                                  | 70                      | 5                                 | 10   | 10   | 10              |
| 25      | 1"     | 14.0                                  | 70                      | 5                                 | 10   | 6.5  | 6               |
|         |        |                                       | 90                      | 5.5                               | 10   | 10   | 8               |

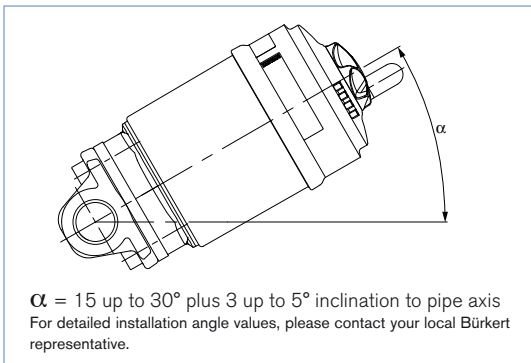
#### Flow rate: Kv value water (m<sup>3</sup>/h)

Measured at +20 °C, 1 bar pressure at valve inlet and free outlet.

#### Pressure values (bar)

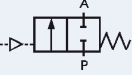
Measured as overpressure to the atmospheric pressure.

### Installation for self-draining operation



## Ordering chart Type 2103 forged diaphragm valve

Body with weld end, surface finish mechanical polished, Ra ≤ 0.5/1.6 µm, further on request

| Control function  | Orifice                             |        | External-Ø [mm] | Kv value water (m³/h) | Actuator size ø [mm] | Pilot pressure [bar] | Max. operating pressure [bar] | Item no. mechanical polished, Ra ≤ 0.5/1.6 µm |
|---|-------------------------------------|--------|-----------------|-----------------------|----------------------|----------------------|-------------------------------|---|
|   | [mm]                                | [inch] |                 |                       |                      |                      |                               |   |
| <b>A</b> 2/2-way valve, normally closed (NC)<br> | <b>Acc. to EN ISO 1127/ISO 4200</b> |        |                 |                       |                      |                      |                               |   |
|   | <b>Diaphragm material EPDM</b>      |        |                 |                       |                      |                      |                               |   |
|   | 8                                   | 1/4"   | 13.5            | 1.0                   | 50                   | 5-10                 | 10                            | 187 247                                       |
|   | 15                                  | 1/2"   | 21.3            | 5.5                   | 70                   | 5-10                 | 10                            | 175 135                                       |
|   | 20                                  | 3/4"   | 26.9            | 10.0                  | 70                   | 5-10                 | 10                            | 175 136                                       |
|   | 25                                  | 1"     | 33.7            | 14.0                  | 70                   | 5-10                 | 6.5                           | 175 137                                       |
|   |                                     |        |                 |                       | 90                   | 5.5-10               | 10                            | 180 353                                       |
|   | <b>Diaphragm material PTFE/EPDM</b> |        |                 |                       |                      |                      |                               |   |
|   | 8                                   | 1/4"   | 13.5            | 1.0                   | 50                   | 5-10                 | 10                            | 187 248                                       |
|   | 15                                  | 1/2"   | 21.3            | 5.5                   | 70                   | 5-10                 | 10                            | 175 138                                       |
|   | 20                                  | 3/4"   | 26.9            | 10.0                  | 70                   | 5-10                 | 10                            | 175 139                                       |
|   | 25                                  | 1"     | 33.7            | 14.0                  | 70                   | 5-10                 | 6                             | 175 140                                       |
|   |                                     |        |                 |                       | 90                   | 5.5-10               | 8                             | 180 354                                       |
|   | <b>Acc. to DIN 11850 Serie 2</b>    |        |                 |                       |                      |                      |                               |   |
|   | <b>Diaphragm material EPDM</b>      |        |                 |                       |                      |                      |                               |   |
|   | 10                                  | 3/8"   | 13              | 1.0                   | 50                   | 5-10                 | 10                            | 187 251                                       |
|   | 15                                  | 1/2"   | 19              | 5.5                   | 70                   | 5-10                 | 10                            | 176 574                                       |
|   | 20                                  | 3/4"   | 23              | 10.0                  | 70                   | 5-10                 | 10                            | 176 575                                       |
|   | 25                                  | 1"     | 29              | 14.0                  | 70                   | 5-10                 | 6.5                           | 176 576                                       |
|   |                                     |        |                 |                       | 90                   | 5.5-10               | 10                            | 180 357                                       |
|   | <b>Diaphragm material PTFE/EPDM</b> |        |                 |                       |                      |                      |                               |   |
|   | 10                                  | 3/8"   | 13              | 1.0                   | 50                   | 5-10                 | 10                            | 187 252                                       |
|   | 15                                  | 1/2"   | 19              | 5.5                   | 70                   | 5-10                 | 10                            | 176 577                                       |
|   | 20                                  | 3/4"   | 23              | 10.0                  | 70                   | 5-10                 | 10                            | 176 578                                       |
| 25  | 1"                                  | 29     | 14.0            | 70                    | 5-10                 | 6                    | 176 579                       |   |
|   |                                     |        |                 | 90                    | 5.5-10               | 8                    | 180 358                       |   |

### **i** Further versions on request

**Material**

Seal: FKM

**Port connection**

Welded acc. SMS3008

**Control function**

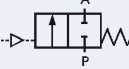
B (normally open) and I (double-acting)

**Additional**

Further surface finishes

## Ordering chart Type 2103 forged diaphragm valve, continued

Welded body, surface finish mechanical polished,  $R_a \leq 0.5/1.6 \mu\text{m}$ , further on request

| Control function  | Orifice                             |        | External- $\varnothing$<br>[mm] | Kv-value<br>water [m <sup>3</sup> /h] | Actuator<br>size $\varnothing$ [mm] | Pilot<br>pressure<br>[bar] | Max.<br>operating<br>pressure<br>[bar] | Item no.<br>mechanical<br>polished,<br>$R_a \leq$<br>0.5/1.6 $\mu\text{m}$ |
|---|-------------------------------------|--------|---------------------------------|---------------------------------------|-------------------------------------|----------------------------|--|--|
|   | [mm]                                | [inch] |                                 |                                       |                                     |                            |  |  |
| <b>A</b> 2/2-way valve, normally closed (NC)<br> | <b>Acc. to ASME BPE</b>             |        |                                 |                                       |                                     |                            |  |  |
|   | <b>Diaphragm material EPDM</b>      |        |                                 |                                       |                                     |                            |  |  |
|   | 8                                   | 1/4"   | 6.35                            | 1.0                                   | 50                                  | 5-10                       | 10                                     | 187 263  |
|   | 10                                  | 3/8"   | 9.53                            | 1.0                                   | 50                                  | 5-10                       | 10                                     | 187 264  |
|   | 15                                  | 1/2"   | 12.7                            | 5.5                                   | 70                                  | 5-10                       | 10                                     | 188 396  |
|   | 20                                  | 3/4"   | 19.05                           | 10.0                                  | 70                                  | 5-10                       | 10                                     | 188 397  |
|   | 25                                  | 1"     | 25.4                            | 14.0                                  | 70                                  | 5-10                       | 6.5                                    | 188 398  |
|   |                                     |        |                                 |                                       | 90                                  | 5.5-10                     | 10                                     | 188 399  |
|   | <b>Diaphragm material PTFE/EPDM</b> |        |                                 |                                       |                                     |                            |  |  |
|   | 8                                   | 1/4"   | 6.35                            | 1.0                                   | 50                                  | 5-10                       | 10                                     | 187 265  |
|   | 10                                  | 3/8"   | 9.53                            | 1.0                                   | 50                                  | 5-10                       | 10                                     | 187 266  |
|   | 15                                  | 1/2"   | 12.7                            | 5.5                                   | 70                                  | 5-10                       | 10                                     | 188 402  |
|   | 20                                  | 3/4"   | 19.05                           | 10.0                                  | 70                                  | 5-10                       | 10                                     | 188 403  |
|   | 25                                  | 1"     | 25.4                            | 14.0                                  | 70                                  | 5-10                       | 6                                      | 188 404  |
|   |                                     |        |                                 |                                       | 90                                  | 5.5-10                     | 8                                      | 188 405  |
|   | <b>Acc. to BS 4825</b>              |        |                                 |                                       |                                     |                            |  |  |
|   | <b>Diaphragm material EPDM</b>      |        |                                 |                                       |                                     |                            |  |  |
|   | 8                                   | 1/4"   | 6.35                            | 1.0                                   | 50                                  | 5-10                       | 10                                     | 187 271  |
|   | 10                                  | 3/8"   | 9.53                            | 1.0                                   | 50                                  | 5-10                       | 10                                     | 187 272  |
|   | 15                                  | 1/2"   | 12.7                            | 5.5                                   | 70                                  | 5-10                       | 10                                     | 188 447  |
|   | 20                                  | 3/4"   | 19.05                           | 10.0                                  | 70                                  | 5-10                       | 10                                     | 188 448  |
|   | <b>Diaphragm material PTFE/EPDM</b> |        |                                 |                                       |                                     |                            |  |  |
|   | 8                                   | 1/4"   | 6.35                            | 1.0                                   | 50                                  | 5-10                       | 10                                     | 187 273  |
|   | 10                                  | 3/8"   | 9.53                            | 1.0                                   | 50                                  | 5-10                       | 10                                     | 187 274  |
|   | 15                                  | 1/2"   | 12.7                            | 5.5                                   | 70                                  | 5-10                       | 10                                     | 188 449  |
|   | 20                                  | 3/4"   | 19.05                           | 10.0                                  | 70                                  | 5-10                       | 10                                     | 188 450  |

 **Further versions on request**

**Material**  
Seal: FKM

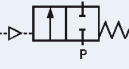
**Port connection**  
Welded acc. to SMS3008

