



## Pneumatically operated 2-way Globe Control Valve

- Excellent control characteristics
- High cycle life and maintenance-free operation
- Flow optimised body in stainless steel
- Several  $K_{VS}$  value per port size due to removable valve seats
- Control units can be mounted directly without external tubing

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

### Can be combined with

|                                                                                     |                                                                                                                   |   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|---|
|   | <b>Type 8692</b><br>Digital electropneumatic positioner for integrated mounting on process control valves         | ▶ |
|  | <b>Type 8694</b><br>Digital electropneumatic positioner for integrated mounting on process control valves         | ▶ |
|  | <b>Type 8696</b><br>Digital electropneumatic positioner for integrated mounting on process control valves         | ▶ |
|  | <b>Type 8693</b><br>Digital electropneumatic process controller for integrated mounting on process control valves | ▶ |
|  | <b>Type 8792</b><br>Digital electropneumatic positioner SideCONTROL                                               | ▶ |
|  | <b>Type 8791</b><br>Digital electropneumatic positioner SideCONTROL                                               | ▶ |
|  | <b>Type 8793</b><br>Digital electropneumatic Process Controller SideCONTROL                                       | ▶ |
|  | <b>Type 8802</b><br>Continuous control valve systems ELEMENT – overview                                           | ▶ |

### Type description

In line with Bürkert's philosophy the construction of the Type 2301 globe valve fulfils tough criteria for process environments. Unrivalled cycle life and sealing integrity is guaranteed by the proven self adjusting spindle packing with exchangeable V-seals. Each globe valve body can be fitted with up to five sizes of trim sets. These parabolic trims provide a reliable and repeatable characteristic to vary the flow. The control cones are available in either stainless steel or with a durable PTFE seal or PEEK seal for tight shut-off. Leakage class III, IV or VI are available. The design enables the easy integration of automation modules whether they are digital electropneumatic positioner or process controller. The fully integrated system has a compact and smooth design, integrated pneumatic lines, IP65/67 protection class and superior chemical resistance.

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## 1. General technical data

|                                                                                                       |                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product properties</b>                                                                             |                                                                                                                                                                                                                                                              |
| Dimensions                                                                                            | Further information can be found in chapter <a href="#">"6. Dimensions" on page 10.</a>                                                                                                                                                                      |
| Material                                                                                              | Further information can be found in chapter <a href="#">"5. Materials" on page 8.</a>                                                                                                                                                                        |
| Design                                                                                                | Globe control valve                                                                                                                                                                                                                                          |
| Nominal diameter (port connection)                                                                    | DN 10...DN 100, NPS 3/8...NPS 4                                                                                                                                                                                                                              |
| Safety setting in case of power failure                                                               | Normally closed (control function A), normally open (control function B)                                                                                                                                                                                     |
| Flow direction                                                                                        | Flow to open (below seat)                                                                                                                                                                                                                                    |
| <b>Performance data</b>                                                                               |                                                                                                                                                                                                                                                              |
| Operating pressure                                                                                    | 0...25 bar(g), 40 bar(g) on request (see <a href="#">"7.1. Fluidic data" on page 17</a> )<br>Vacuum variant... - 0.9 bar(g) (option)                                                                                                                         |
| Nominal pressure                                                                                      | PN 25/PN 40 (DIN EN 1333), Class 150 (DIN EN 1759)                                                                                                                                                                                                           |
| Seat leakage                                                                                          | Leakage class III and IV (DIN EN 60534 - 4:2006) for stainless steel<br>Leakage class VI for PTFE and PEEK (see <a href="#">"7.1. Fluidic data" on page 17</a> )                                                                                             |
| K <sub>v</sub> value                                                                                  | 0.1 m³/h...140 m³/h (see <a href="#">"7.1. Fluidic data" on page 17</a> )                                                                                                                                                                                    |
| Operating characteristic                                                                              | Equal percentage, linear (others on request)                                                                                                                                                                                                                 |
| Theoretical rangeability                                                                              | 50:1                                                                                                                                                                                                                                                         |
| <b>Medium data</b>                                                                                    |                                                                                                                                                                                                                                                              |
| Medium                                                                                                | Steam, water, neutral gases, alcohols, oils, fuels, hydraulic fluids, salt solutions, organic solvents, oxygen and fuel gases of families I, II and III in accordance with the Gas Appliances Regulation (EU) 2016/426, Hydrogen (optional), lyes (optional) |
| Medium temperature                                                                                    | - 40 °C...+ 230 °C (see <a href="#">"7.2. Operating limits" on page 22</a> )                                                                                                                                                                                 |
| Viscosity                                                                                             | Max. 600 mm²/s                                                                                                                                                                                                                                               |
| Control medium                                                                                        | Air, neutral gases                                                                                                                                                                                                                                           |
| <b>Product connections</b>                                                                            |                                                                                                                                                                                                                                                              |
| <b>Port connection <sup>2,)</sup></b>                                                                 |                                                                                                                                                                                                                                                              |
| Flange connection                                                                                     | DIN EN 1092 - 1<br>ANSI B 16.5<br>JIS 10K                                                                                                                                                                                                                    |
| Threaded connection                                                                                   | G (DIN ISO 228 - 1)<br>NPT (ASME B1.20.1)<br>RC (ISO 7 - 1)                                                                                                                                                                                                  |
| Welded connection                                                                                     | DIN EN ISO 1127 / ISO 4200 / DIN 11866 series B<br>DIN 11850 - 2 / DIN 11866 series A<br>ASME BPE / DIN 11866 series C<br>SMS 3008                                                                                                                           |
| Clamp connection                                                                                      | DIN 32676 series B (pipe: ISO 4200)<br>DIN 32676 series A (pipe: DIN 11850 - 2)<br>ASME BPE                                                                                                                                                                  |
| <b>Approvals and conformities</b>                                                                     |                                                                                                                                                                                                                                                              |
| Further information can be found in chapter <a href="#">"4. Approvals and conformities" on page 6</a> |                                                                                                                                                                                                                                                              |
| <b>Environment and installation</b>                                                                   |                                                                                                                                                                                                                                                              |
| Environmental factors                                                                                 | Protect the device from electromagnetic interference, UV radiation and, when used outdoors, from weather conditions.                                                                                                                                         |
| Ambient temperature                                                                                   | - 10 °C...+ 80 °C (with positioner or process controller Type 8791/8792/8793)<br>- 10 °C...+ 55 °C (with positioner or process controller Type 8692/8693/8694)<br>(see <a href="#">"7.2. Operating limits" on page 22</a> )                                  |
| Degree of protection                                                                                  | IP65/67                                                                                                                                                                                                                                                      |
| Installation position                                                                                 | As required, preferably with actuator upright                                                                                                                                                                                                                |

1.) Others are available on request.

2. Product variants

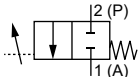
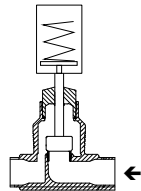
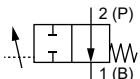
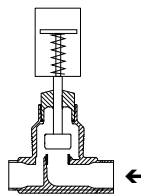
2.1. ELEMENT

| Product properties                 |                                                                                                                                                       |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nominal diameter (port connection) | DN 10...DN 100                                                                                                                                        |
| Actuator size                      | 50 mm (D), 70 mm (M), 90 mm (N), 130 mm (P)                                                                                                           |
| Performance data                   |                                                                                                                                                       |
| Pilot pressure (CF A)              | 5.6...7 bar(g) for control function B (see <a href="#">“Pilot pressure diagrams with flow direction below seat (control function B)” on page 21</a> ) |

2.2. Stainless steel drive guide for higher drive forces

| Product properties                 |                                                                                                                                                                                                                         |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nominal diameter (port connection) | DN 65...DN 100                                                                                                                                                                                                          |
| Actuator size                      | 225 mm (L)                                                                                                                                                                                                              |
| Performance data                   |                                                                                                                                                                                                                         |
| Pilot pressure (CF A)              | DN 65, 3.7 bar(g)...7 bar(g)<br>DN 80, DN 100, 5.5 bar(g)...7 bar(g)<br>5 bar(g) for control function B (see <a href="#">“Pilot pressure diagrams with flow direction below seat (control function B)” on page 21</a> ) |

3. Control functions

| Symbol                                                                              | Description                                                                                                                                      |                                                                                       |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Flow direction below seat for fluids, steam and gases                               |                                                                                                                                                  |                                                                                       |
|  | <b>Control function A (CF A)</b><br>Pneumatically operated 2/2-way control valve<br>Flow direction below seat<br>Normally closed by spring force |  |
|  | <b>Control function B (CF B)</b><br>Pneumatically operated 2/2-way control valve<br>Flow direction below seat<br>Normally opened by spring force |  |

## 4. Approvals and conformities

### 4.1. 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.

### 4.2. Conformity

In accordance with the Declaration of Conformity, the product is compliant with the EU Directives. This includes the following directives:

- Pressure Equipment Directive 2014/68/EU
- Machinery Directive 2006/42/EC

### 4.3. 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.

### 4.4. Explosion protection

| Approval                                                                                                                                                                               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                    |                    |    |    |                             |          |          |          |                     |                    |                    |                    |                            |          |          |          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|----|----|-----------------------------|----------|----------|----------|---------------------|--------------------|--------------------|--------------------|----------------------------|----------|----------|----------|
| <div><br/></div> | <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 °C...+ 130 °C</td><td>- 40 °C...+ 130 °C</td><td>- 40 °C...+ 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 °C...+ 130 °C | - 40 °C...+ 130 °C | - 40 °C...+ 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 °C...+ 130 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | - 40 °C...+ 130 °C | - 40 °C...+ 100 °C |    |    |                             |          |          |          |                     |                    |                    |                    |                            |          |          |          |
| Maximum medium temperature                                                                                                                                                             | + 285 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | + 185 °C           | + 125 °C           |    |    |                             |          |          |          |                     |                    |                    |                    |                            |          |          |          |

### 4.5. Drinking water

| Conformity                                                                          | Description                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>Suitable for use in drinking water applications</b><br/>The materials comply with the assessment principles (UBA) for materials in contact with drinking water (TrinkwasserV).</p> <p><b>Stainless steel body</b><br/>PF39: Suitable for products with medium temperature up to 85 °C (hot water)</p> |

#### 4.6. Foods and beverages/Hygiene

| Conformity                                                                        | Description                                                                                                                                                                                                                                                        |
|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FDA                                                                               | <b>FDA – Code of Federal Regulations (valid for the variable code PL02, PL03)</b><br>All wetted materials are compliant with the Code of Federal Regulations published by the FDA (Food and Drug Administration, USA) according to the manufacturer's declaration. |
| USP                                                                               | <b>United States Pharmacopeial Convention (USP) (valid for the variable code PL04)</b><br>All wetted materials are biocompatible according to the manufacturer's declaration.                                                                                      |
|  | <b>EC Regulation 1935/2004 of the European Parliament and of the Council (valid for the variable code PL01, PL02)</b><br>All wetted materials are compliant with EC Regulation 1935/2004/EC according to the manufacturer's declaration.                           |
|  | <b>China food GB Standards of the People's Republic of China (valid for the variable code PL10)</b><br>All wetted materials are compliant with the requirement of China food GB Standards according to the manufacturer's declaration.                             |

#### 4.7. Others

##### DNV GL classification

| Approval                                                                           | Description                                                                                                                                                          |
|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>DNV GL classification – Ships, offshore units, and high speed and light craft</b><br>The products are accepted for installation on all vessels classed by DNV GL. |

##### Oxygen

| Conformity | Description                                                                                                                                                                       |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $O_2$      | <b>Optional: Suitability for oxygen (valid for the variable code NL02)</b><br>The products are suitable for use with gaseous oxygen, according to the manufacturer's declaration. |

##### Fuel gases

| Conformity                                                                          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Fuel gases (valid for the variable code PO19, PO20)</b><br>The products comply with: <ul style="list-style-type: none"> <li>Regulation (EU) 2016/426 – Appliances burning gaseous fuels and</li> <li>DVGW DIN EN 161 (Automatic shut-off valves for gas burners and gas appliances) and</li> <li>DIN EN 16678, Class A or Class D (Safety and control devices for gas burners and gas burning appliances – Automatic shut-off valves for operating pressure of above 500 kPa up to and including 6 300 kPa)</li> </ul> |

##### Hydrogen

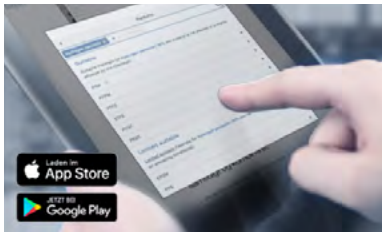
| Conformity | Description                                                                                                                                                                           |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $H_2$      | <b>Optional: Suitability for hydrogen (valid for the variable code NG18)</b><br>The products are suitable for use with gaseous hydrogen, according to the manufacturer's declaration. |