**Control function**  
B (normally open) and I (double-acting)

**Additional**  
Further surface finishes

## Ordering chart Type 2103 forged diaphragm valve, continued

Clamp body, surface finish mechanical polished, Ra ≤ 0.5/1.6 µm, further on request

| Control function  | Orifice                                   |        | External-Ø [mm] | Kv value water (m³/h) | Actuator size ø [mm] | Pilot pressure [bar] | Max. operating pressure [bar] | Item no. mechanical polished, Ra ≤ 0.5/1.6 µm |
|---|---|--------|-----------------|-----------------------|----------------------|----------------------|-------------------------------|---|
|   | [mm]                                      | [inch] |                 |                       |                      |                      |                               |   |
| <b>A</b> 2/2-way valve, normally closed (NC)<br> | <b>Acc. to DIN 32676</b>                  |        |                 |                       |                      |                      |                               |   |
|   | <b>Diaphragm material EPDM</b>            |        |                 |                       |                      |                      |                               |   |
|   | 15  | 1/2"   | 34.0            | 5.5                   | 70                   | 5-10                 | 10                            | 188 503                                       |
|   | 20  | 3/4"   | 34.0            | 10.0                  | 70                   | 5-10                 | 10                            | 188 504                                       |
|   | 25  | 1"     | 50.5            | 14.0                  | 70                   | 5-10                 | 6.5                           | 188 505                                       |
|   |   |        |                 |                       | 90                   | 5.5-10               | 10                            | 188 506                                       |
|   | <b>Diaphragm material PTFE/EPDM</b>       |        |                 |                       |                      |                      |                               |   |
|   | 15  | 1/2"   | 34.0            | 5.5                   | 70                   | 5-10                 | 10                            | 188 509                                       |
|   | 20  | 3/4"   | 34.0            | 10.0                  | 70                   | 5-10                 | 10                            | 188 510                                       |
|   | 25  | 1"     | 50.5            | 14.0                  | 70                   | 5-10                 | 6                             | 188 511                                       |
|   |   |        |                 |                       | 90                   | 5.5-10               | 8                             | 188 512                                       |
|   | <b>Acc. to ASME BPE - short dimension</b> |        |                 |                       |                      |                      |                               |   |
|   | <b>Diaphragm material EPDM</b>            |        |                 |                       |                      |                      |                               |   |
|   | 8   | 1/4"   | 25.0            | 1.0                   | 50                   | 5-10                 | 10                            | 187 287                                       |
|   | 10  | 3/8"   | 25.0            | 1.0                   | 50                   | 5-10                 | 10                            | 187 288                                       |
|   | 15  | 1/2"   | 25.0            | 5.5                   | 70                   | 5-10                 | 10                            | 188 547                                       |
|   | 20  | 3/4"   | 25.0            | 10.0                  | 70                   | 5-10                 | 10                            | 188 548                                       |
|   | 25  | 1"     | 50.5            | 14.0                  | 70                   | 5-10                 | 6.5                           | 188 549                                       |
|   |   |        |                 |                       | 90                   | 5.5-10               | 10                            | 188 550                                       |
|   | <b>Diaphragm material PTFE/EPDM</b>       |        |                 |                       |                      |                      |                               |   |
|   | 8   | 1/4"   | 25.0            | 1.0                   | 50                   | 5-10                 | 10                            | 187 289                                       |
|   | 10  | 3/8"   | 25.0            | 1.0                   | 50                   | 5-10                 | 10                            | 187 290                                       |
|   | 15  | 1/2"   | 25.0            | 5.5                   | 70                   | 5-10                 | 10                            | 188 553                                       |
|   | 20  | 3/4"   | 25.0            | 10.0                  | 70                   | 5-10                 | 10                            | 188 554                                       |
|   | 25  | 1"     | 50.5            | 14.0                  | 70                   | 5-10                 | 6                             | 188 555                                       |
|   |   |        |                 |                       | 90                   | 5.5-10               | 8                             | 188 556                                       |
|   | <b>Acc. to ASME BPE - long dimension</b>  |        |                 |                       |                      |                      |                               |   |
|   | <b>Diaphragm material EPDM</b>            |        |                 |                       |                      |                      |                               |   |
|   | 8   | 1/4"   | 25.0            | 1.0                   | 50                   | 5-10                 | 10                            | 187 295                                       |
|   | 15  | 1/2"   | 25.0            | 5.5                   | 70                   | 5-10                 | 10                            | 188 571                                       |
| 20  | 3/4"                                      | 25.0   | 10.0            | 70                    | 5-10                 | 10                   | 188 572                       |   |
| 25  | 1"  | 50.5   | 14.0            | 70                    | 5-10                 | 6.5                  | 188 573                       |   |
|   |   |        |                 | 90                    | 5.5-10               | 10                   | 188 574                       |   |
| <b>Diaphragm material PTFE/EPDM</b>   |   |        |                 |                       |                      |                      |                               |   |
| 8   | 1/4"                                      | 25.0   | 1.0             | 50                    | 5-10                 | 10                   | 187 296                       |   |
| 15  | 1/2"                                      | 25.0   | 5.5             | 70                    | 5-10                 | 10                   | 188 577                       |   |
| 20  | 3/4"                                      | 25.0   | 10.0            | 70                    | 5-10                 | 10                   | 188 578                       |   |
| 25  | 1"  | 50.5   | 14.0            | 70                    | 5-10                 | 6                    | 188 579                       |   |
|   |   |        |                 | 90                    | 5.5-10               | 8                    | 188 580                       |   |

### **i** Further versions on request



**Material**  
Seal: FKM



**Port connection**  
Clamp acc. to ISO 2852



**Control function**  
B (normally open) and I (double-acting)



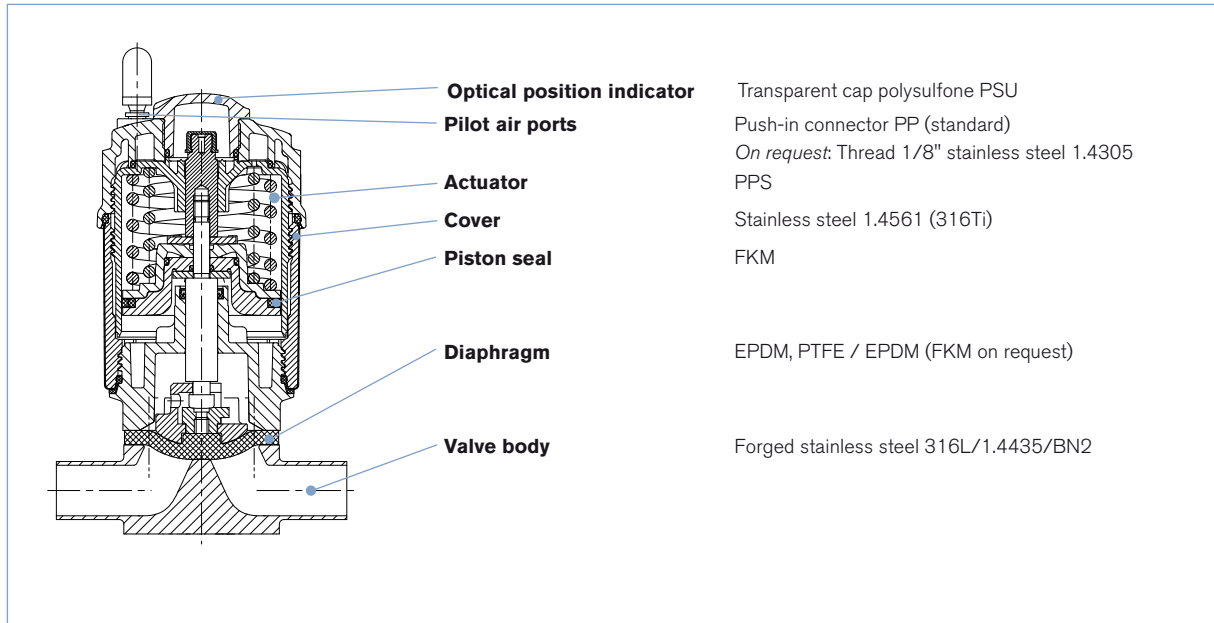
**Additional**  
Further surface finishes

## Approvals

### Suitability for foodstuffs / sterile applications

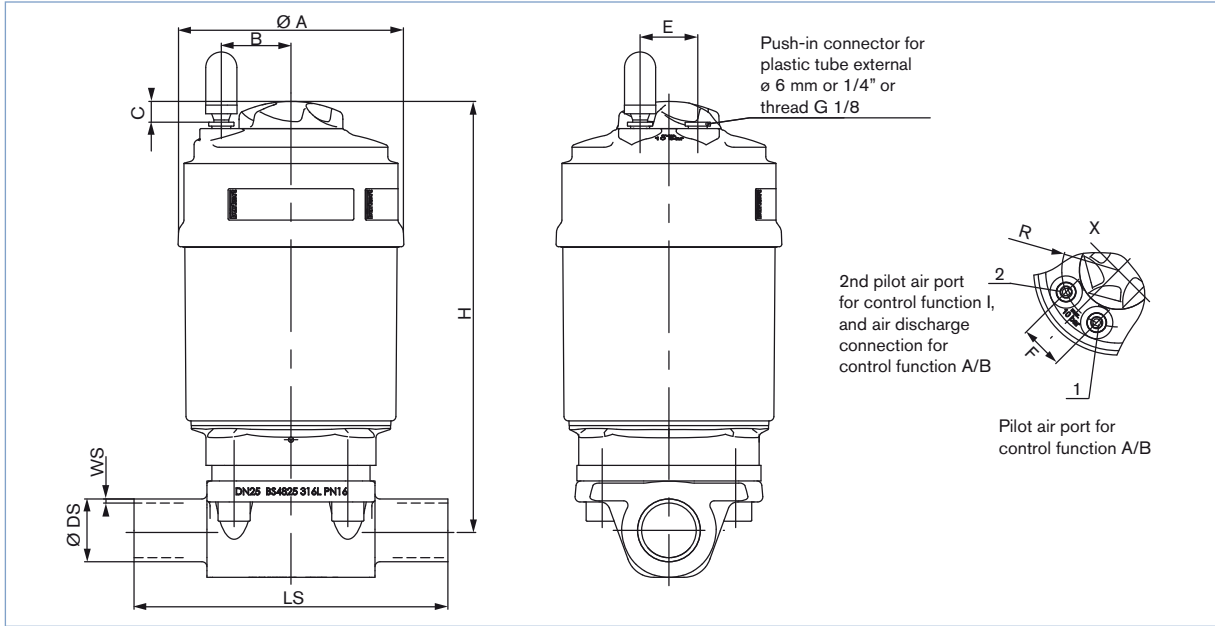
- FDA** • The composition of the EPDM and PTFE/EPDM diaphragms corresponds to the *Code of Federal Regulations*, published by the *FDA* (Food and Drug Administration, USA).
- The EPDM diaphragms correspond to the KTW Recommendation (Plastics in the Drinking Water Sector). A Manufacturer's Declaration will be supplied on request.