##### TA Luft

| Conformity | Description                                                                            |
|------------|----------------------------------------------------------------------------------------|
| TA Luft    | <b>Technical instruction on air quality control (valid for the variable code PM01)</b> |

5. Materials

5.1. Bürkert resistApp



**Bürkert resistApp – Chemical resistance chart**

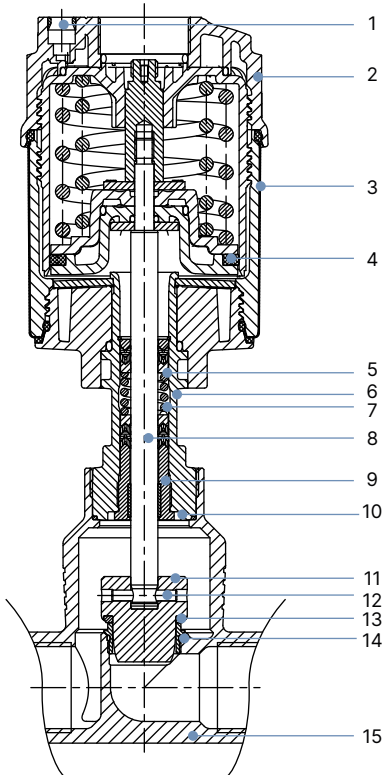
You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

[Start chemical resistance check](#)

5.2. Material specifications

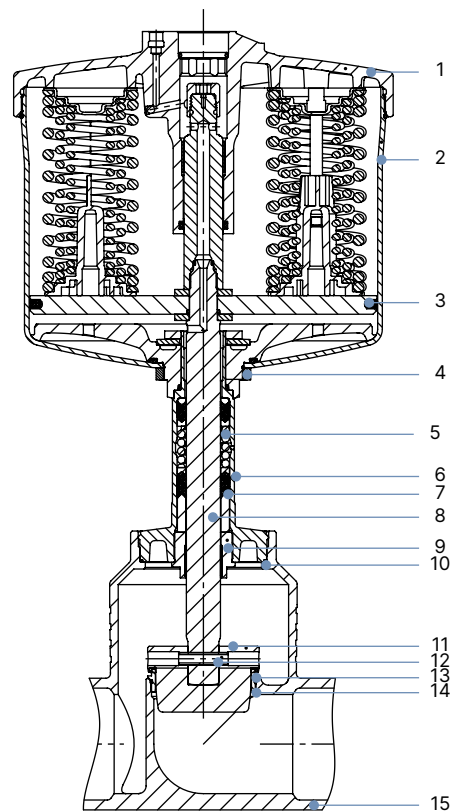
ELEMENT

**Note:**  
The Type 2301 globe control valve is supplied with different port connections (flange, thread, welded connection and clamp). These connections are not shown. They correspond to the valve body material.



| No. | Element                | Material                                                   |
|-----|------------------------|------------------------------------------------------------|
| 1   | Pilot air ports        | Push-in connector PP                                       |
| 2   | Actuator cover         | PPS                                                        |
| 3   | Actuator casing        | Stainless steel 1.4561 (316Ti)                             |
| 4   | Piston seal            | FKM                                                        |
| 5   | Spring                 | Stainless steel 1.4310                                     |
| 6   | Pipe                   | Stainless steel CF3M                                       |
| 7   | Packing gland          | PTFE V-Rings (filled), with spring compensation            |
| 8   | Spindle                | Stainless steel 1.4401 (316)/1.4404 (316L)                 |
| 9   | Spindle guide          | Stainless steel 1.4404 (316L), PTFE filled                 |
| 10  | Body seal              | Graphite or PTFE                                           |
| 11  | Control cone           | Stainless steel 1.4571 (optionally hardened)               |
| 12  | Spring straight pin    | Stainless steel 1.4310                                     |
| 13  | Seat seal              | Stainless steel 1.4571 (optionally hardened), PTFE or PEEK |
| 14  | Valve seat with o-Ring | Stainless steel 1.4571, EPDM                               |
| 15  | Valve body             | Stainless steel 316L / CF3M                                |

Stainless steel for higher drive forces



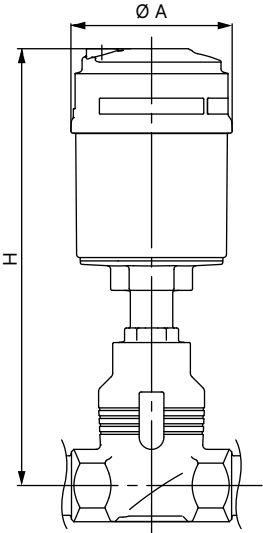
| No. | Element                | Material                                                   |
|-----|------------------------|------------------------------------------------------------|
| 1   | Actuator cover         | Stainless steel 1.4308                                     |
| 2   | Actuator               | Stainless steel 1.4404                                     |
| 3   | Piston seal            | FKM                                                        |
| 4   | Nut                    | Stainless steel 1.4301                                     |
| 5   | Spring                 | Stainless steel 1.4310                                     |
| 6   | Pipe                   | Stainless steel CF3M                                       |
| 7   | Packing gland          | PTFE V-rings (filled), with spring compensation            |
| 8   | Spindle                | Stainless steel 1.4021                                     |
| 9   | Spindle guide          | Stainless steel 1.4404 (316L) / PTFE filled                |
| 10  | Body seal              | Graphite or PTFE                                           |
| 11  | Control cone           | Stainless steel 1.4571 (optionally hardened)               |
| 12  | Spring straight pin    | Stainless steel 1.4310                                     |
| 13  | Seat seal              | Stainless steel 1.4571 (optionally hardened), PTFE or PEEK |
| 14  | Valve seat with o-ring | Stainless steel 1.4571, EPDM                               |
| 15  | Valve body             | Stainless steel 316L / CF3M                                |

6. Dimensions

6.1. Actuator

Continuous ELEMENT Type 2301 valve

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

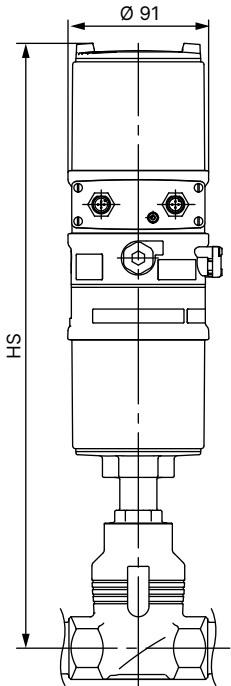
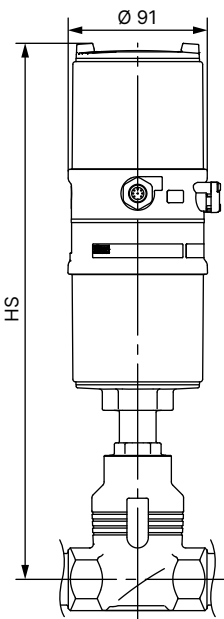
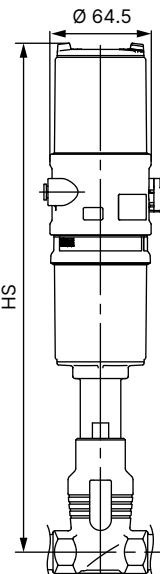
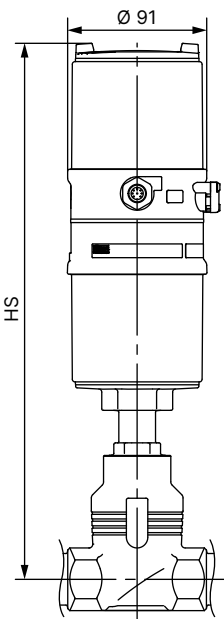


| Nominal diameter (port connection) |       | Actuator size Ø | Ø A  | H   |
|------------------------------------|-------|-----------------|------|-----|
| DN                                 | NPS   |                 |      |     |
| 10                                 | 3/8   | 50 (D)          | 64.5 | 226 |
|                                    |       | 70 (M)          | 91   | 239 |
| 15                                 | 1/2   | 50 (D)          | 64.5 | 226 |
|                                    |       | 70 (M)          | 91   | 239 |
| 20                                 | 3/4   | 50 (D)          | 64.5 | 232 |
|                                    |       | 70 (M)          | 91   | 245 |
|                                    |       | 90 (N)          | 120  | 307 |
| 25                                 | 1     | 50 (D)          | 64.5 | 235 |
|                                    |       | 70 (M)          | 91   | 248 |
|                                    |       | 90 (N)          | 120  | 301 |
| 32                                 | 1 1/4 | 90 (N)          | 120  | 329 |
|                                    |       | 130 (P)         | 159  | 381 |
| 40                                 | 1 1/2 | 90 (N)          | 120  | 334 |
|                                    |       | 130 (P)         | 159  | 386 |
| 50                                 | 2     | 90 (N)          | 120  | 340 |
|                                    |       | 130 (P)         | 159  | 392 |
| 65                                 | 2 1/2 | 130 (P)         | 159  | 446 |
|                                    |       | 225 (L)         | 245  | 460 |
| 80                                 | 3     | 130 (P)         | 159  | 454 |
|                                    |       | 225 (L)         | 245  | 467 |
| 100                                | 4     | 130 (P)         | 159  | 464 |
|                                    |       | 225 (L)         | 245  | 477 |

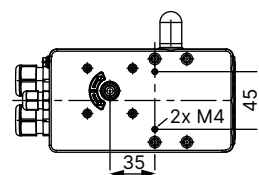
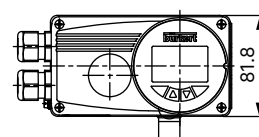
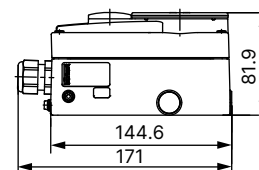
Valve system Continuous ELEMENT

Note:

- Dimensions in mm, unless otherwise stated
- Please note actuator size A in table “6.1. Actuator” on page 10

| With positioner TopControl                                                         |                                                                                    |                                                                                     | With remote positioner Side-CONTROL                                                  |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Type 8692<br>or with<br>process controller TopControl                              | Type 8694                                                                          | Type 8696                                                                           | Type 8792<br>or with remote<br>process controller SideCONTROL                        |
| Type 8693                                                                          |                                                                                    |                                                                                     | Type 8793                                                                            |
|  |  |  |  |