## Materials



Dimensions Type 2103 forged diaphragm valve [mm]

Welded body



EN ISO 1127/ISO 4200 and DIN 11850 S2

| All bodies |        |                                     |                 |       |      |     |       |      |     |     |                  | EN ISO 1127/<br>ISO 4200 |                  | DIN 11850 S2 |  |
|------------|--------|-------------------------------------|-----------------|-------|------|-----|-------|------|-----|-----|------------------|--------------------------|------------------|--------------|--|
| Orifice    |        | Actuator size $\varnothing$<br>[mm] | $\varnothing A$ | B     | F    | C   | R     | E    | H   | LS  | $\varnothing DS$ | WS                       | $\varnothing DS$ | WS           |  |
| [mm]       | [inch] |                                     |                 |       |      |     |       |      |     |     |                  |                          |                  |              |  |
| 8          | 1/4"   | 50                                  | 64.5            | 17.15 | 19.8 | 6.1 | 17.15 | 19.8 | 129 | 90  | 13.5             | 1.6                      | -                | -            |  |
| 10         | 3/8"   | 50                                  | 64.5            | 17.15 | 19.8 | 6.1 | 17.15 | 19.8 | 144 | 110 | 17.2             | 1.6                      | 13.0             | 1.5          |  |
| 15         | 1/2"   | 70                                  | 91              | 30.5  | 23.3 | 8.5 | 30.5  | 23.3 | 161 | 110 | 21.3             | 1.6                      | 19.0             | 1.5          |  |
| 20         | 3/4"   | 70                                  | 91              | 30.5  | 23.3 | 8.5 | 30.5  | 23.3 | 171 | 119 | 26.9             | 1.6                      | 23.0             | 1.5          |  |
| 25         | 1"     | 70                                  | 91              | 30.5  | 23.3 | 8.5 | 30.5  | 23.3 | 174 | 129 | 33.7             | 2.0                      | 29.0             | 1.5          |  |
|            |        | 90                                  | 120             | 30.5  | 23.3 | 8.5 | 30.5  | 23.3 | 207 | 129 | 33.7             | 2.0                      | 29.0             | 1.5          |  |

ASME BPE and BS 4825

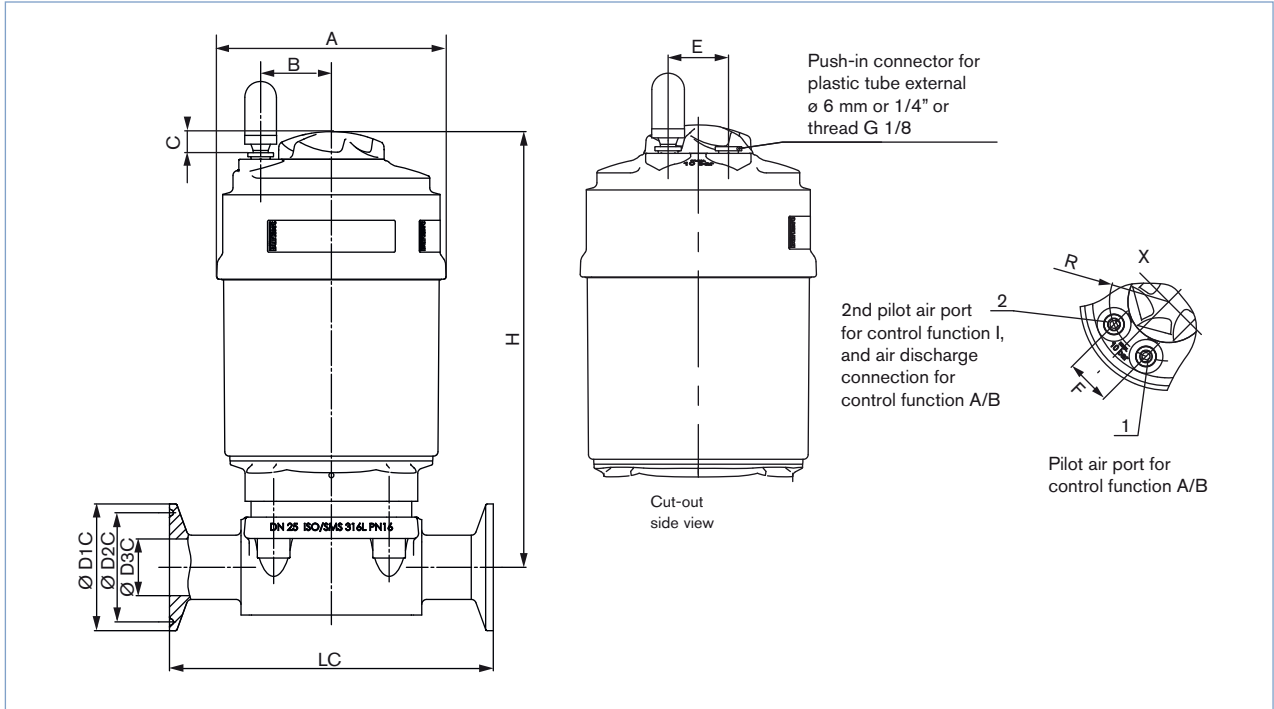
| All bodies |        |                                     |                 |       |      |     |       |      |     |     |                  | ASME BPE |                  | BS 4825 |  |
|------------|--------|-------------------------------------|-----------------|-------|------|-----|-------|------|-----|-----|------------------|----------|------------------|---------|--|
| Orifice    |        | Actuator size $\varnothing$<br>[mm] | $\varnothing A$ | B     | F    | C   | R     | E    | H   | LS  | $\varnothing DS$ | WS       | $\varnothing DS$ | WS      |  |
| [mm]       | [inch] |                                     |                 |       |      |     |       |      |     |     |                  |          |                  |         |  |
| 8          | 1/4"   | 50                                  | 64.5            | 17.15 | 19.8 | 6.1 | 17.15 | 19.8 | 129 | 78  | 6.35             | 0.89     | 6.35             | 1.2     |  |
| 10         | 3/8"   | 50                                  | 64.5            | 17.15 | 19.8 | 6.1 | 17.15 | 19.8 | 144 | 108 | 9.53             | 0.89     | 9.53             | 1.2     |  |
| 15         | 1/2"   | 70                                  | 91              | 30.5  | 23.3 | 8.5 | 30.5  | 23.3 | 161 | 108 | 12.70            | 1.65     | 12.70            | 1.2     |  |
| 20         | 3/4"   | 70                                  | 91              | 30.5  | 23.3 | 8.5 | 30.5  | 23.3 | 171 | 117 | 19.05            | 1.65     | 19.05            | 1.2     |  |
| 25         | 1"     | 70                                  | 91              | 30.5  | 23.3 | 8.5 | 30.5  | 23.3 | 174 | 127 | 25.40            | 1.65     | 25.40            | 1.65    |  |
|            |        | 90                                  | 120             | 30.5  | 23.3 | 8.5 | 30.5  | 23.3 | 207 | 127 | 25.40            | 1.65     | 25.40            | 1.65    |  |

On request: SMS 3008

| Orifice |        | Actuator size $\varnothing$<br>[mm] | $\varnothing A$ | B    | F    | C   | R    | E    | H   | LS  | $\varnothing DS$ | WS  |
|---------|--------|-------------------------------------|-----------------|------|------|-----|------|------|-----|-----|------------------|-----|
| [mm]    | [inch] |                                     |                 |      |      |     |      |      |     |     |                  |     |
| 25      | 1"     | 70                                  | 91              | 30.5 | 23.3 | 8.5 | 30.5 | 23.3 | 174 | 127 | 25               | 1.2 |
|         |        | 90                                  | 120             | 30.5 | 23.3 | 8.5 | 30.5 | 23.3 | 207 | 127 | 25               | 1.2 |

Dimensions Type 2103 forged diaphragm valve [mm], continued

Clamp body



DIN 32676

| Orifice |        | Actuator size Ø | Ø A | B    | F    | C   | R    | E    | H   | LC  | Ø D1C | Ø D2C | Ø D3C |
|---------|--------|-----------------|-----|------|------|-----|------|------|-----|-----|-------|-------|-------|
| [mm]    | [inch] |                 |     |      |      |     |      |      |     |     |       |       |       |
| 15      | 1/2"   | 70              | 91  | 30.5 | 23.3 | 8.5 | 30.5 | 23.3 | 161 | 110 | 34    | 27.5  | 16    |
| 20      | 3/4"   | 70              | 91  | 30.5 | 23.3 | 8.5 | 30.5 | 23.3 | 171 | 119 | 34    | 27.5  | 20    |
| 25      | 1"     | 70              | 91  | 30.5 | 23.3 | 8.5 | 30.5 | 23.3 | 174 | 129 | 50.5  | 43.5  | 26    |
|         |        | 90              | 120 | 30.5 | 23.3 | 8.5 | 30.5 | 23.3 | 207 | 129 | 50.5  | 43.5  | 26    |