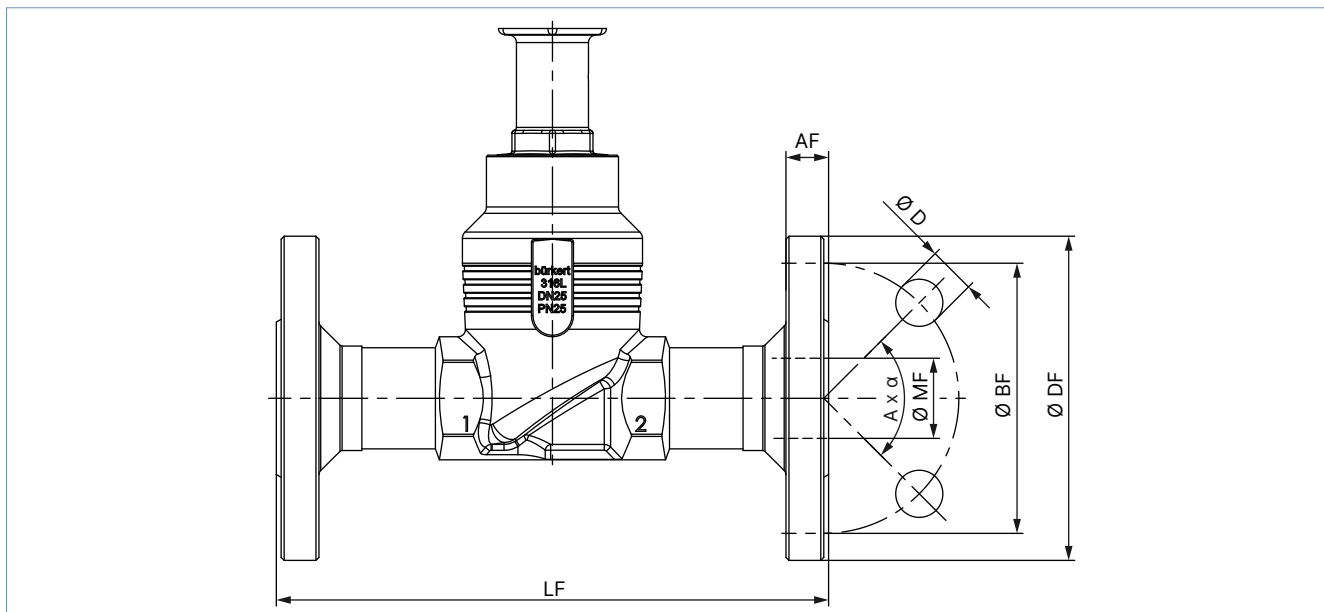
| Nominal diameter<br>(port connection) |       | Actuator<br>size Ø | HS with                   |                           |                           |
|---------------------------------------|-------|--------------------|---------------------------|---------------------------|---------------------------|
| DN                                    | NPS   |                    | Type 8692 or<br>Type 8693 | Type 8694 or<br>Type 8696 | Type 8792 or<br>Type 8793 |
| 10                                    | 3/8   | 50 (D)             | –                         | 329                       | –                         |
|                                       |       | 70 (M)             | 383                       | 342                       | 342                       |
| 15                                    | 1/2   | 50 (D)             | –                         | 329                       | –                         |
|                                       |       | 70 (M)             | 383                       | 342                       | 342                       |
| 20                                    | 3/4   | 50 (D)             | –                         | 335                       | –                         |
|                                       |       | 70 (M)             | 389                       | 348                       | 348                       |
|                                       |       | 90 (N)             | 449                       | 405                       | 413                       |
| 25                                    | 1     | 50 (D)             | –                         | 342                       | –                         |
|                                       |       | 70 (M)             | 392                       | 351                       | 351                       |
|                                       |       | 90 (N)             | 445                       | 404                       | 404                       |
| 32                                    | 1 1/4 | 90 (N)             | 473                       | 432                       | 432                       |
|                                       |       | 130 (P)            | 525                       | 484                       | 484                       |
| 40                                    | 1 1/2 | 90 (N)             | 478                       | 437                       | 437                       |
|                                       |       | 130 (P)            | 530                       | 489                       | 489                       |
| 50                                    | 2     | 90 (N)             | 484                       | 443                       | 443                       |
|                                       |       | 130 (P)            | 536                       | 495                       | 495                       |
| 65                                    | 2 1/2 | 130 (P)            | 590                       | 549                       | 549                       |
|                                       |       | 225 (L)            | 603                       | 564                       | 564                       |
| 80                                    | 3     | 130 (P)            | 598                       | 557                       | 557                       |
|                                       |       | 225 (L)            | 611                       | 572                       | 572                       |
| 100                                   | 4     | 130 (P)            | 608                       | 567                       | 567                       |
|                                       |       | 225 (L)            | 621                       | 582                       | 582                       |



## 6.2. Body with flange connection

### Note:

Dimensions in mm, unless otherwise stated

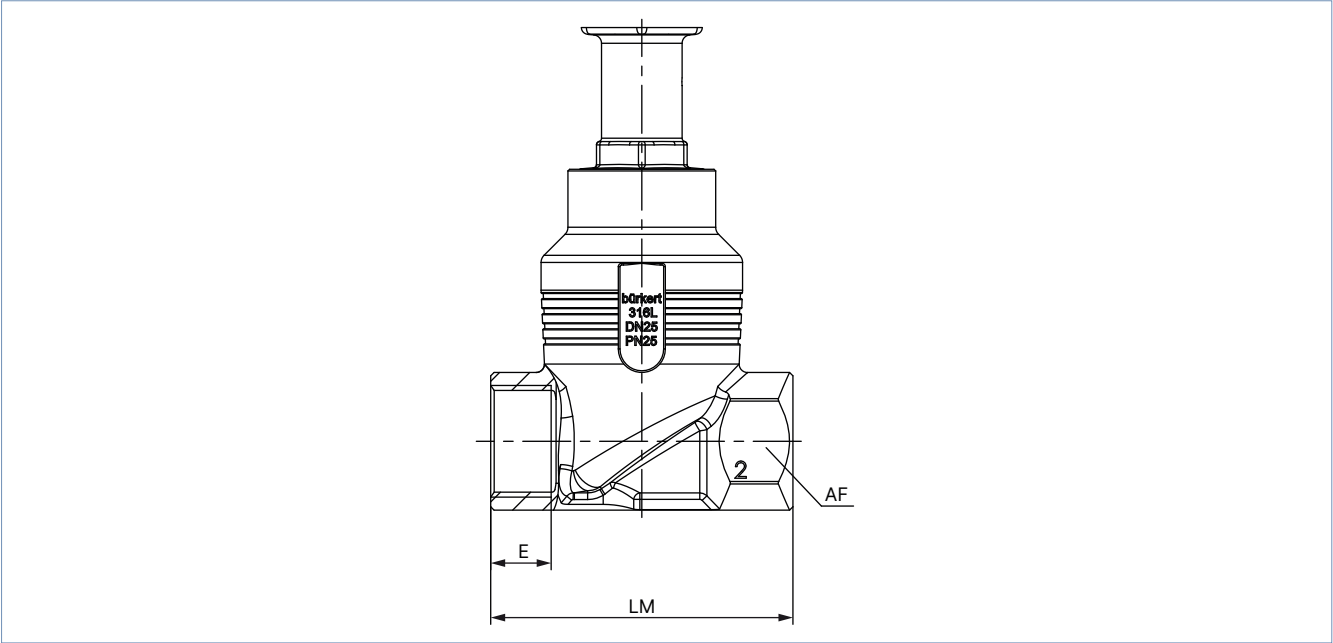


| Nominal diameter (pipe) | DIN EN 1092 PN 25 FTF 1 according to DIN EN 558 - 1 |     |      |    |     |         |       | JIS 10K FTF 10 according to DIN EN 558 - 2 |     |      |    |     |         |       |
|-------------------------|-----------------------------------------------------|-----|------|----|-----|---------|-------|--------------------------------------------|-----|------|----|-----|---------|-------|
| DN                      | Ø DF                                                | LF  | Ø BF | AF | Ø D | A x α   | Ø MF  | Ø DF                                       | LF  | Ø BF | AF | Ø D | A x α   | Ø MF  |
| 10                      | 90                                                  | 130 | 60   | 16 | 14  | 4 × 90° | 13.6  | —                                          | —   | —    | —  | —   | —       | —     |
| 15                      | 95                                                  | 130 | 65   | 16 | 14  | 4 × 90° | 18.1  | 95                                         | 108 | 70   | 12 | 15  | 4 × 90° | 18.1  |
| 20                      | 105                                                 | 150 | 75   | 18 | 14  | 4 × 90° | 23.7  | 100                                        | 117 | 75   | 14 | 15  | 4 × 90° | 23.7  |
| 25                      | 115                                                 | 160 | 85   | 18 | 14  | 4 × 90° | 29.7  | 125                                        | 127 | 90   | 14 | 19  | 4 × 90° | 29.7  |
| 32                      | 140                                                 | 180 | 100  | 18 | 18  | 4 × 90° | 38.4  | 135                                        | 140 | 100  | 16 | 19  | 4 × 90° | 38.4  |
| 40                      | 150                                                 | 200 | 110  | 18 | 18  | 4 × 90° | 44.3  | 140                                        | 165 | 105  | 16 | 19  | 4 × 90° | 44.3  |
| 50                      | 165                                                 | 230 | 125  | 20 | 18  | 4 × 90° | 56.3  | 155                                        | 203 | 120  | 16 | 19  | 4 × 90° | 56.3  |
| 65                      | 185                                                 | 290 | 145  | 22 | 18  | 8 × 45° | 66.0  | 175                                        | 216 | 140  | 18 | 19  | 4 × 90° | 71.5  |
| 80                      | 200                                                 | 310 | 160  | 24 | 18  | 8 × 45° | 81.0  | 185                                        | 241 | 150  | 18 | 19  | 8 × 45° | 84.3  |
| 100                     | 235                                                 | 350 | 190  | 24 | 22  | 8 × 45° | 100.0 | 210                                        | 292 | 175  | 18 | 19  | 8 × 45° | 109.1 |

| Nominal diameter (pipe) | ANSI B 16.5 Class 150 FTF 37 according to DIN EN 558 - 2 |     |       |      |      |         |       |
|-------------------------|----------------------------------------------------------|-----|-------|------|------|---------|-------|
| NPS                     | Ø DF                                                     | LF  | Ø BF  | AF   | Ø D  | A x α   | Ø MF  |
| ½                       | 89                                                       | 184 | 60.5  | 11.2 | 15.7 | 4 × 90° | 15.7  |
| ¾                       | 99                                                       | 184 | 69.9  | 12.7 | 15.7 | 4 × 90° | 20.8  |
| 1                       | 108                                                      | 184 | 79.2  | 14.2 | 15.7 | 4 × 90° | 26.7  |
| 1½                      | 127                                                      | 222 | 98.6  | 17.5 | 15.7 | 4 × 90° | 40.9  |
| 2                       | 152                                                      | 254 | 120.7 | 19.1 | 19.1 | 4 × 90° | 52.6  |
| 2½                      | 178                                                      | 276 | 139.7 | 22.3 | 19.1 | 4 × 90° | 62.7  |
| 3                       | 190                                                      | 298 | 152.5 | 23.9 | 19.1 | 4 × 90° | 78.0  |
| 4                       | 229                                                      | 352 | 190.5 | 23.9 | 19.1 | 8 × 45° | 102.4 |

6.3. Body with threaded connection

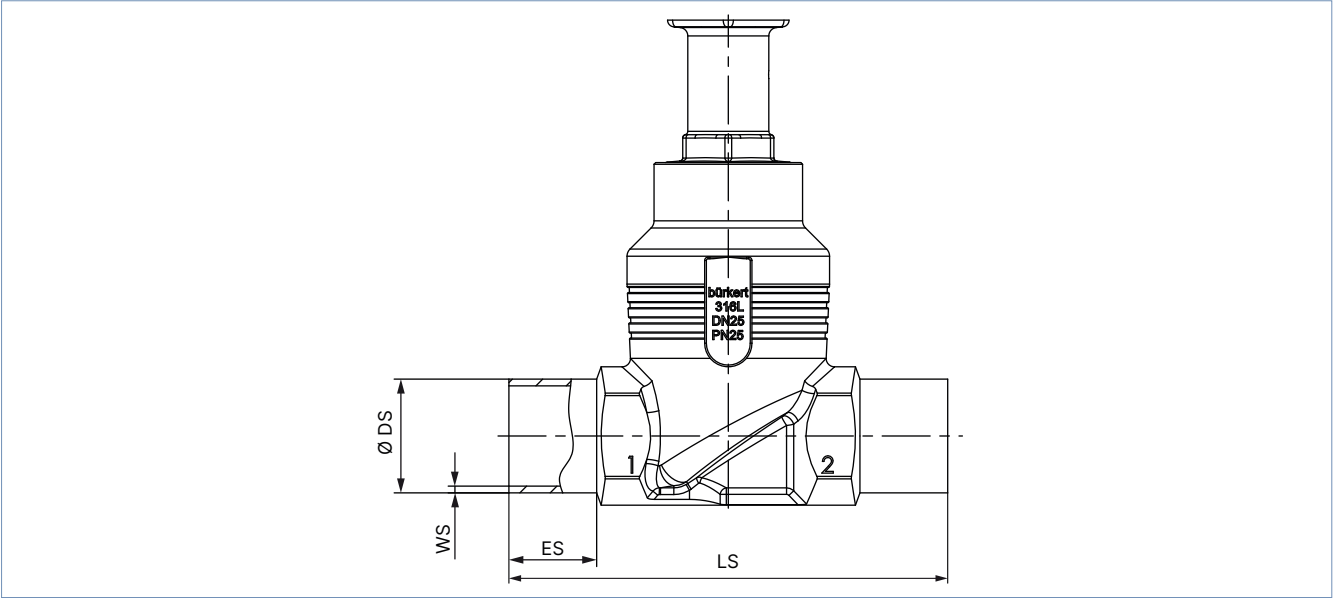
**Note:**  
Dimensions in mm, unless otherwise stated



| Nominal diameter (port connection) |       | G (DIN ISO 228 - 1)<br>NPT (ASME B1.20.1)<br>RC (ISO 7 - 1) |      |      |     |     |
|------------------------------------|-------|-------------------------------------------------------------|------|------|-----|-----|
|                                    |       | E                                                           |      |      | LM  | AF  |
| DN                                 | NPS   | G                                                           | NPT  | RC   |     |     |
| 10                                 | 3/8   | 12                                                          | 10.3 | 10.1 | 65  | 27  |
| 15                                 | 1/2   | 14                                                          | 13.7 | 13.2 | 65  | 27  |
| 20                                 | 3/4   | 16                                                          | 14   | 14.5 | 75  | 34  |
| 25                                 | 1     | 18                                                          | 16.8 | 16.8 | 90  | 41  |
| 32                                 | 1 1/4 | 20                                                          | 17.3 | 19.1 | 110 | 50  |
| 40                                 | 1 1/2 | 22                                                          | 17.3 | 19.1 | 120 | 55  |
| 50                                 | 2     | 24                                                          | 17.6 | 23.4 | 150 | 70  |
| 65                                 | 2 1/2 | 26                                                          | 23.7 | 26.7 | 185 | 85  |
| 80                                 | 3     | 28                                                          | 30.5 | 29.8 | 205 | 100 |
| 100                                | 4     | 32                                                          | 33   | 35.8 | 240 | 125 |