ASME BPE

| Orifice |        | Actuator size Ø | Ø A  | B     | F    | C   | R     | E    | H   | LC             |                 | Ø D1C | Ø D2C | Ø D3C |
|---------|--------|-----------------|------|-------|------|-----|-------|------|-----|----------------|-----------------|-------|-------|-------|
| [mm]    | [inch] |                 |      |       |      |     |       |      |     | long dimension | short dimension |       |       |       |
| 8       | 1/4"   | 50              | 64.5 | 17.15 | 19.8 | 6.1 | 17.15 | 19.8 | 129 | 78             | 64.5            | 25    | 21.8  | 3.95  |
| 10      | 3/8"   | 50              | 64.5 | 17.15 | 19.8 | 6.1 | 17.15 | 19.8 | 144 | 89             | 89              | 25    | 21.8  | 9.4   |
| 15      | 1/2"   | 70              | 91   | 30.5  | 23.3 | 8.5 | 30.5  | 23.3 | 161 | 108            | 89              | 25    | 21.8  | 9.4   |
| 20      | 3/4"   | 70              | 91   | 30.5  | 23.3 | 8.5 | 30.5  | 23.3 | 171 | 117            | 102             | 25    | 21.8  | 15.75 |
| 25      | 1"     | 70              | 91   | 30.5  | 23.3 | 8.5 | 30.5  | 23.3 | 174 | 127            | 114             | 50.5  | 43.5  | 22.2  |
|         |        | 90              | 120  | 30.5  | 23.3 | 8.5 | 30.5  | 23.3 | 207 | 127            | 114             | 50.5  | 43.5  | 22.2  |

On request: ISO 2852

| Orifice |        | Actuator size Ø | H   | LC  | Ø D1C | Ø D2C | Ø D3C |
|---------|--------|-----------------|-----|-----|-------|-------|-------|
| [mm]    | [inch] |                 |     |     |       |       |       |
| 25      | 1"     | 70              | 174 | 129 | 50.5  | 43.5  | 22.6  |
|         |        | 90              | 207 | 129 | 50.5  | 43.5  | 22.6  |

**Ordering information for valve system On/Off ELEMENT Type 8801-DF**

A valve system On/Off ELEMENT Type 8801-DF consists of a diaphragm valve Type 2103 and a pneumatic control unit Type 8690 or control head Type 8691 (for valve actuator sizes  $\varnothing$  70/90 mm) or control head Type 8695 (for valve actuator size  $\varnothing$  50 mm) (see separate datasheets). For the configuration of further valve systems please use the "Request for quotation" on p.14 [go to page](#)  
You order two components and receive a complete assembled and certified valve.

**Ordering the valve system On/Off ELEMENT Type 8801-DF with valve actuator sizes  $\varnothing$  70/90 mm**

**Diaphragm valve Type 2103  
with actuator size  $\varnothing$  70/90 mm**

**Control unit**



Type 8690



Type 8691

**Diaphragm valve with  
desired control unit**



**Valve system  
On/Off ELEMENT  
Type 8801-DF-K  
Type 2103 + 8690**



**Valve system  
On/Off ELEMENT  
Type 8801-DF-H  
Type 2103 + 8691**

**Pneumatic control unit Type 8690**



**More  
info.**

The new generation of integrated controllers for combination with actuators from the process valve series Type 21xx is specially designed for the requirements of hygienic process environments. The pneumatic control unit Type 8690 combines electrical position feedback and pneumatic control for single or double-acting actuators, and is also optionally available as an intrinsically safe model to ATEX.

Main customer benefits:

- Compact design of the valve system with integrated controller meets the demands for plant washdown environments through the selection of materials, external seals and integrated control air supply to the actuator
- Integrated pilot valve with manual actuation
- Air intake filter enhances the process valve system availability
- Simple and reliable actuator adaptations allowing additional actuators of the process valve series, Type 20xx or actuators from other manufacturers to be used

**Control head Type 8691**



**More  
info.**

The new generation of integrated control heads for combination with actuators from the process valve series Type 21xx is specially designed for the requirements of hygienic process environments. The intelligent control head, Type 8691, detects the valve position by means of a contact-free analog position sensor circumventing excessive wear of mechanical parts. Single or double-acting actuators are controlled via the integral pilot valve. Communication interfaces AS-Interface and DeviceNet are available as options.

Main customer benefits:

- Compact, hygienic design of the valve system with integrated controller meets the demands of plant washdown environments through the selection of materials, external seals and integrated control air supply to the actuator
- Automatic setting of the control head at the push of a button
- Even under dirty or dark environments, a clearly visible status display due to powerful LEDs
- Monitoring and diagnosis: Process valve systems with field bus interface used in modern plant processes
- Integrated pilot valve with manual actuation
- Air intake filter enhances the process valve system availability
- Simple and reliable actuator adaptations allowing additional actuators of the process valve series, Type 20xx or actuators from other manufacturers to be used

**Ordering information for valve system On/Off ELEMENT Type 8801-DF, continued**

A valve system On/Off ELEMENT Type 8801-DF consists of a diaphragm valve Type 2103 and a pneumatic control unit Type 8690 or control head Type 8691 (for valve actuator sizes  $\varnothing$  70/90 mm) or control head Type 8695 (for valve actuator size  $\varnothing$  50 mm) (see separate datasheets). For the configuration of further valve systems please use the "Request for quotation" on p.14 [go to page](#)  
You order two components and receive a complete assembled and certified valve.

**Ordering the valve system On/Off ELEMENT Type 8801-DF with valve actuator size  $\varnothing$  50 mm**

**Diaphragm valve Type 2103  
with actuator size  $\varnothing$  50 mm**



**Control unit**



Type 8695

**Diaphragm valve with  
desired control unit**



**Valve system  
On/Off ELEMENT  
Type 8801-DF-M  
Type 2103 + 8695**

Click on the orange box "More info." below... you will come to our website for the resp. product where you can download the datasheet.

**Control head Type 8695**



**More  
info.**

The new generation of integrated control heads for combination with small actuators from the process valve series Type 21xx is specially designed for the requirements of hygienic process environments. The intelligent control head, Type 8695, detects the valve position by means of a contact-free analog position sensor circumventing excessive wear of mechanical parts. Single and double-acting actuators are controlled via the integral pilot valve. An AS-Interface communication interface is available as an option.

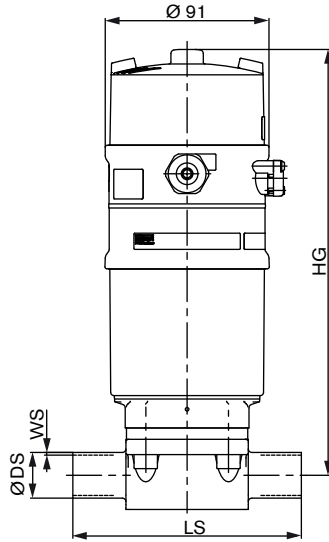
Main customer benefits:

- Compact, hygienic design of the valve system with integrated controller meets the demands of plant washdown environments through the selection of materials, external seals and integrated control air supply to the actuator
- Automatic setting of the control head at the push of a button
- Visual status display on the control head
- Monitoring and diagnosis: Process valve systems with fieldbus interface used in modern plant processes
- Integrated pilot valve
- Simple and reliable actuator adaption

Dimensions for valve system On/Off ELEMENT Type 8801-DF [mm]

Dimensions valve system On/Off ELEMENT Type 8801-DF-K with pneumatic control unit Type 8690 [mm]

Welded body



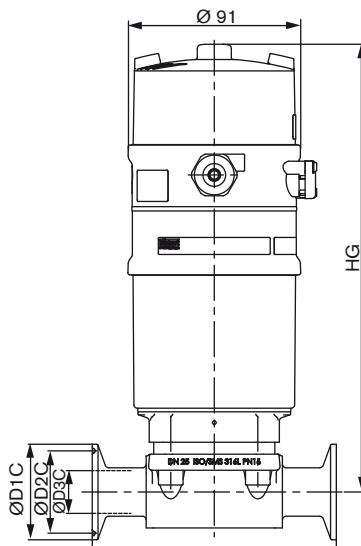
EN ISO 1127/ISO 4200 and DIN 11850 S2

| Orifice |        | Actuator size [mm] | HG  | LS  | EN ISO 1127/ISO 4200 |     | DIN 11850 Serie 2 |     |
|---------|--------|--------------------|-----|-----|----------------------|-----|-------------------|-----|
| [mm]    | [inch] |                    |     |     | Ø DS                 | WS  | Ø DS              | WS  |
| 15      | 1/2"   | 70                 | 224 | 110 | 21.3                 | 1.6 | 19                | 1.5 |
| 20      | 3/4"   | 70                 | 234 | 119 | 26.9                 | 1.6 | 23                | 1.5 |
| 25      | 1"     | 70                 | 237 | 129 | 33.7                 | 2.0 | 29                | 1.5 |
|         |        | 90                 | 270 | 129 | 33.7                 | 2.0 | 29                | 1.5 |

ASME BPE and BS 4825 (SMS 3008 on request)

| Orifice |        | Actuator size Ø [mm] | HG  | LS  | ASME BPE |      | BS 4825 |      | SMS 3008 (on request) |     |
|---------|--------|----------------------|-----|-----|----------|------|---------|------|-----------------------|-----|
| [mm]    | [inch] |                      |     |     | Ø DS     | WS   | Ø DS    | WS   | Ø DS                  | WS  |
| 15      | 1/2"   | 70                   | 224 | 108 | 12.70    | 1.65 | 12.70   | 1.2  | -                     | -   |
| 20      | 3/4"   | 70                   | 234 | 117 | 19.05    | 1.65 | 19.05   | 1.2  | -                     | -   |
| 25      | 1"     | 70                   | 237 | 127 | 25.40    | 1.65 | 25.40   | 1.65 | 25                    | 1.2 |
|         |        | 90                   | 270 | 127 | 25.40    | 1.65 | 25.40   | 1.65 | 25                    | 1.2 |