6.4. Body with welded connection

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



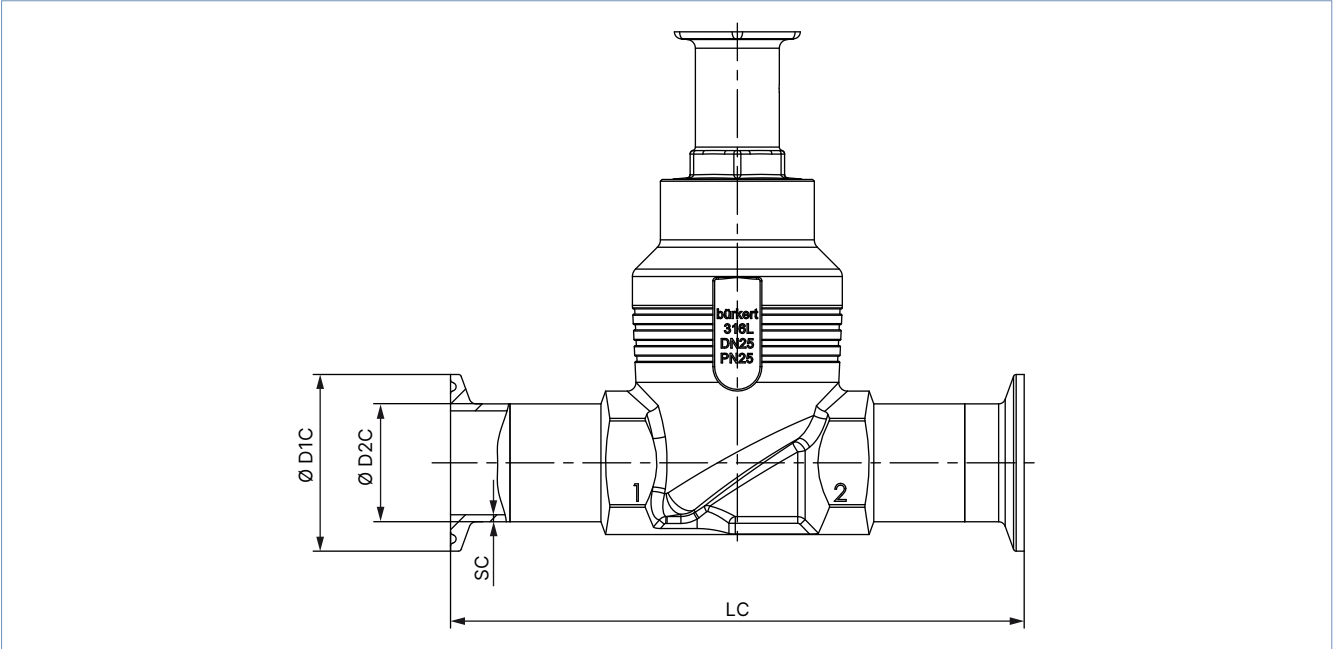
| Nominal diameter<br>(port connection)<br>DN | ES | LS  | DIN EN ISO 1127 - 1 / ISO 4200 /<br>DIN 11866 series B |     | DIN 11850 - 2 / DIN 11866 series A /<br>DIN EN 10357 series A |     |
|---------------------------------------------|----|-----|--------------------------------------------------------|-----|---------------------------------------------------------------|-----|
|                                             |    |     | Ø DS                                                   | WS  | Ø DS                                                          | WS  |
| 10                                          | 20 | 90  | 17.2                                                   | 1.6 | 13                                                            | 1.5 |
| 15                                          | 20 | 90  | 21.3                                                   | 1.6 | 19                                                            | 1.5 |
| 20                                          | 20 | 100 | 26.9                                                   | 1.6 | 23                                                            | 1.5 |
| 25                                          | 26 | 130 | 33.7                                                   | 2.0 | 29                                                            | 1.5 |
| 32                                          | 26 | 140 | 42.4                                                   | 2.0 | 35                                                            | 1.5 |
| 40                                          | 26 | 150 | 48.3                                                   | 2.0 | 41                                                            | 1.5 |
| 50                                          | 26 | 175 | 60.3                                                   | 2.0 | 53                                                            | 1.5 |
| 65                                          | 26 | 210 | 76.1                                                   | 2.3 | 70                                                            | 2.0 |
| 80                                          | 26 | 230 | 88.9                                                   | 2.3 | 85                                                            | 2.0 |
| 100                                         | 26 | 260 | 114.3                                                  | 2.6 | 104                                                           | 2.0 |

| Nominal diameter (port connection)<br>NPS | ES | LS  | ASME BPE / DIN 11866 series C |      |
|-------------------------------------------|----|-----|-------------------------------|------|
|                                           |    |     | Ø DS                          | WS   |
| ½                                         | 20 | 90  | 12.7                          | 1.65 |
| ¾                                         | 20 | 90  | 19.05                         | 1.65 |
| 1                                         | 20 | 100 | 25.4                          | 1.65 |
| 1½                                        | 26 | 140 | 38.1                          | 1.65 |
| 2                                         | 26 | 150 | 50.8                          | 1.65 |
| 2½                                        | 26 | 175 | 63.5                          | 1.65 |
| 3                                         | 26 | 210 | 76.2                          | 1.65 |
| 4                                         | 26 | 260 | 101.6                         | 2.11 |

| Nominal diameter (port connection)<br>NPS | ES | LS  | SMS 3008 |     |
|-------------------------------------------|----|-----|----------|-----|
|                                           |    |     | Ø DS     | WS  |
| 20                                        | 20 | 100 | 25       | 1.2 |
| 32                                        | 26 | 140 | 38       | 1.2 |
| 40                                        | 26 | 175 | 51       | 1.2 |
| 50                                        | 26 | 175 | 63.5     | 1.6 |
| 65                                        | 26 | 210 | 76.1     | 1.6 |
| 100                                       | 26 | 260 | 101.5    | 2   |

6.5. Body with clamp connection

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



| Nominal diameter<br>(port connection) | Clamp: DIN 32676 series A<br>Pipe: DIN 11850 - 2 / DIN 11866 series A /<br>DIN EN 10357 series A |        |        |     | Clamp: DIN 32676 series B<br>Pipe: DIN EN ISO 1127 / ISO 4200 / DIN 11866 series B |        |        |     |
|---------------------------------------|--------------------------------------------------------------------------------------------------|--------|--------|-----|------------------------------------------------------------------------------------|--------|--------|-----|
| DN                                    | LC                                                                                               | Ø D2 C | Ø D1 C | SC  | LC                                                                                 | Ø D2 C | Ø D1 C | SC  |
| 15                                    | 126                                                                                              | 19     | 34     | 1.5 | 146                                                                                | 21.3   | 50.5   | 1.6 |
| 20                                    | 136                                                                                              | 23     | 34     | 1.5 | 136                                                                                | 26.9   | 50.5   | 1.6 |
| 25                                    | 173                                                                                              | 29     | 50.5   | 1.5 | 164                                                                                | 33.7   | 50.5   | 2.0 |
| 40                                    | 193                                                                                              | 41     | 50.5   | 1.5 | 193                                                                                | 48.3   | 64.0   | 2.0 |
| 50                                    | 218                                                                                              | 53     | 64     | 1.5 | 218                                                                                | 60.3   | 77.5   | 2.0 |

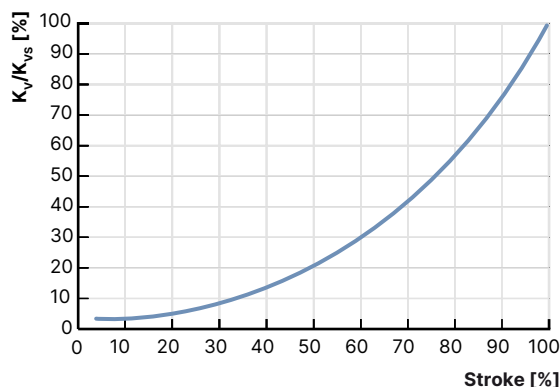
| Nominal diameter<br>(port connection) | Clamp: ASME BPE / DIN 11866 series C<br>Pipe: ASME BPE / DIN 11866 series C |        |        |      |
|---------------------------------------|-----------------------------------------------------------------------------|--------|--------|------|
| NPS                                   | LC                                                                          | Ø D2 C | Ø D1 C | SC   |
| ½                                     | 122                                                                         | 12.7   | 25.0   | 1.65 |
| ¾                                     | 126                                                                         | 19.05  | 25.0   | 1.65 |
| 1                                     | 126                                                                         | 25.4   | 50.5   | 1.65 |
| 1½                                    | 172                                                                         | 38.1   | 50.5   | 1.65 |
| 2                                     | 182                                                                         | 50.8   | 64.0   | 1.65 |
| 2½                                    | 231                                                                         | 63.5   | 77.5   | 1.65 |
| 3                                     | 265                                                                         | 76.2   | 91.0   | 1.65 |
| 4                                     | 315                                                                         | 101.6  | 119.0  | 2.11 |

## 7. Performance specifications

### 7.1. Fluidic data

#### Flow characteristics

- Equal-percentage flow characteristic according to DIN EN 60534 - 2 - 4 (linear characteristic curve on request)
- $K_{VR}$  value at 5 % of the stroke for seat size > 10 mm  
 $K_{VR}$  value at 10 % of the stroke for seat size ≤ 10 mm
- Actuator size 70 offers a better control quality compared to actuator size 50 and is therefore preferred ( $K_{VR}$  value = smallest  $K_V$  value, at which the tilt tolerance according to DIN EN 60534 - 2 - 4 is still maintained).



Equal percentage flow curve - detailed values please see below

#### Overview of fluidic data for flow below seat (for liquids, steam and gases)

##### Note:

- $K_V$  value [m³/h]: measurement with water according to DIN EN 60534 - 2 - 4
- Operating limits (see "7.2. Operating limits" on page 22)

| Nominal diameter<br>(port connection) |                  | Seat size | Actuator size<br>Ø | Operating pressure max.<br>(Seat leakage class) |                 |         | Theoretical rangeability | K <sub>V</sub> value water at stroke [m³/h] |       |       |       |       |       |       |       |       |       |       | K <sub>VS</sub> value             |
|---------------------------------------|------------------|-----------|--------------------|-------------------------------------------------|-----------------|---------|--------------------------|---------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------------------------|
|                                       |                  |           |                    | Seat seal                                       |                 |         |                          | 5 %                                         | 10 %  | 20 %  | 30 %  | 40 %  | 50 %  | 60 %  | 70 %  | 80 %  | 90 %  | 100 % |                                   |
|                                       |                  |           |                    | CF A                                            | Stainless steel | PTFE    |                          |                                             |       |       |       |       |       |       |       |       |       |       |                                   |
| DN                                    | NPS              |           | [mm]               | [bar(g)]                                        |                 |         |                          | [m³/h]                                      |       |       |       |       |       |       |       |       |       |       |                                   |
| 10                                    | ¾ <sup>2.)</sup> | 3         | 50 (D)             | 16 (IV)                                         | –               | –       | 20:1                     | –                                           | 0.005 | 0.009 | 0.013 | 0.019 | 0.026 | 0.034 | 0.044 | 0.060 | 0.077 | 0.1   |                                   |
|                                       |                  |           | 70 (M)             | 25 (IV)<br>40 (IV) <sup>4.)</sup>               |                 |         |                          |                                             |       |       |       |       |       |       |       |       |       |       |                                   |
|                                       |                  | 3         | 50 (D)             | 16 (IV)                                         |                 |         | 20:1                     | –                                           | 0.009 | 0.015 | 0.023 | 0.033 | 0.046 | 0.063 | 0.085 | 0.11  | 0.16  | 0.2   |                                   |
|                                       |                  |           | 70 (M)             | 25 (IV)<br>40 (IV) <sup>4.)</sup>               |                 |         |                          |                                             |       |       |       |       |       |       |       |       |       |       |                                   |
|                                       |                  | 4         | 50 (D)             | 16 (IV)                                         |                 |         | 30:1                     | –                                           | 0.023 | 0.033 | 0.049 | 0.070 | 0.097 | 0.14  | 0.18  | 0.26  | 0.35  | 0.5   |                                   |
|                                       |                  |           | 70 (M)             | 25 (IV)<br>40 (IV) <sup>4.)</sup>               |                 |         |                          |                                             |       |       |       |       |       |       |       |       |       |       |                                   |
|                                       |                  | 6         | 50 (D)             | 16 (IV)                                         | 16 (VI)         | 10 (VI) | 50:1                     | 0.019                                       | 0.026 | 0.046 | 0.072 | 0.11  | 0.17  | 0.25  | 0.39  | 0.57  | 0.85  | 1.25  |                                   |
|                                       |                  |           | 70 (M)             | 25 (IV)<br>40 (IV) <sup>4.)</sup>               |                 |         |                          |                                             |       |       |       |       |       |       |       |       |       |       | 25 (IV)<br>40 (IV) <sup>4.)</sup> |
|                                       |                  | 8         | 50 (D)             | 16 (IV)                                         | 16 (VI)         | 10 (VI) |                          | 0.060                                       | 0.070 | 0.090 | 0.12  | 0.18  | 0.26  | 0.42  | 0.61  | 0.92  | 1.5   | 2.0   |                                   |
|                                       |                  |           | 70 (M)             | 25 (IV)<br>40 (IV) <sup>4.)</sup>               |                 |         |                          |                                             |       |       |       |       |       |       |       |       |       |       | 25 (IV)<br>40 (IV) <sup>4.)</sup> |
|                                       |                  | 10        | 50 (D)             | 16 (IV)                                         | 16 (VI)         | 10 (VI) |                          | 0.090                                       | 0.11  | 0.13  | 0.19  | 0.30  | 0.48  | 0.73  | 1.0   | 1.6   | 2.3   | 2.7   |                                   |
|                                       |                  |           | 70 (M)             | 25 (IV)<br>40 (IV) <sup>4.)</sup>               |                 |         |                          |                                             |       |       |       |       |       |       |       |       |       |       | 25 (IV)<br>40 (IV) <sup>4.)</sup> |