Clamp body



DIN 32676 and ASME BPE

| Orifice |        | Actuator size Ø [mm] | HG  | DIN 32676 |       |       | ASME BPE       |                 |     |       |       |       |
|---------|--------|----------------------|-----|-----------|-------|-------|----------------|-----------------|-----|-------|-------|-------|
| [mm]    | [inch] |                      |     | LC        | Ø D1C | Ø D2C | Ø D3C          | LC              |     | Ø D1C | Ø D2C | Ø D3C |
|         |        |                      |     |           |       |       | long dimension | short dimension |     |       |       |       |
| 15      | 1/2"   | 70                   | 224 | 110       | 34    | 27.5  | 16             | 108             | 89  | 25    | -     | 9.4   |
| 20      | 3/4"   | 70                   | 234 | 119       | 34    | 27.5  | 20             | 117             | 102 | 25    | -     | 15.75 |
| 25      | 1"     | 70                   | 237 | 129       | 50.5  | 43.5  | 26             | 127             | 114 | 50.5  | 43.5  | 22.2  |
|         |        | 90                   | 270 | 129       | 50.5  | 43.5  | 26             | 127             | 114 | 50.5  | 43.5  | 22.2  |

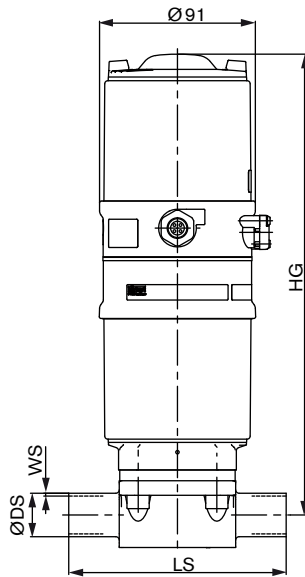
On request: ISO 2852

| Orifice |        | Actuator size Ø [mm] | HG  | LC  | Ø D1C | Ø D2C | Ø D3C |
|---------|--------|----------------------|-----|-----|-------|-------|-------|
| [mm]    | [inch] |                      |     |     |       |       |       |
| 25      | 1"     | 70                   | 237 | 129 | 50.5  | 43.5  | 22.6  |
|         |        | 90                   | 270 | 129 | 50.5  | 43.5  | 22.6  |

Dimensions for valve system On/Off ELEMENT Type 8801-DF [mm], continued

Dimensions valve system On/Off ELEMENT Type 8801-DF-H with control head Type 8691 [mm]

Welded body



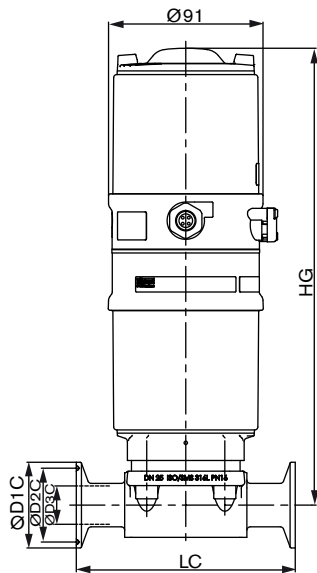
EN ISO 1127/ISO 4200 and DIN 11850 S2

| Orifice |        | Actuator size Ø [mm] | HG  | LS  | EN ISO 1127/ISO 4200 |     | DIN 11850 Serie 2 |     |
|---------|--------|----------------------|-----|-----|----------------------|-----|-------------------|-----|
| [mm]    | [inch] |                      |     |     | Ø DS                 | WS  | Ø DS              | WS  |
| 15      | 1/2"   | 70                   | 257 | 110 | 21.3                 | 1.6 | 19                | 1.5 |
| 20      | 3/4"   | 70                   | 267 | 119 | 26.9                 | 1.6 | 23                | 1.5 |
| 25      | 1"     | 70                   | 270 | 129 | 33.7                 | 2.0 | 29                | 1.5 |
|         |        | 90                   | 303 | 129 | 33.7                 | 2.0 | 29                | 1.5 |

ASME BPE and BS 4825 (SMS 3008 on request)

| Orifice |        | Actuator size Ø [mm] | HG  | LS  | ASME BPE |      | BS 4825 |      | SMS 3008 (on request) |     |
|---------|--------|----------------------|-----|-----|----------|------|---------|------|-----------------------|-----|
| [mm]    | [inch] |                      |     |     | Ø DS     | WS   | Ø DS    | WS   | Ø DS                  | WS  |
| 15      | 1/2"   | 70                   | 257 | 108 | 12.70    | 1.65 | 12.70   | 1.2  | -                     | -   |
| 20      | 3/4"   | 70                   | 267 | 117 | 19.05    | 1.65 | 19.05   | 1.2  | -                     | -   |
| 25      | 1"     | 70                   | 270 | 127 | 25.40    | 1.65 | 25.40   | 1.65 | 25                    | 1.2 |
|         |        | 90                   | 303 | 127 | 25.40    | 1.65 | 25.40   | 1.65 | 25                    | 1.2 |

Clamp body



DIN 32676 and ASME BPE

| Orifice |        | Actuator size Ø [mm] | HG  | LC  | DIN 32676 |       |       | ASME BPE          |                 |       |       |       |
|---------|--------|----------------------|-----|-----|-----------|-------|-------|-------------------|-----------------|-------|-------|-------|
| [mm]    | [inch] |                      |     |     | Ø D1C     | Ø D2C | Ø D3C | LC long dimension | short dimension | Ø D1C | Ø D2C | Ø D3C |
| 15      | 1/2"   | 70                   | 257 | 110 | 34        | 27.5  | 16    |                   |                 | 108   | 89    | 25    |
| 20      | 3/4"   | 70                   | 267 | 119 | 34        | 27.5  | 20    | 117               | 102             | 25    | -     | 15.75 |
| 25      | 1"     | 70                   | 270 | 129 | 50.5      | 43.5  | 26    | 127               | 114             | 50.5  | 43.5  | 22.2  |
|         |        | 90                   | 303 | 129 | 50.5      | 43.5  | 26    | 127               | 114             | 50.5  | 43.5  | 22.2  |

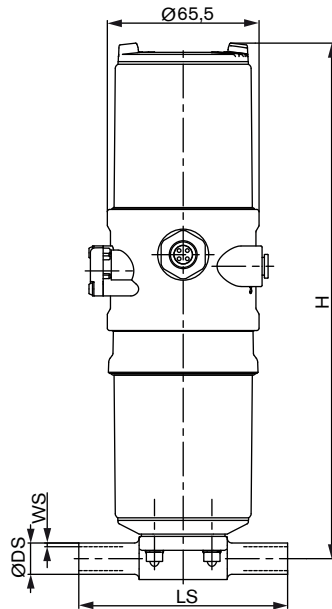
On request: ISO 2852

| Orifice |        | Actuator size Ø [mm] | HG  | LC  | ISO 2852 |        |        |
|---------|--------|----------------------|-----|-----|----------|--------|--------|
| [mm]    | [inch] |                      |     |     | Ø D1 C   | Ø D2 C | Ø D3 C |
| 25      | 1"     | 70                   | 270 | 129 | 50.5     | 43.5   | 22.6   |
|         |        | 90                   | 303 | 129 | 50.5     | 43.5   | 22.6   |

Dimensions for valve system On/Off ELEMENT Type 8801-DF [mm], continued

Dimensions valve system On/Off ELEMENT Type 8801-DF-M with control head Type 8695 [mm]

Welded body



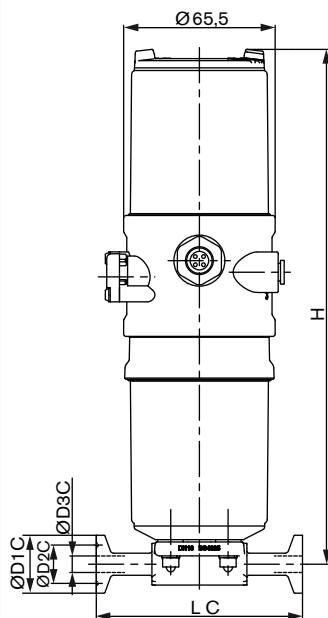
EN ISO 1127/ISO 4200 and DIN 11850 S2

| Orifice |        | Actuator size |     | EN ISO 1127/ ISO 4200 |      | DIN 11850 Serie 2 |      |      |
|---------|--------|---------------|-----|-----------------------|------|-------------------|------|------|
| [mm]    | [inch] | [mm]          | H   | LS                    | Ø DS | Ø WS              | Ø DS | Ø WS |
| 8       | 1/4"   | 50            | 223 | 90                    | 13.5 | 1.6               | -    | -    |
| 10      | 3/8"   | 50            | 238 | 110                   | 17.2 | 1.6               | 13.0 | 1.5  |

On request: ASME BPE and BS 4825

| Orifice |        | Actuator size Ø |     | ASME BPE |      | BS 4825 |      |     |
|---------|--------|-----------------|-----|----------|------|---------|------|-----|
| [mm]    | [inch] | [mm]            | H   | LS       | Ø DS | WS      | Ø DS | WS  |
| 8       | 1/4"   | 50              | 223 | 78       | 6.35 | 0.89    | 6.35 | 1.2 |
| 10      | 3/8"   | 50              | 238 | 108      | 9.53 | 0.89    | 9.53 | 1.2 |

Clamp body



DIN 32676

| Orifice |        | Actuator size |     | DIN 32676 |       |       |       |
|---------|--------|---------------|-----|-----------|-------|-------|-------|
| [mm]    | [inch] | [mm]          | H   | LC        | ØD1 C | ØD2 C | ØD3 C |
| 10      | 3/8"   | 50            | 238 | 110       | 34    | 27.5  | 16    |

ASME BPE

| Orifice |        | Actuator size |     | ASME BPE          |                 |       |       |       |
|---------|--------|---------------|-----|-------------------|-----------------|-------|-------|-------|
| [mm]    | [inch] | [mm]          | H   | LC long dimension | short dimension | ØD1 C | ØD2 C | ØD3 C |
| 8       | 1/4"   | 50            | 223 | 78                | 64.5            | 25    | 21.8  | 3.95  |
| 10      | 3/8"   | 50            | 238 | 89                | 89              | 25    | 21.8  | 9.4   |

**Note**

You can fill out the fields directly in the PDF file before printing out the form.