| Nominal diameter<br>(port connection) |                  | Seat size | Actuator size Ø | Operating pressure max. (Seat leakage class) |                                   |         | Theoretical rangeability | K <sub>v</sub> value water at stroke [m³/h] |       |       |       |       |       |       |       |       |       |       | K <sub>vs</sub> value |
|---------------------------------------|------------------|-----------|-----------------|----------------------------------------------|-----------------------------------|---------|--------------------------|---------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------------|
|                                       |                  |           |                 | Seat seal                                    |                                   |         |                          |                                             |       |       |       |       |       |       |       |       |       |       |                       |
|                                       |                  |           |                 | CF A                                         |                                   |         |                          |                                             |       |       |       |       |       |       |       |       |       |       |                       |
|                                       |                  |           |                 | Stainless steel                              | PTFE                              | PEEK    |                          | 5 %                                         | 10 %  | 20 %  | 30 %  | 40 %  | 50 %  | 60 %  | 70 %  | 80 %  | 90 %  | 100 % |                       |
| DN                                    | NPS              |           | [mm]            | [bar(g)]                                     |                                   |         |                          | [m³/h]                                      |       |       |       |       |       |       |       |       |       |       |                       |
| 15                                    | ½ <sup>2.)</sup> | 3         | 50 (D)          | 16 (IV)                                      | –                                 | –       | 20:1                     | –                                           | 0.005 | 0.009 | 0.013 | 0.019 | 0.026 | 0.034 | 0.044 | 0.060 | 0.077 | 0.1   |                       |
|                                       |                  |           | 70 (M)          | 25 (IV)<br>40 (IV) <sup>4.)</sup>            |                                   |         |                          |                                             |       |       |       |       |       |       |       |       |       |       |                       |
|                                       |                  | 3         | 50 (D)          | 16 (IV)                                      |                                   |         | 20:1                     | –                                           | 0.009 | 0.015 | 0.023 | 0.033 | 0.046 | 0.063 | 0.085 | 0.11  | 0.16  | 0.2   |                       |
|                                       |                  |           | 70 (M)          | 25 (IV)<br>40 (IV) <sup>4.)</sup>            |                                   |         |                          |                                             |       |       |       |       |       |       |       |       |       |       |                       |
|                                       |                  | 4         | 50 (D)          | 16 (IV)                                      |                                   |         | 30:1                     | –                                           | 0.023 | 0.033 | 0.049 | 0.070 | 0.097 | 0.14  | 0.18  | 0.26  | 0.35  | 0.5   |                       |
|                                       |                  |           | 70 (M)          | 25 (IV)<br>40 (IV) <sup>4.)</sup>            |                                   |         |                          |                                             |       |       |       |       |       |       |       |       |       |       |                       |
|                                       |                  | 6         | 50 (D)          | 16 (IV)                                      | 16 (VI)                           | 10 (VI) | 50:1                     | 0.019                                       | 0.026 | 0.046 | 0.072 | 0.11  | 0.17  | 0.25  | 0.39  | 0.57  | 0.85  | 1.25  |                       |
|                                       |                  |           | 70 (M)          | 25 (IV)<br>40 (IV) <sup>4.)</sup>            | 25 (VI)<br>40 (VI) <sup>4.)</sup> | 25 (VI) |                          |                                             |       |       |       |       |       |       |       |       |       |       |                       |
|                                       |                  | 8         | 50 (D)          | 16 (IV)                                      | 16 (VI)                           | 10 (VI) |                          | 0.070                                       | 0.080 | 0.11  | 0.13  | 0.19  | 0.27  | 0.43  | 0.63  | 0.95  | 1.6   | 2.1   |                       |
|                                       |                  |           | 70 (M)          | 25 (IV)<br>40 (IV) <sup>4.)</sup>            | 25 (VI)<br>40 (VI) <sup>4.)</sup> | 25 (VI) |                          |                                             |       |       |       |       |       |       |       |       |       |       |                       |
|                                       |                  | 10        | 50 (D)          | 16 (IV)                                      | 16 (VI)                           | 10 (VI) |                          | 0.090                                       | 0.11  | 0.15  | 0.19  | 0.31  | 0.49  | 0.75  | 1.1   | 1.7   | 2.5   | 3.1   |                       |
|                                       |                  |           | 70 (M)          | 25 (IV)<br>40 (IV) <sup>4.)</sup>            | 25 (VI)<br>40 (VI) <sup>4.)</sup> | 25 (VI) |                          |                                             |       |       |       |       |       |       |       |       |       |       |                       |
|                                       |                  | 15        | 50 (D)          | 16 (IV)                                      | 16 (VI)                           | 10 (VI) |                          | 0.14                                        | 0.17  | 0.22  | 0.35  | 0.52  | 0.80  | 1.2   | 1.8   | 2.7   | 3.7   | 4.3   |                       |
|                                       |                  |           | 70 (M)          | 25 (IV)<br>40 (IV) <sup>4.)</sup>            | 25 (VI)<br>40 (VI) <sup>4.)</sup> | 25 (IV) |                          |                                             |       |       |       |       |       |       |       |       |       |       |                       |
| 20                                    | ¾ <sup>2.)</sup> | 10        | 50 (D)          | 16 (IV)                                      | 16 (VI)                           | 10 (VI) |                          | 0.11                                        | 0.12  | 0.16  | 0.20  | 0.33  | 0.52  | 0.77  | 1.2   | 1.8   | 2.6   | 3.2   |                       |
|                                       |                  |           | 70 (M)          | 25 (IV)<br>40 (IV) <sup>4.)</sup>            | 25 (VI)<br>40 (VI) <sup>4.)</sup> | 10 (VI) |                          |                                             |       |       |       |       |       |       |       |       |       |       |                       |
|                                       |                  | 15        | 50 (D)          | 16 (IV)                                      | 16 (VI)                           | 10 (VI) |                          | 0.14                                        | 0.17  | 0.22  | 0.35  | 0.52  | 0.80  | 1.2   | 1.8   | 2.9   | 4.0   | 5.2   |                       |
|                                       |                  |           | 70 (M)          | 25 (IV)<br>40 (IV) <sup>4.)</sup>            | 25 (VI)<br>40 (VI) <sup>4.)</sup> | 25 (VI) |                          |                                             |       |       |       |       |       |       |       |       |       |       |                       |
|                                       |                  | 20        | 70 (M)          | 16 (IV)                                      | 16 (VI)                           | 10 (VI) |                          | 0.20                                        | 0.25  | 0.30  | 0.45  | 0.70  | 1.1   | 1.6   | 2.4   | 3.5   | 5.2   | 7.1   |                       |
|                                       |                  |           | 90 (N)          | 25 (IV)<br>40 (IV) <sup>4.)</sup>            | 25 (VI)<br>40 (VI) <sup>4.)</sup> | 25 (VI) |                          |                                             |       |       |       |       |       |       |       |       |       |       |                       |

| Nominal diameter<br>(port connection) |                  | Seat size | Actuator size Ø  | Operating pressure max. (Seat leakage class) |          |         | Theoretical range-ability | K <sub>v</sub> value water at stroke [m³/h] |       |       |       |       |       |       |       |                                  |                                  |         | K <sub>vs</sub> value |
|---------------------------------------|------------------|-----------|------------------|----------------------------------------------|----------|---------|---------------------------|---------------------------------------------|-------|-------|-------|-------|-------|-------|-------|----------------------------------|----------------------------------|---------|-----------------------|
|                                       |                  |           |                  | Seat seal                                    |          |         |                           |                                             |       |       |       |       |       |       |       |                                  |                                  |         |                       |
|                                       |                  |           |                  | CF A                                         |          |         |                           |                                             |       |       |       |       |       |       |       |                                  |                                  |         |                       |
|                                       |                  |           |                  | Stainless steel                              | PTFE     | PEEK    |                           | 5 %                                         | 10 %  | 20 %  | 30 %  | 40 %  | 50 %  | 60 %  | 70 %  | 80 %                             | 90 %                             | 100 %   |                       |
| DN                                    | NPS              |           | [mm]             |                                              | [bar(g)] |         |                           | [m³/h]                                      |       |       |       |       |       |       |       |                                  |                                  |         |                       |
| 25                                    | 1                | 3         | 50 (D)           | 16 (IV)                                      | –        | –       | 20:1                      | –                                           | 0.005 | 0.009 | 0.013 | 0.019 | 0.026 | 0.034 | 0.044 | 0.060                            | 0.077                            | 0.1     |                       |
|                                       |                  |           | 70 (M)           | 25 (IV)<br>40 (IV) <sup>4)</sup>             |          |         |                           |                                             |       |       |       |       |       |       |       |                                  |                                  |         |                       |
|                                       |                  | 3         | 50 (D)           | 16 (IV)                                      | 20:1     | –       | 0.009                     | 0.015                                       | 0.023 | 0.033 | 0.046 | 0.063 | 0.085 | 0.11  | 0.16  | 0.2                              |                                  |         |                       |
|                                       |                  |           | 70 (M)           | 25 (IV)<br>40 (IV) <sup>4)</sup>             |          |         |                           |                                             |       |       |       |       |       |       |       |                                  |                                  |         |                       |
|                                       |                  | 4         | 50 (D)           | 16 (IV)                                      | 30:1     | –       | 0.023                     | 0.033                                       | 0.049 | 0.070 | 0.097 | 0.14  | 0.18  | 0.26  | 0.35  | 0.5                              |                                  |         |                       |
|                                       |                  |           | 70 (M)           | 25 (IV)<br>40 (IV) <sup>4)</sup>             |          |         |                           |                                             |       |       |       |       |       |       |       |                                  |                                  |         |                       |
|                                       |                  | 6         | 50 (D)           | 16 (IV)                                      | 50:1     | 0.019   | 0.026                     | 0.046                                       | 0.072 | 0.11  | 0.17  | 0.25  | 0.39  | 0.57  | 0.85  | 1.25                             |                                  |         |                       |
|                                       |                  |           | 70 (M)           | 25 (IV)<br>40 (IV) <sup>4)</sup>             |          |         |                           |                                             |       |       |       |       |       |       |       |                                  | 25 (VI)<br>40 (VI) <sup>4)</sup> | 25 (VI) |                       |
|                                       |                  | 8         | 50 (D)           | 16 (IV)                                      | 0.070    | 0.080   | 0.11                      | 0.13                                        | 0.19  | 0.27  | 0.43  | 0.63  | 0.95  | 1.6   | 2.1   |                                  |                                  |         |                       |
|                                       |                  |           | 70 (M)           | 25 (IV)<br>40 (IV) <sup>4)</sup>             |          |         |                           |                                             |       |       |       |       |       |       |       | 25 (VI)<br>40 (VI) <sup>4)</sup> | 25 (VI)                          |         |                       |
|                                       |                  | 10        | 50 (D)           | 16 (IV)                                      | 0.11     | 0.12    | 0.16                      | 0.20                                        | 0.33  | 0.52  | 0.77  | 1.2   | 1.8   | 2.6   | 3.2   |                                  |                                  |         |                       |
|                                       |                  |           | 70 (M)           | 25 (IV)<br>40 (IV) <sup>4)</sup>             |          |         |                           |                                             |       |       |       |       |       |       |       | 25 (VI)<br>40 (VI) <sup>4)</sup> | 25 (VI)                          |         |                       |
|                                       |                  | 15        | 50 (D)           | 16 (IV)                                      | 0.14     | 0.17    | 0.22                      | 0.35                                        | 0.52  | 0.80  | 1.2   | 1.8   | 2.9   | 4.1   | 5.3   |                                  |                                  |         |                       |
|                                       |                  |           | 70 (M)           | 25 (IV)<br>40 (IV) <sup>4)</sup>             |          |         |                           |                                             |       |       |       |       |       |       |       | 25 (VI)<br>40 (VI) <sup>4)</sup> | 25 (VI)                          |         |                       |
|                                       |                  | 20        | 70 (M)           | 16 (IV)                                      | 0.20     | 0.25    | 0.31                      | 0.47                                        | 0.70  | 1.1   | 1.6   | 2.5   | 3.8   | 5.4   | 7.2   |                                  |                                  |         |                       |
|                                       |                  |           | 90 (N)           | 25 (IV)<br>40 (IV) <sup>4)</sup>             |          |         |                           |                                             |       |       |       |       |       |       |       | 25 (VI)<br>40 (VI) <sup>4)</sup> | 25 (VI)                          |         |                       |
|                                       |                  | 25        | 70 (M)           | 12 (IV)                                      | 0.35     | 0.38    | 0.65                      | 1.0                                         | 1.5   | 2.2   | 3.4   | 5.1   | 7.0   | 9.4   | 12.0  |                                  |                                  |         |                       |
|                                       |                  |           | 90 (N)           | 25 (IV)                                      |          |         |                           |                                             |       |       |       |       |       |       |       | 25 (VI)                          | 20 (VI)                          |         |                       |
|                                       |                  | 32        | 1¼ <sup>2)</sup> | 20                                           | 90 (N)   | 25 (IV) | 25 (VI)                   | 25 (VI)                                     | 0.21  | 0.24  | 0.32  | 0.43  | 0.60  | 0.85  | 1.2   | 1.6                              | 2.3                              | 3.3     | 4.8                   |
|                                       |                  |           |                  |                                              | 130 (P)  |         |                           | 25 (VI)                                     | 0.22  | 0.25  | 0.35  | 0.50  | 0.70  | 1.1   | 1.6   | 2.5                              | 3.8                              | 5.8     | 8.0                   |
|                                       |                  |           |                  | 25                                           | 90 (N)   |         |                           | 20 (VI)                                     | 0.38  | 0.45  | 0.65  | 0.93  | 1.3   | 1.8   | 2.6   | 3.7                              | 5.1                              | 6.7     | 8.9                   |
|                                       |                  |           |                  |                                              | 130 (P)  |         |                           | 25 (VI)                                     | 0.40  | 0.47  | 0.73  | 1.1   | 1.6   | 2.5   | 3.7   | 5.4                              | 7.5                              | 10.3    | 13.0                  |
|                                       |                  |           |                  | 32                                           | 90 (N)   | 16 (IV) | 16 (VI)                   | 10 (VI)                                     | 0.45  | 0.58  | 0.80  | 1.1   | 1.7   | 2.5   | 3.5   | 4.9                              | 7.0                              | 10.1    | 13.4                  |
|                                       |                  |           |                  |                                              | 130 (P)  | 25 (IV) | 25 (VI)                   | 20 (VI)                                     | 0.48  | 0.60  | 0.85  | 1.3   | 2.1   | 3.1   | 4.5   | 6.8                              | 10.2                             | 14.0    | 17.8                  |
| 40                                    | 1½ <sup>2)</sup> |           |                  | 25                                           | 90 (N)   | 25 (IV) | 25 (VI)                   | 10 (VI)                                     | 0.38  | 0.47  | 0.68  | 0.95  | 1.4   | 1.9   | 2.7   | 3.7                              | 5.2                              | 7.2     | 9.4                   |
|                                       |                  |           |                  |                                              | 130 (P)  |         |                           | 25 (VI)                                     | 0.40  | 0.50  | 0.75  | 1.1   | 1.7   | 2.6   | 3.8   | 5.6                              | 8.0                              | 10.7    | 13.6                  |
|                                       |                  | 32        | 90 (N)           | 16 (IV)                                      | 16 (VI)  | 10 (VI) | 0.45                      | 0.55                                        | 0.80  | 1.1   | 1.7   | 2.5   | 3.6   | 5.0   | 7.2   | 10.8                             | 14.4                             |         |                       |
|                                       |                  |           | 130 (P)          | 25 (IV)                                      | 25 (VI)  | 20 (VI) | 0.48                      | 0.60                                        | 0.85  | 1.3   | 2.1   | 3.2   | 4.6   | 6.9   | 11.0  | 15.0                             | 20.0                             |         |                       |
|                                       |                  | 40        | 90 (N)           | 12 (IV)                                      | 12 (VI)  | 7 (VI)  | 0.55                      | 0.67                                        | 1.0   | 1.5   | 2.3   | 3.2   | 4.5   | 6.5   | 9.5   | 13.7                             | 17.5                             |         |                       |
|                                       |                  |           | 130 (P)          | 25 (IV)                                      | 25 (VI)  | 20 (VI) | 0.60                      | 0.70                                        | 1.1   | 1.7   | 2.7   | 4.0   | 6.0   | 9.2   | 13.8  | 18.2                             | 24.0                             |         |                       |

| Nominal diameter<br>(port connection) |                               | Seat size                     | Actuator size<br>Ø                 | Operating pressure max.<br>(Seat leakage class) |                                    |                                    | Theoretical range-ability          | K <sub>v</sub> value water at stroke [m³/h] |                               |      |      |      |      |      |      |      |      |       | K <sub>vs</sub> value |      |
|---------------------------------------|-------------------------------|-------------------------------|------------------------------------|-------------------------------------------------|------------------------------------|------------------------------------|------------------------------------|---------------------------------------------|-------------------------------|------|------|------|------|------|------|------|------|-------|-----------------------|------|
|                                       |                               |                               |                                    | Seat seal                                       |                                    |                                    |                                    |                                             |                               |      |      |      |      |      |      |      |      |       |                       |      |
|                                       |                               |                               |                                    | CF A                                            |                                    |                                    |                                    |                                             |                               |      |      |      |      |      |      |      |      |       |                       |      |
|                                       |                               |                               |                                    | Stainless steel                                 | PTFE                               | PEEK                               |                                    | 5 %                                         | 10 %                          | 20 % | 30 % | 40 % | 50 % | 60 % | 70 % | 80 % | 90 % | 100 % |                       |      |
| DN                                    | NPS                           |                               | [mm]                               | [bar(g)]                                        |                                    |                                    |                                    | [m³/h]                                      |                               |      |      |      |      |      |      |      |      |       |                       |      |
| 50                                    | 2 <sup>2.)</sup>              | 20                            | 90 (N)                             | 25 (20 <sup>1.)</sup><br>(IV)                   | –                                  | –                                  | 50:1                               | –                                           | 0.12                          | 0.23 | 0.33 | 0.47 | 0.67 | 0.96 | 1.4  | 1.9  | 2.7  | 3.8   |                       |      |
|                                       |                               |                               | 130 (P)                            | 25 (20 <sup>1.)</sup><br>(IV)                   |                                    |                                    |                                    |                                             | 0.14                          | 0.25 | 0.38 | 0.57 | 0.85 | 1.3  | 1.9  | 2.8  | 4.1  | 6.3   |                       |      |
|                                       |                               | 32                            | 90 (N)                             | 16 (IV)                                         |                                    |                                    |                                    |                                             | 0.29                          | 0.46 | 0.66 | 0.95 | 1.3  | 1.9  | 2.7  | 3.7  | 5.2  | 7.4   |                       |      |
|                                       |                               |                               | 130 (P)                            | 25 (20 <sup>1.)</sup><br>(IV)                   | 0.31                               | 0.51                               |                                    |                                             | 0.76                          | 1.1  | 1.7  | 2.5  | 3.6  | 5.3  | 7.9  | 12.0 |      |       |                       |      |
|                                       |                               | 32                            | 90 (N)                             | 16 (IV)                                         | 16 (VI)                            | 0.45                               |                                    | 0.56                                        | 0.80                          | 1.1  | 1.7  | 2.5  | 3.6  | 5.0  | 7.2  | 11.4 | 15.3 |       |                       |      |
|                                       |                               |                               | 130 (P)                            | 25 (20 <sup>1.)</sup><br>(IV)                   | 25 (20 <sup>1.)</sup><br>(VI)      | 0.48                               |                                    | 0.60                                        | 0.90                          | 1.3  | 2.1  | 3.2  | 4.6  | 6.9  | 11.6 | 16.0 | 21.0 |       |                       |      |
|                                       |                               | 40                            | 90 (N)                             | 12 (IV)                                         | 12 (VI)                            | 7 (VI)                             |                                    | 0.57                                        | 0.68                          | 0.90 | 1.5  | 2.1  | 3.2  | 4.5  | 6.4  | 9.5  | 13.8 | 18.0  |                       |      |
|                                       |                               |                               | 130 (P)                            | 25 (20 <sup>1.)</sup><br>(IV)                   | 25 (20 <sup>1.)</sup><br>(VI)      | 20 (VI)                            |                                    | 0.60                                        | 0.70                          | 1.0  | 1.7  | 2.6  | 4.0  | 5.9  | 9.2  | 14.0 | 18.9 | 24.5  |                       |      |
|                                       |                               | 50                            | 90 (N)                             | 7 (III)                                         | 7 (VI)                             | –                                  |                                    | 0.85                                        | 1.1                           | 1.7  | 2.6  | 3.8  | 5.4  | 7.7  | 11.4 | 16.0 | 21.5 | 28.0  |                       |      |
|                                       |                               |                               | 130 (P)                            | 25 (20 <sup>1.)</sup><br>(IV)                   | 25 (20 <sup>1.)</sup><br>(VI)      | 20 (VI)                            |                                    | 0.90                                        | 1.1                           | 1.9  | 2.9  | 4.5  | 6.8  | 10.5 | 15.5 | 22.0 | 29.5 | 37.0  |                       |      |
|                                       |                               | 65                            | 2<br>½ <sup>2.)</sup>              | 40                                              | 130 (P)                            | 25 (15 <sup>1.)</sup><br>(IV)      |                                    | 25 (15 <sup>1.)</sup><br>(VI)               | 20 (15 <sup>1.)</sup><br>(VI) | 0.65 | 0.75 | 1.1  | 1.8  | 2.8  | 4.3  | 6.5  | 10.4 | 16.0  | 22.0                  | 29.0 |
|                                       |                               |                               |                                    | 50                                              | 130 (P)                            |                                    |                                    |                                             | 1.0                           | 1.2  | 2.0  | 3.1  | 4.8  | 6.7  | 9.7  | 16.0 | 24.0 | 35.0  | 45.0                  |      |
| 65                                    | 130 (P)                       |                               |                                    | 16 (15 <sup>1.)</sup><br>(IV)                   | 16 (15 <sup>1.)</sup><br>(VI)      | 10 (VI)                            | 1.6                                | 2.0                                         | 3.0                           | 5.0  | 8.0  | 13.5 | 22.0 | 33.0 | 45.0 | 56   | 65   |       |                       |      |
|                                       | 225 (L) <sup>3.)</sup>        |                               |                                    | 20 (15 <sup>1.)</sup><br>(IV)                   | 20 (15 <sup>1.)</sup><br>(VI)      | 12 (VI)                            | 1.1                                | 1.4                                         | 2.1                           | 3.2  | 4.9  | 8.0  | 12.0 | 18.5 | 31.5 | 46.5 | 62   |       |                       |      |
|                                       | 225 (L)                       |                               |                                    | 25 (15 <sup>1.)</sup><br>(IV)                   | 25 (15 <sup>1.)</sup><br>(VI)      | 16 (15 <sup>1.)</sup><br>(VI)      |                                    |                                             |                               |      |      |      |      |      |      |      |      |       |                       |      |
| 80                                    | 3 <sup>2.)</sup>              |                               |                                    | 50                                              | 130 (P)                            | 25<br>(12.5 <sup>1.)</sup><br>(IV) | 25<br>(12.5 <sup>1.)</sup><br>(VI) | 20<br>(12.5 <sup>1.)</sup><br>(VI)          | 1.0                           | 1.2  | 2.0  | 3.4  | 5.3  | 8.3  | 13.0 | 19.0 | 26.0 | 35.0  | 45.0                  |      |
|                                       |                               | 65                            | 130 (P)                            |                                                 | 16<br>(12.5 <sup>1.)</sup><br>(IV) | 16<br>(12.5 <sup>1.)</sup><br>(VI) | 10 (VI)                            | 1.6                                         | 2.0                           | 2.9  | 5.0  | 8.2  | 13.0 | 22.0 | 35.0 | 48.0 | 61   | 73    |                       |      |
|                                       |                               | 225 (L) <sup>3.)</sup>        | 25<br>(12.5 <sup>1.)</sup><br>(IV) |                                                 | 25<br>(12.5 <sup>1.)</sup><br>(VI) | 16<br>(12.5 <sup>1.)</sup><br>(VI) | 1.4                                | 1.7                                         | 2.5                           | 3.8  | 5.7  | 8.2  | 12.2 | 19.5 | 32.5 | 50   | 70   |       |                       |      |
|                                       |                               |                               | 225 (L)                            |                                                 | 25<br>(12.5 <sup>1.)</sup><br>(IV) | 25<br>(12.5 <sup>1.)</sup><br>(VI) | 20<br>(12.5 <sup>1.)</sup><br>(VI) |                                             |                               |      |      |      |      |      |      |      |      |       |                       |      |
|                                       |                               | 80                            | 130 (P)                            | 10 (IV)                                         | 10 (VI)                            | 10 (VI)                            | 2.5                                | 3.4                                         | 6.3                           | 10.7 | 16.0 | 27.0 | 42.5 | 58   | 73   | 87   | 100  |       |                       |      |
|                                       |                               |                               | 225 (L) <sup>3.)</sup>             | 16<br>(12.5 <sup>1.)</sup><br>(IV)              | 16<br>(12.5 <sup>1.)</sup><br>(VI) | 10 (VI)                            | 2.1                                | 2.6                                         | 4.2                           | 7.0  | 10.5 | 16.0 | 25.0 | 40.0 | 60   | 83   | 100  |       |                       |      |
|                                       |                               |                               |                                    | 225 (L)                                         | 25<br>(12.5 <sup>1.)</sup><br>(IV) | 25<br>(12.5 <sup>1.)</sup><br>(VI) | 15<br>(12.5 <sup>1.)</sup><br>(VI) |                                             |                               |      |      |      |      |      |      |      |      |       |                       |      |
|                                       |                               |                               | 100                                | 4                                               | 65                                 | 130 (P)                            | 16 (10 <sup>1.)</sup><br>(IV)      | 16 (10 <sup>1.)</sup><br>(VI)               | 10 (VI)                       | 50:1 | 1.4  | 1.8  | 2.8  | 5.0  | 8.8  | 15.0 | 25.0 | 37.0  | 50                    | 64   |
| 225 (L) <sup>3.)</sup>                | 25 (10 <sup>1.)</sup><br>(IV) | 25 (10 <sup>1.)</sup><br>(VI) |                                    |                                                 |                                    | 16 (10 <sup>1.)</sup><br>(VI)      | 1.4                                | 1.7                                         | 2.6                           |      | 3.8  | 5.7  | 8.3  | 12.6 | 20.0 | 32.0 | 51   | 75    |                       |      |
| 225 (L)                               | 25 (10 <sup>1.)</sup><br>(IV) | 25 (10 <sup>1.)</sup><br>(VI) |                                    |                                                 |                                    | 20 (10 <sup>1.)</sup><br>(VI)      |                                    |                                             |                               |      |      |      |      |      |      |      |      |       |                       |      |
| 80                                    | 130 (P)                       | 10 (IV)                       |                                    |                                                 | 10 (VI)                            | 10 (VI)                            | 2.2                                | 3.1                                         | 5.9                           |      | 10.3 | 17.5 | 30.0 | 48.0 | 66   | 82   | 97   | 110   |                       |      |
|                                       | 225 (L) <sup>3.)</sup>        | 16 (10 <sup>1.)</sup><br>(IV) |                                    |                                                 | 16 (10 <sup>1.)</sup><br>(VI)      | 10 (VI)                            | 2.1                                | 2.6                                         | 4.3                           |      | 7.0  | 11.0 | 17.0 | 26.5 | 44.0 | 65   | 89   | 115   |                       |      |
|                                       | 225 (L)                       | 25 (10 <sup>1.)</sup><br>(IV) |                                    |                                                 | 25 (10 <sup>1.)</sup><br>(VI)      | 15 (10 <sup>1.)</sup><br>(VI)      |                                    |                                             |                               |      |      |      |      |      |      |      |      |       |                       |      |
| 100                                   | 130 (P)                       | 6 (IV)                        |                                    |                                                 | 6 (VI)                             | –                                  | 3.8                                | 5.2                                         | 9.5                           |      | 15.0 | 26.0 | 46.5 | 68   | 90   | 111  | 128  | 140   |                       |      |
|                                       | 225 (L) <sup>3.)</sup>        | 10 (IV)                       |                                    |                                                 | 10 (VI)                            | 6 (VI)                             | 3.2                                | 3.9                                         | 5.7                           |      | 9.0  | 13.5 | 20.5 | 32.0 | 51   | 83   | 118  | 140   |                       |      |
|                                       | 225 (L)                       | 16 (10 <sup>1.)</sup><br>(IV) |                                    |                                                 | 16 (10 <sup>1.)</sup><br>(VI)      | 10 (VI)                            |                                    |                                             |                               |      |      |      |      |      |      |      |      |       |                       |      |