**Valve system On/Off ELEMENT Type 8801-DF - Request for quotation**

▶ Please fill out and send to your nearest Bürkert facility\* with your inquiry or order

|               |                |
|---------------|----------------|
| Company       | Contact person |
| Customer no.  | Department     |
| Address       | Tel./Fax       |
| Postcode/town | E-mail         |

= mandatory fields to fill out

Quantity

Required delivery date

**Operating data**

|                |                                 |   |
|----------------|---------------------------------|---|
| Pipe line      | DN <input type="text"/>         | PN <input type="text"/>                                     |
| Pipe material  | <input type="text"/>            |   |
| Process medium | <input type="text"/>            |   |
| Type of media  | <input type="checkbox"/> Liquid | <input type="checkbox"/> Steam <input type="checkbox"/> Gas |

**Valve features**

|                                   |   |   |  |                      |
|-----------------------------------|---|---|--|----------------------|
| Surface finish                    | <input type="text"/>                      | internal                                  | <input type="text"/>                   | external             |
| Seal material                     | <input type="checkbox"/> PTFE             | <input type="checkbox"/> EPDM             | <input type="checkbox"/> FKM           |                      |
| Nominal pressure                  | PN <input type="text"/>                   |   |  |                      |
| Orifice                           | DN <input type="text"/>                   |   |  |                      |
| Type of connection                | <input type="checkbox"/> Threaded         | <input type="checkbox"/> Welded           | <input type="checkbox"/> Clamp         |                      |
| Standard connection               | <input type="checkbox"/> ISO              | <input type="checkbox"/> DIN              | <input type="checkbox"/> other         | <input type="text"/> |
| Control function                  | <input type="checkbox"/> NC <sup>1)</sup> | <input type="checkbox"/> NO <sup>1)</sup> | <input type="checkbox"/> double-acting |                      |
| Pilot pressure                    | <input type="text"/>                      | min.                                      | <input type="text"/>                   | max.                 |
| Please specify item no. if known: |   |   |  |                      |
| <input type="text"/>              |   |   |  |                      |

<sup>1)</sup> NC: normally closed by spring action; NO: normally open by spring action

**Control unit features**

| For actuator sizes 70/90 mm  | For actuator sizes 70/90 mm  | For actuator size 50 mm  |
|--|--|--|
| <input type="checkbox"/> <b>Pneumatic Control Unit Type 8690</b>   | <input type="checkbox"/> <b>Control Head Type 8691</b>   | <input type="checkbox"/> <b>Control Head Type 8695</b>   |
| <b>Pneumatic function</b><br><input type="checkbox"/> Single-acting <input type="checkbox"/> Double-acting<br><input type="checkbox"/> Without pilot valve<br><b>Position feedback</b><br><input type="checkbox"/> 1x inductive <input type="checkbox"/> 2x inductive<br><input type="checkbox"/> 1x inductive (NAMUR) <input type="checkbox"/> 2x inductive (NAMUR)<br><input type="checkbox"/> 1x mechanical <input type="checkbox"/> 2x mechanical<br><b>Supply voltage</b><br><input type="checkbox"/> 24 V / DC (ATEX Zone 2/22)<br><input type="checkbox"/> Ex ia IIC T6 (ATEX Zone 1)<br><b>Pilot air ports</b><br><input type="checkbox"/> Push-in connector <input type="checkbox"/> Thread G 1/8"<br>external ø 6mm or 1/4"<br>Please specify item no. if known:<br><input type="text"/> | <b>Pneumatic function</b><br><input type="checkbox"/> Single-acting <input type="checkbox"/> Double-acting<br><b>Pilot air ports</b><br><input type="checkbox"/> Push-in connector external ø 6mm or 1/4"<br><input type="checkbox"/> Thread G 1/8"<br><b>Communication</b><br><input type="checkbox"/> ASI<br><input type="checkbox"/> Multipol M12<br><input type="checkbox"/> Flat cable clip, 1 m cable<br><input type="checkbox"/> DeviceNet<br>Please specify item no. if known:<br><input type="text"/> | <b>Pneumatic function</b><br><input type="checkbox"/> Single-acting <input type="checkbox"/> Double-acting<br><b>Pilot air ports</b><br><input type="checkbox"/> Push-in connector external ø 6mm or 1/4"<br><input type="checkbox"/> Thread G 1/8"<br><b>Communication</b><br><input type="checkbox"/> ASI<br>Please specify item no. if known:<br><input type="text"/> |

**Comments**

\* To find your nearest Bürkert facility, click on the orange box → [www.burkert.com](http://www.burkert.com)

**Ordering information for valve system Continuous ELEMENT Type 8802-DF**

A valve system Continuous ELEMENT Type 8802-DF consists of a diaphragm valve Type 2103 and a digital electropneumatic Positioner Type 8692, a digital electropneumatic Process Controller Type 8693 or a digital electropneumatic Positioner Basic Type 8694 (for valve actuator sizes  $\varnothing$  70/90 mm) or a digital electropneumatic Positioner Basic Type 8696 (for valve actuator size  $\varnothing$  50 mm) (see separate datasheets).

For the configuration of further valve systems please use the "Request for quotation" on p. 20 [go to page](#)

You order two components and receive a complete assembled and certified valve.

**Ordering the valve system Continuous ELEMENT Type 8802-DF with valve actuator sizes  $\varnothing$  70/90 mm**

**Diaphragm valve Type 2103  
with actuator sizes  $\varnothing$  70/90 mm**      **Control units**



Type 8692



Type 8693



Type 8694

**Diaphragm valve with  
desired control unit**



**Valve system  
Continuous  
ELEMENT  
Type 8802-DF-I  
2103 + 8692**



**Valve system  
Continuous  
ELEMENT  
Type 8802-DF-J  
2103 + 8693**



**Valve system  
Continuous  
ELEMENT  
Type 8802-DF-L  
2103 + 8694**

Click on the orange box "More info." below... you will come to our website for the resp. product where you can download the datasheet.

**Positioner TopControl  
Type 8692**

**More  
info.**

**Process Controller  
TopControl Type 8693**

**More  
info.**



PROFIBUS  
BUS DeviceNet™

The new generation of integrated positioners/process controllers for combination with actuators from the process valve series Type 23xx/2103 is specially designed for the requirements of hygienic process environments. The easy handling and the selection of additional software functions are done either on a big graphic display with backlight and keypad or via a PC interface. A contact-free analog position sensor registers the valve position without deterioration. Single-acting or double-acting actuators are controlled via the integral positioner system. With Type 8693, the process controller function is superimposed on the position control loop. Profibus DPV1 and DeviceNet communication interfaces are available as options.

Main customer benefits:

- Compact design of the valve system with integrated positioner/process controller meets the demands for plant washdown environments through the selection of materials, external seals and integrated control air supply to the actuator
- Extremely simple commissioning and operation thanks to the back-lighting of the graphics display and proven multilingual software structure
- Automatic parameterisation of the positioner and process controller using the TUNE functions
- Field bus communication via Profibus DPV1 or DeviceNet
- Air intake filter enhances the process valve system availability
- Simple and reliable actuator adaption
- Explosion-proof models for zone 2/22

**Positioner TopControl Basic Type 8694**

**More  
info.**



The new generation of integrated positioners for combination with actuators from the process valve series Type 23xx/2103 is specially designed for the requirements of hygienic process environments. The operation and selection of the software functions close tight function, inversion of the operating direction of the setpoint signal, characteristic curves selection and switching manual/automatic operation are effected via push-buttons and DIP switches or via the PC interface. The position setpoint is set using the standard signal 4 - 20 mA. In addition, the enable can be controlled via the binary input and an optional position feedback can be integrated. The positioner, Type 8694, registers the valve position without deterioration through a contact-free analogue position sensor. Single-acting or double-acting actuators are controlled via the integral positioner system. An AS-Interface communication interface is available as an option.

Main customer benefits:

- Compact design of the valve system with integrated positioner meets the demands for plant washdown environments through the selection of materials, external seals and integrated control air supply to the actuator
- Automatic parameterisation of the process controller using the Process TUNE function
- Field bus communication via optional AS-Interface
- Air intake filter enhances the process valve system availability
- Simple and reliable actuator adaption allowing additional actuators of the process valve series, Type 20xx or actuators from other manufacturers to be used
- Explosion-proof models for zone 2/22

**Ordering information for valve system Continuous ELEMENT Type 8802-DF, continued**

A valve system Continuous ELEMENT Type 8802-DF consists of a diaphragm valve Type 2103 and a digital electropneumatic Positioner Type 8692, a digital electropneumatic Process Controller Type 8693 or a digital electropneumatic Positioner Basic Type 8694 (for valve actuator sizes  $\varnothing$  70/90 mm) or a digital electropneumatic Positioner Basic Type 8696 (for valve actuator size  $\varnothing$  50 mm) (see separate datasheets).

For the configuration of further valve systems please use the "Request for quotation" on p. 20 [go to page](#)

You order two components and receive a complete assembled and certified valve.

**Ordering the valve system Continuous ELEMENT Type 8802-DF with valve actuator size  $\varnothing$  50 mm**

**Diaphragm valve Type 2103  
with actuator size  $\varnothing$  50 mm**



**Control unit**



Type 8696

**Diaphragm valve with  
desired control unit**



**Valve system  
Continuous ELEMENT  
Type 8802-DF-N  
2103 + 8696**

Click on the orange box "More info." below... you will come to our website for the resp. product where you can download the datasheet.

**Positioner TopControl Basic Type 8696**



**More  
info.**

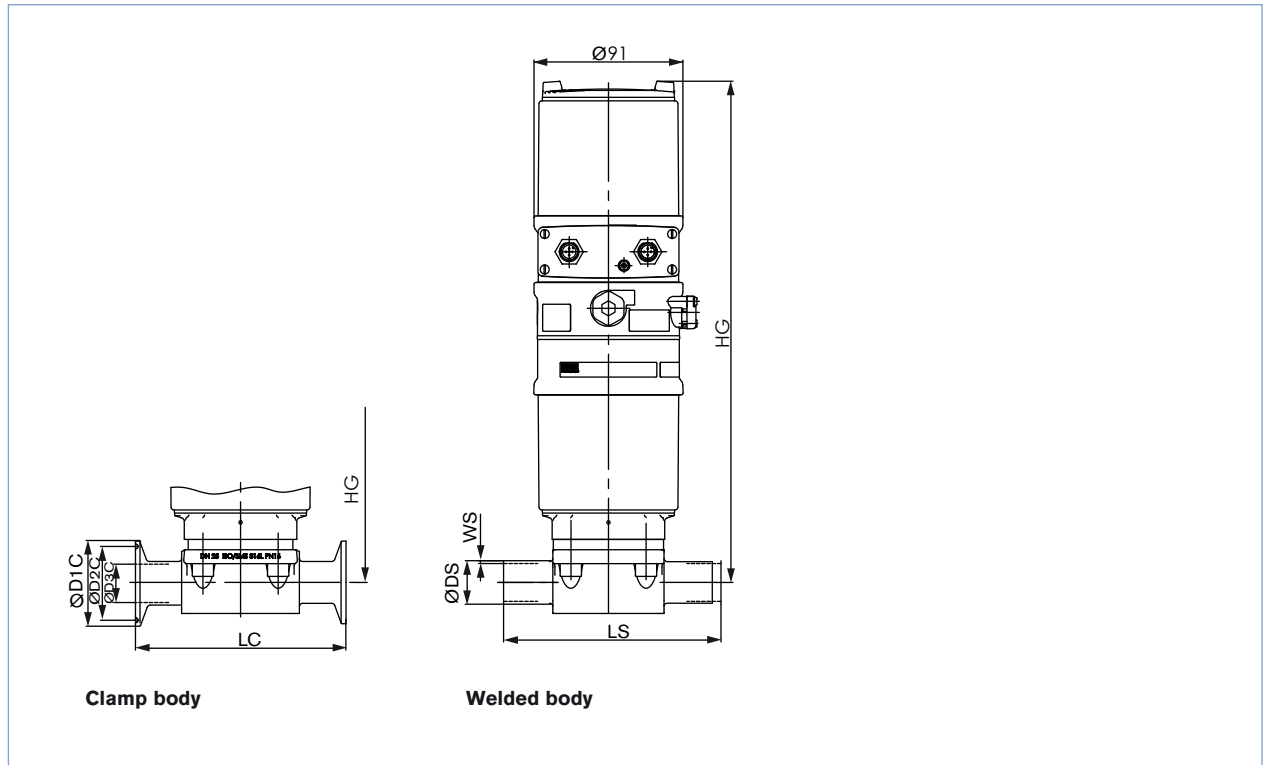
The new generation of integrated positioners for combination with small actuators from the process valve series Type 23xx/2103 is specially designed for the requirements of hygienic process environments. The operation and selection of the software functions close tight function, inversion of the operating direction of the setpoint signal, characteristic curves selection and switching manual/automatic operation are effected via push-buttons and DIP switches or via the PC interface. The position setpoint is set using the standard signal 4 - 20 mA. In addition, the enable can be controlled via the binary input and an optional position feedback can be integrated. The positioner, Type 8696, registers the valve position without deterioration through a contact-free analogue position sensor. Single-acting actuators are controlled via the integral positioner system.

Main customer benefits:

- Compact design of the valve system with integrated positioner meets the demands for plant washdown environments through the selection of materials, external seals and integrated control air supply to the actuator
- Automatic parameterisation of the positioner using the TUNE function
- Simple and reliable actuator adaption
- Explosion-proof models for zone 2/22

Dimensions for valve system Continuous ELEMENT Type 8802-DF [mm]

Dimensions valve system Continuous ELEMENT Type 8802-DF-I with Positioner TopControl Type 8692 and 8802-DF-J with Process Controller TopControl Type 8693 [mm]



Welded body

| Orifice |        | Actuator size [mm] | HG  | LS  | EN ISO 1127/ ISO 4200 |     | DIN 11850 Serie 2 |     | ASME BPE         |      | BS 4825          |      | SMS 3008 (on request) |     |
|---------|--------|--------------------|-----|-----|-----------------------|-----|-------------------|-----|------------------|------|------------------|------|-----------------------|-----|
| [mm]    | [inch] |                    |     |     | $\varnothing DS$      | WS  | $\varnothing DS$  | WS  | $\varnothing DS$ | WS   | $\varnothing DS$ | WS   | $\varnothing DS$      | WS  |
| 15      | 1/2"   | 70                 | 294 | 110 | 21.3                  | 1.6 | 19                | 1.5 | 12.70            | 1.65 | 12.70            | 1.2  | -                     | -   |
| 20      | 3/4"   | 70                 | 304 | 119 | 26.9                  | 1.6 | 23                | 1.5 | 19.05            | 1.65 | 19.05            | 1.2  | -                     | -   |
| 25      | 1"     | 70                 | 307 | 129 | 33.7                  | 2.0 | 29                | 1.5 | 25.40            | 1.65 | 25.40            | 1.65 | 25                    | 1.2 |
|         |        | 90                 | 340 | 129 | 33.7                  | 2.0 | 29                | 1.5 | 25.40            | 1.65 | 25.40            | 1.65 | 25                    | 1.2 |

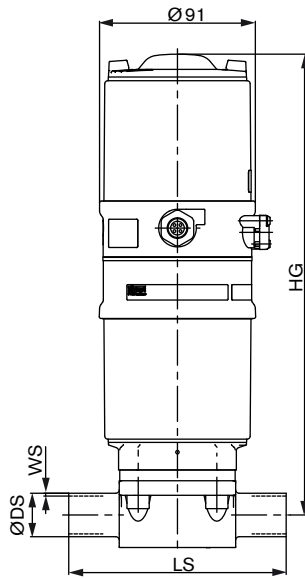
Clamp body

| Orifice |        | Actuator size $\varnothing$ [mm] | DIN 32676 |     |                   |                   |                   |                 | ASME BPE |                   |                   |                   | ISO 2852 (on request) |                  |                   |                   |
|---------|--------|----------------------------------|-----------|-----|-------------------|-------------------|-------------------|-----------------|----------|-------------------|-------------------|-------------------|-----------------------|------------------|-------------------|-------------------|
| [mm]    | [inch] |                                  | HG        | LC  | $\varnothing D1C$ | $\varnothing D2C$ | $\varnothing D3C$ | LC              |          | $\varnothing D1C$ | $\varnothing D2C$ | $\varnothing D3C$ | LC                    | $\varnothing DC$ | $\varnothing D2C$ | $\varnothing D3C$ |
|         |        |                                  |           |     |                   |                   | long dimension    | short dimension |          |                   |                   |                   |                       |                  |                   |                   |
| 15      | 1/2"   | 70                               | 294       | 110 | 34                | 27.5              | 16                | 108             | 89       | 25                | -                 | 9.4               | -                     | -                | -                 | -                 |
| 20      | 3/4"   | 70                               | 304       | 119 | 34                | 27.5              | 20                | 117             | 102      | 25                | -                 | 15.75             | -                     | -                | -                 | -                 |
| 25      | 1"     | 70                               | 307       | 129 | 50.5              | 43.5              | 26                | 127             | 114      | 50.5              | 43.5              | 22.2              | 129                   | 50.5             | 43.5              | 22.6              |
|         |        | 90                               | 340       | 129 | 50.5              | 43.5              | 26                | 127             | 114      | 50.5              | 43.5              | 22.2              | 129                   | 50.5             | 43.5              | 22.6              |

Dimensions for valve system Continuous ELEMENT Type 8802-DF [mm], continued

Dimensions valve system Continuous ELEMENT Type 8802-DF-L with Positioner TopControl Basic Type 8694 [mm]

Welded body



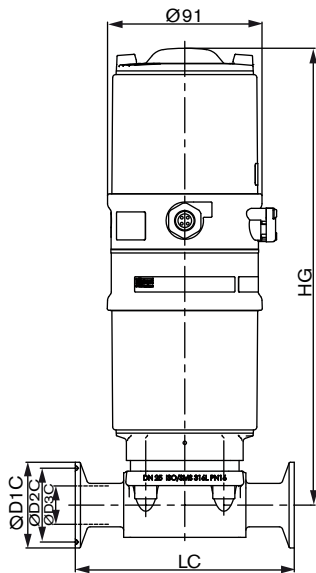
EN ISO 1127/ISO 4200 and DIN 11850 S2

| Orifice |        | Actuator size Ø | HG  | LS  | EN ISO 1127/ISO 4200 |     | DIN 11850 Serie 2 |     |
|---------|--------|-----------------|-----|-----|----------------------|-----|-------------------|-----|
| [mm]    | [inch] |                 |     |     | Ø DS                 | WS  | Ø DS              | WS  |
| 15      | 1/2"   | 70              | 257 | 110 | 21.3                 | 1.6 | 19                | 1.5 |
| 20      | 3/4"   | 70              | 267 | 119 | 26.9                 | 1.6 | 23                | 1.5 |
| 25      | 1"     | 70              | 270 | 129 | 33.7                 | 2.0 | 29                | 1.5 |
|         |        | 90              | 303 | 129 | 33.7                 | 2.0 | 29                | 1.5 |