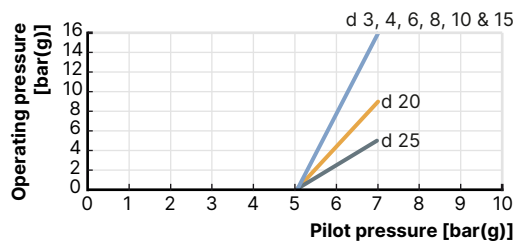
- 1.) According to the Pressure Equipment Directive 97/23/EC for compressible fluids of Group 1 (hazardous gases and vapours according to Article 3 No. 1.3 letter a first dash)
- 2.) Deviation for port connections according to ASME BPE: the next largest nominal diameter is used, e.g. NPS 1 instead of NPS ¾.
- 3.) Reduced spring force
- 4.) Only for housing variants with nominal pressure PN 40 (optional)

**Pilot pressure diagrams with flow direction below seat (control function B)**
**Note:**

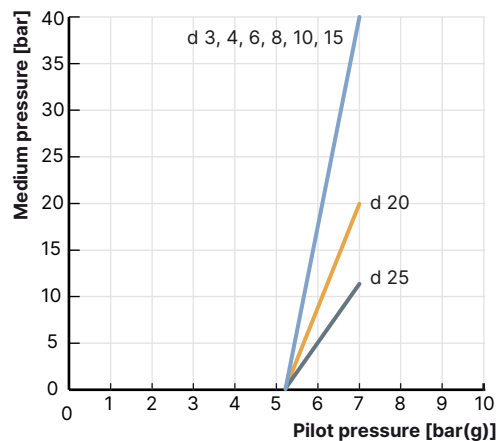
d = Seat size

**Actuator size Ø 50 mm**

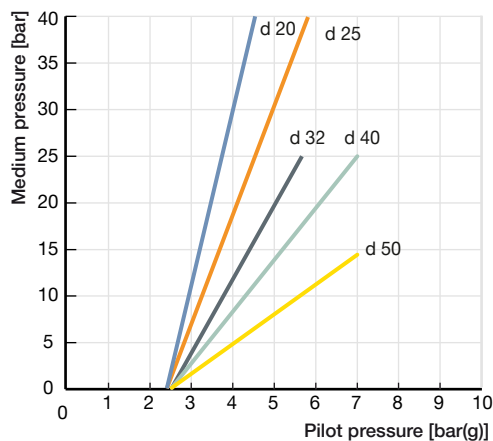
Maximum control pressure 7 bar(g)


**Actuator size Ø 70 mm**

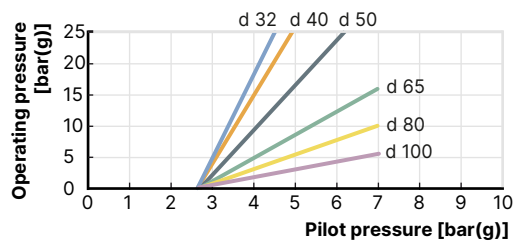
Maximum control pressure 7 bar(g)


**Actuator size Ø 90 mm**

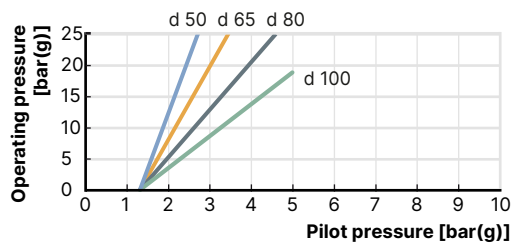
Maximum control pressure 7 bar(g)


**Actuator size Ø 130 mm**

Maximum control pressure 7 bar(g)


**Actuator size Ø 225 mm**

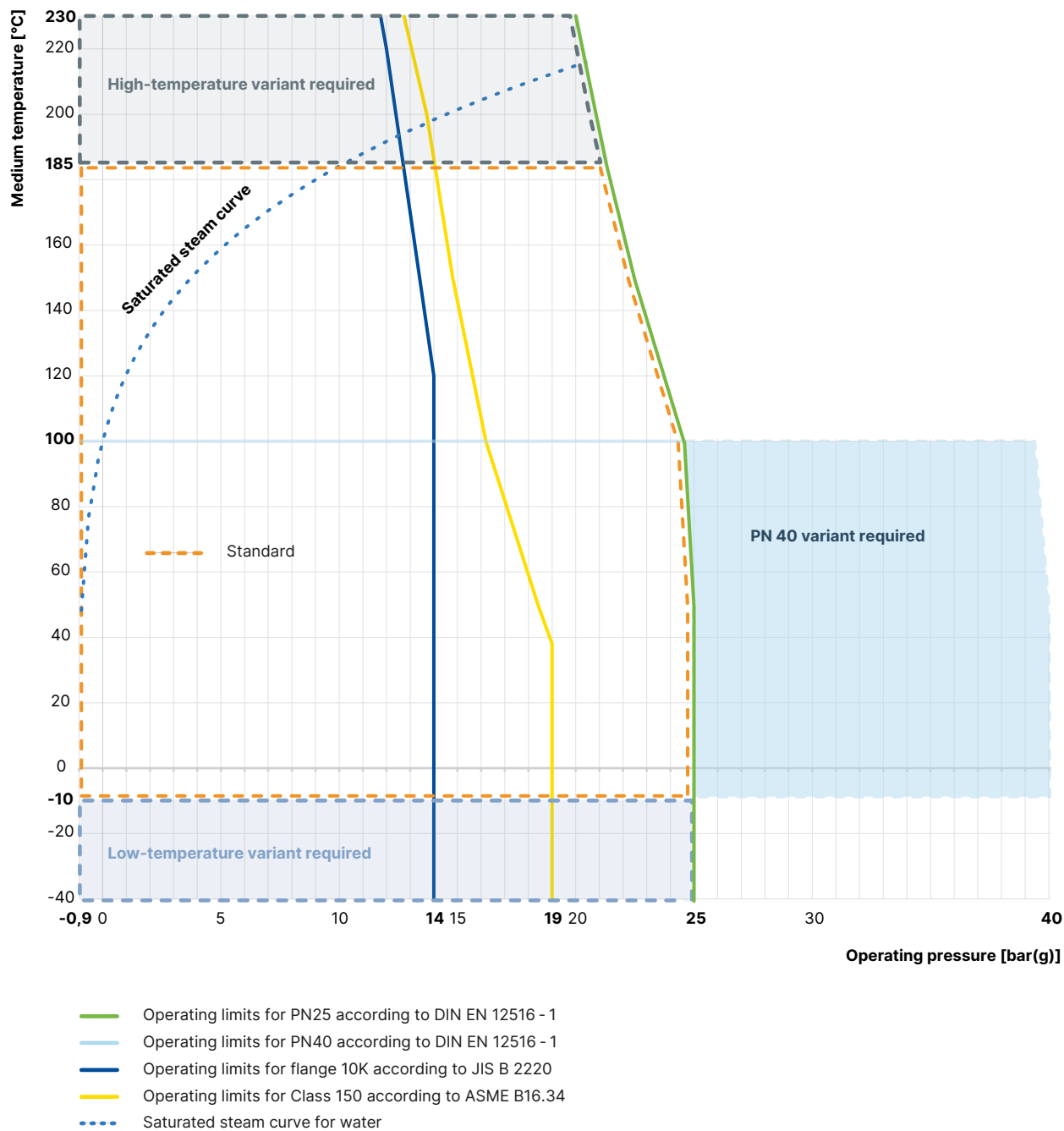
Maximum control pressure 5 bar(g)