ASME BPE and BS 4825 (SMS 3008 on request)

| Orifice |        | Actuator size Ø | HG  | LS  | ASME BPE |      | BS 4825 |      | SMS 3008 (on request) |     |
|---------|--------|-----------------|-----|-----|----------|------|---------|------|-----------------------|-----|
| [mm]    | [inch] |                 |     |     | Ø DS     | WS   | Ø DS    | WS   | Ø DS                  | WS  |
| 15      | 1/2"   | 70              | 257 | 108 | 12.70    | 1.65 | 12.70   | 1.2  | -                     | -   |
| 20      | 3/4"   | 70              | 267 | 117 | 19.05    | 1.65 | 19.05   | 1.2  | -                     | -   |
| 25      | 1"     | 70              | 270 | 127 | 25.40    | 1.65 | 25.40   | 1.65 | 25                    | 1.2 |
|         |        | 90              | 303 | 127 | 25.40    | 1.65 | 25.40   | 1.65 | 25                    | 1.2 |

Clamp body



DIN 32676 and ASME BPE

| Orifice |        | Actuator size Ø | HG  | LC  | DIN 32676 |       |       | ASME BPE          |                    |      | Ø D1C | Ø D2C | Ø D3C |
|---------|--------|-----------------|-----|-----|-----------|-------|-------|-------------------|--------------------|------|-------|-------|-------|
| [mm]    | [inch] |                 |     |     | Ø D1C     | Ø D2C | Ø D3C | LC long dimension | LC short dimension |      |       |       |       |
| 15      | 1/2"   | 70              | 257 | 110 | 34        | 27.5  | 16    | 108               | 89                 | 25   | -     | 9.4   |       |
| 20      | 3/4"   | 70              | 267 | 119 | 34        | 27.5  | 20    | 117               | 102                | 25   | -     | 15.75 |       |
| 25      | 1"     | 70              | 270 | 129 | 50.5      | 43.5  | 26    | 127               | 114                | 50.5 | 43.5  | 22.2  |       |
|         |        | 90              | 303 | 129 | 50.5      | 43.5  | 26    | 127               | 114                | 50.5 | 43.5  | 22.2  |       |

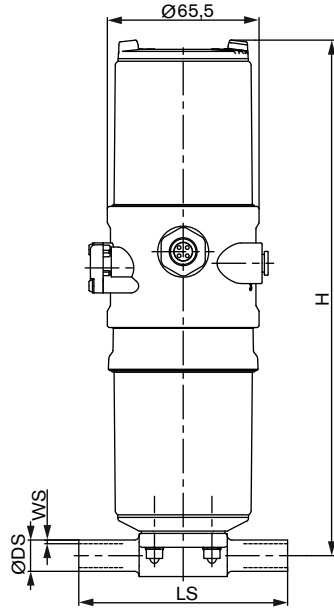
On request: ISO 2852

| Orifice |        | Actuator size Ø | HG  | LC  | Ø D1 C | Ø D2 C | Ø D3 C |
|---------|--------|-----------------|-----|-----|--------|--------|--------|
| [mm]    | [inch] |                 |     |     |        |        |        |
| 25      | 1"     | 70              | 270 | 129 | 50.5   | 43.5   | 22.6   |
|         |        | 90              | 303 | 129 | 50.5   | 43.5   | 22.6   |

Dimensions for valve system Continuous ELEMENT Type 8802-DF [mm] ], continued

Dimensions valve system Continuous ELEMENT Type 8802-DF-N with Positioner TopControl Basic Type 8696 [mm]

Welded body



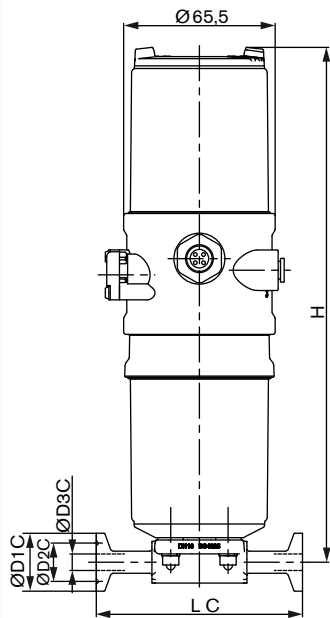
EN ISO 1127/ISO 4200 and DIN 11850 S2

| Orifice |        | Actuator size<br>[mm] | H   | LS  | EN ISO 1127/ ISO 4200 |      | DIN 11850 Serie 2 |      |
|---------|--------|-----------------------|-----|-----|-----------------------|------|-------------------|------|
| [mm]    | [inch] |                       |     |     | Ø DS                  | Ø WS | Ø DS              | Ø WS |
| 8       | 1/4"   | 50                    | 223 | 90  | 13.5                  | 1.6  | -                 | -    |
| 10      | 3/8"   | 50                    | 238 | 110 | 17.2                  | 1.6  | 13.0              | 1.5  |

On request: ASME BPE and BS 4825

| Orifice |        | Actuator size Ø<br>[mm] | H   | LS  | ASME BPE |      | BS 4825 |     |
|---------|--------|-------------------------|-----|-----|----------|------|---------|-----|
| [mm]    | [inch] |                         |     |     | Ø DS     | WS   | Ø DS    | WS  |
| 8       | 1/4"   | 50                      | 223 | 78  | 6.35     | 0.89 | 6.35    | 1.2 |
| 10      | 3/8"   | 50                      | 238 | 108 | 9.53     | 0.89 | 9.53    | 1.2 |

Clamp body



DIN 32676

| Orifice |        | Actuator size<br>[mm] | H   | DIN 32676 |       |       |       |
|---------|--------|-----------------------|-----|-----------|-------|-------|-------|
| [mm]    | [inch] |                       |     | LC        | ØD1 C | ØD2 C | ØD3 C |
| 10      | 3/8"   | 50                    | 238 | 110       | 34    | 27.5  | 16    |

ASME BPE

| Orifice |        | Actuator size<br>[mm] | H   | ASME BPE          |                 |       |       |       |
|---------|--------|-----------------------|-----|-------------------|-----------------|-------|-------|-------|
| [mm]    | [inch] |                       |     | LC long dimension | short dimension | ØD1 C | ØD2 C | ØD3 C |
| 8       | 1/4"   | 50                    | 223 | 78                | 64.5            | 25    | 21.8  | 3.95  |
| 10      | 3/8"   | 50                    | 238 | 89                | 89              | 25    | 21.8  | 9.4   |

Valve system Continuous ELEMENT Type 8802-DF - Request for quotation

Note

You can fill out the fields directly in the PDF file before printing out the form.

Please fill out and send to your nearest Bürkert facility\* with your inquiry or order

|               |                |
|---------------|----------------|
| Company       | Contact person |
| Customer no.  | Department     |
| Address       | Tel./Fax       |
| Postcode/town | E-mail         |

= mandatory fields to fill out       Quantity       Required delivery date

Operating data

Pipe line DN  PN

Pipe material

Process medium

Type of media  Liquid  Steam  Gas

| Flow rate (Q, Q <sub>N</sub> , W) <sup>1)</sup>               | Min                  | Standard             | Max                  | Unit                 |
|---|----------------------|----------------------|----------------------|----------------------|
| <input type="checkbox"/> Temperature at valve inlet T1        | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <input type="checkbox"/> Absolute pressure at valve inlet P1  | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| <input type="checkbox"/> Absolute pressure at valve outlet P2 | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

<sup>1)</sup> standard unit Liquid Q = m<sup>3</sup>/h; Steam W = Kg/h; Gas QN = Nm<sup>3</sup>/h

Valve features

Surface finish  internal  external

Seal material  PTFE  EPDM  FKM

Orifice DN







Type of connection  Threaded  Welded  Clamp

Standard connection  ISO  DIN  other

Control function  NC <sup>2)</sup>  NO <sup>2)</sup>  double-acting

Please specify item no. if known:  <sup>2)</sup> NC: normally closed by spring action; NO: normally open by spring action

Control unit features

|   For actuator sizes 70/90 mm |  |  For actuator size 50 mm  |
|---|--|--|
| <input type="checkbox"/> Positioner TopControl Type 8692   | <input type="checkbox"/> Process Controller TopControl Type 8693  | <input type="checkbox"/> Positioner TopControl Basic Type 8694  |
| <b>Pneumatic function</b><br><input type="checkbox"/> Single-acting <input type="checkbox"/> Double-acting  | <b>Pneumatic function</b><br><input type="checkbox"/> Single-acting  | <b>Pneumatic function</b><br><input type="checkbox"/> Single-acting  |
| <b>Communication</b><br><input type="checkbox"/> Profibus <input type="checkbox"/> DeviceNet  | <b>Pilot air ports</b><br><input type="checkbox"/> Push-in connector external ø 6 mm or 1/4"<br><input type="checkbox"/> Thread G 1/8"               | <b>Pilot air ports</b><br><input type="checkbox"/> Push-in connector external ø 6 mm or 1/4"<br><input type="checkbox"/> Thread G 1/8"               |
| <b>Electrical connection</b><br><input type="checkbox"/> Cable gland <input type="checkbox"/> Multipol connection   | <b>Feedback</b><br><input type="checkbox"/> 4-20 mA  | <b>Feedback</b><br><input type="checkbox"/> 4-20 mA  |
| <b>Feedback</b><br><input type="checkbox"/> 4-20 mA <input type="checkbox"/> 4-20 mA + 2 binary outputs   | Please specify item no. if known: <input type="text"/>   | Please specify item no. if known: <input type="text"/>   |
| <b>Initiator</b><br><input type="checkbox"/> Initiator  |  |  |
| Please specify item no. if known: <input type="text"/>  |  |  |

Comments

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In case of special application conditions, please consult for advice.

Subject to alteration.  
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