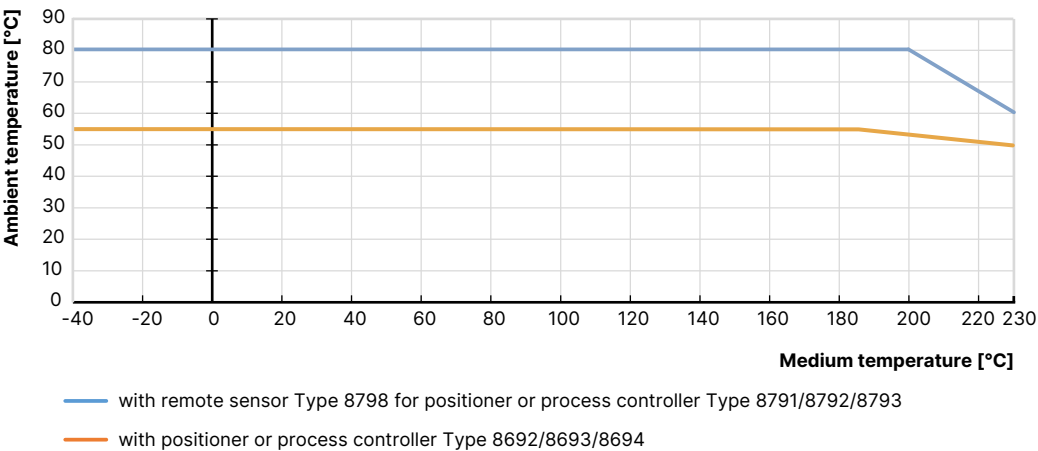
## 7.2. Operating limits

### Operating limits for medium temperature and operating pressure

In addition to the maximum operating pressures, the operating range of Bürkert process valves is limited by the nominal pressure according to the relevant standard.



Operating limits for ambient and medium temperature



Operating limits for seat seal

| Tight sealing required                                        | Leakage class (DIN EN 60534 - 4)                                                                                                                                                                               | Medium temperature                              | Seat seal                |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------|
| No<br><br>An additional shut-off valve is recommended         | III/IV (metal seals)<br><br>Metal-sealed valves have larger leakages (0.1 % or 0.01 % of the nominal flow rate are permissible).<br><br>Metallic seals are impervious even under demanding process conditions. | - 40...+ 230 °C                                 | Stainless steel          |
|                                                               | For particularly demanding process conditions such as cavitation, erosion by wet steam or abrasive media, hardened cones and seats can be used to significantly increase the service life.                     |                                                 | Hardened stainless steel |
| Yes<br><br>An additional shut-off valve is often unnecessary. | VI (soft seals)<br><br>By using plastics as sealing material, the control valves can close tightly.<br><br>Their use is not recommended in cases of increased erosion due to demanding process conditions.     | - 40...+ 130 °C<br>(recommended for ≤ + 130 °C) | PTFE                     |
|                                                               |                                                                                                                                                                                                                | - 10...+ 230 °C<br>(recommended for > + 130 °C) | PEEK                     |

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### Operating limits for optional variants

#### High-temperature variant

Thanks to an adaption of the spindle seal, this variant is suitable for applications with steam, neutral gases and other heat transfer mediums up to + 230 °C.

#### Water variant

For applications with water up to + 200 °C, a special configuration of the spindle seal increases service life significantly. It is recommended for water temperatures starting at + 85 °C.

#### Drinking water variant

Wetted materials are tested in contact with the medium are tested for suitability with drinking water up to + 85 °C.

#### Vacuum variant

Without leakage bore, this design is suitable for pressures down to - 0.9 bar(g).

#### Low-temperature variant

Suitable for minimum medium temperatures down to - 40 °C

#### Oxygen variant

Non-metallic wetted materials are tested for suitability with oxygen and are suitable for operating pressures up to 25 bar(g) and medium temperatures up to + 60 °C. Optional variant for operating pressures up to 40 bar(g) and medium temperatures up to + 100 °C on request.

#### Hydrogen variant

Wetted materials are tested for suitability with hydrogen and are suitable for operating pressures up to 40 bar(g) and medium temperatures up to + 100 °C.

The hydrogen variant of Type 2301 is tested for an external tightness (stem seal and body seal) totalling  $10^{-6}$  mbar\*l/s at 40 bar, + 20 °C helium and  $2.78 \times 10^{-3}$  mbar\*l/s at 40 bar, - 10 °C/+ 100 °C hydrogen. An external leak-tightness of  $10^{-4}$  mbar\*l/s is ensured when delivered.

## 8. Product accessories

### Process controller TopControl

#### Type 8693 ▶ Actuator size Ø 70/90/130/225 mm



The intelligent process controller Type 8693 is designed for integrated mounting on pneumatic actuators from the process control valve series Type 23xx/2103 and especially for the requirements of hygienic process conditions. Using the TUNE functions, the positioner and process controller can be initialised automatically. Easy operation and selection of additional software functions as well as parameterisation are carried out via the large graphic display and a touch keypad. Device configuration and parameterisation can also be conveniently carried out by the Bürkert Communicator software via a PC interface.

#### Features

- Contactless position sensor
- Universal control system for single and double acting actuators
- Highly dynamic actuating system without internal pilot air consumption in the balanced state
- Integrated diagnostic functions for valve monitoring
- Automatic initialisation of the positioner and process controller using the TUNE function
- Safeguarding in the event of failure of the electrical or pneumatic auxiliary power
- PROFIBUS DPV1, EtherNet/IP, PROFINET, Modbus TCP, Bürkert system bus (bÜS)
- Compact and robust hygienic stainless steel design

#### Customer benefits

- Quick and easy commissioning
- Intuitive and simple operation via a graphic display with backlight and touch keypad
- High system availability due to increased drive service life by means of spring chamber ventilation
- Guaranteed reliability and predictable maintenance through valve monitoring and diagnostics
- Easy maintenance and process monitoring

**Positioner TopControl**
**Type 8692 ▶ Actuator size Ø 70/90/130/225 mm**


The intelligent electropneumatic positioner Type 8692 is designed for integrated attachment to pneumatic actuators of the process control valve series Type 23xx/2103 and especially for the requirements of hygienic process conditions. The positioner can be initialised automatically using the TUNE function. Easy operation and the selection of the extensive additional software functions as well as parameterisation are carried out via the large graphic display and the touch keypad. The device configuration and parameterisation can also be conveniently carried out using the Bürkert Communicator software via a PC interface.

**Features**

- Contactless position sensor
- Universal positioning system for single and double-acting actuators in the balanced state
- Highly dynamic positioning system without internal pilot air consumption
- Integrated diagnostic functions for valve monitoring
- Automatic initialisation of the positioner by using the TUNE function
- Safeguard in the event of failure of the electrical or pneumatic auxiliary power
- PROFIBUS DPV1, EtherNet/IP, PROFINET, Modbus TCP, Bürkert system bus (bÜS)
- Compact and robust hygienic stainless steel design

**Customer benefits**

- Quick and easy commissioning
- Intuitive and simple operation via graphic display with backlight and touch keypad
- High system availability due to increased drive service life by means of spring chamber ventilation
- Guaranteed reliability and predictable maintenance through valve monitoring and diagnostics

**Positioner TopControl BASIC**
**Type 8694 ▶ Actuator size Ø 70/90/130/225 mm**


The compact positioner Type 8694/8696 is designed for integrated attachment to pneumatic actuators of the Type 23xx/2103 process control valve series and especially for the requirements of hygienic process conditions. Operation and parameterisation are performed via push buttons and DIP switches. The device configuration and parameterisation can also be conveniently carried out using the Bürkert Communicator software via a PC interface.

**Features**

- Contactless position sensor
- Universal positioning system for single and double-acting actuators
- Ultra dynamic positioning system without internal pilot air consumption
- AS-Interface, IO-Link, Bürkert system bus (bÜS) (only 8694)
- Compact and robust hygienic stainless steel design

**Type 8696 ▶  
Actuator size Ø 50 mm**

**Customer benefits**

- Simple and safe commissioning using the teach function
- Minimum space requirement in the plant pipework for more flexibility in plant design
- High system availability due to increased drive service life by means of spring chamber ventilation

**Process controller SideCONTROL Remote**
**Type 8793 ▶ with remote sensor 8798 ▶ Actuator size Ø 70/90/130/225 mm**


The intelligent digital positioner and process controller Type 8793 is designed for mounting on lift or swivel drives with standardisation in accordance with IEC 534 - 6 or VDI/VDE 3845 for demanding control tasks. The variant with remote position sensor Type 8798 is used to control Bürkert process control valves. It is operated via a graphic display with backlight. The initialisation of the positioner and process controller can be done automatically using the TUNE function. The type of controlled system is automatically recognised and the appropriate controller structure with the corresponding optimum parameter set is determined.

**Features**

- Universal control system for single and double acting actuators
- Integrated diagnostic functions for valve monitoring
- Automatic initialisation of the position and process controller using the TUNE function
- Ultra-dynamic actuating system without internal pilot air consumption
- Illuminated graphic display with backlight and touch keypad
- PROFIBUS DPV1, EtherNet/IP, PROFINET, Modbus TCP, Bürkert system bus (bÜS)
- Compact and robust design
- Adaptation according to IEC 534 - 6 or VDI/VDE 3845 for lift and swivel drives or as remote variant on Bürkert process valves

**Customer benefits**

- Quick and easy commissioning
- Intuitive and simple operation via graphic display with backlight and touch keypad
- Guaranteed reliability and scheduled maintenance thanks to valve monitoring and diagnostics
- Easy maintenance and process monitoring
- Long service life

**Positioner SideCONTROL Remote**
**Positioner Type 8792 ▶ with remote sensor Type 8798 ▶ Actuator size Ø 70/90/130/225 mm**


The intelligent digital positioner and process controller Type 8792 is designed for attachment to lift and swivel drives with standardisation according to IEC 534 - 6 or VDI/VDE 3845 for demanding control tasks. The Type 8798 variant with remote position sensor is used to control Bürkert process control valves. It is operated via a graphic display with backlight. The initialisation of the positioner and process controller can be done automatically by using the TUNE function.

**Features**

- Illuminated graphic display with backlight and touch keypad
- Universal control system for single and double acting actuators
- Ultra-dynamic actuating system without internal pilot air consumption
- Integrated diagnostic functions for valve monitoring
- PROFIBUS DPV1, EtherNet/IP, PROFINET, Modbus TCP, Bürkert system bus (bÜS)
- Compact and robust design
- Adaptation according to IEC 534 - 6 or VDI/VDE 3845 for lift and swivel drives or as remote variant on Bürkert process valves

**Customer benefits**

- Quick and easy commissioning
- Intuitive and simple operation via a graphic display with backlight and touch keypad
- Guaranteed reliability and scheduled maintenance thanks to valve monitoring and diagnostics
- Long service life

**Positioner SideCONTROL BASIC Remote**
**Positioner Type 8791 ▶ with remote sensor Type 8798 ▶ Actuator size Ø 70/90/130/225 mm**


The intelligent digital positioner and process controller Type 8791/8798 is designed for mounting on linear and rotary actuators with standardisation in accordance with IEC 534 - 6 or VDI/VDE 3845 for demanding control tasks. The variant with remote position sensor Type 8798 is used for controlling Bürkert process control valves. It is operated via a graphic display with backlight. The positioner and process controller can be initialised automatically using the TUNE functions.

**Features**

- Simple design
- Universal control system for single and double acting actuators
- Highly dynamic actuating system without internal pilot air consumption in the balanced state
- Adaptation according to IEC 534 - 6 or VDI/VDE 3845 for lift and swivel drives or as remote variant on Bürkert process valves
- AS-Interface, IO-Link, Bürkert system bus (bÜS) (only for positioner Type 8791 BASIC Remote)

**Positioner IP20 Type 8791 ▶  
with remote sensor  
Type 8798 ▶ Actuator size  
Ø 70/90/130/225 mm**

**Customer benefits**

- Simple commissioning
- Simple device for simple control tasks
- Low energy consumption

## 9. Networking and combination with other Bürkert products

The **Type 2301 Globe Control Valve** can be combined with our extensive range of positioners and process controllers to form the **Continuous ELEMENT valve system, Type 8802-GD**.

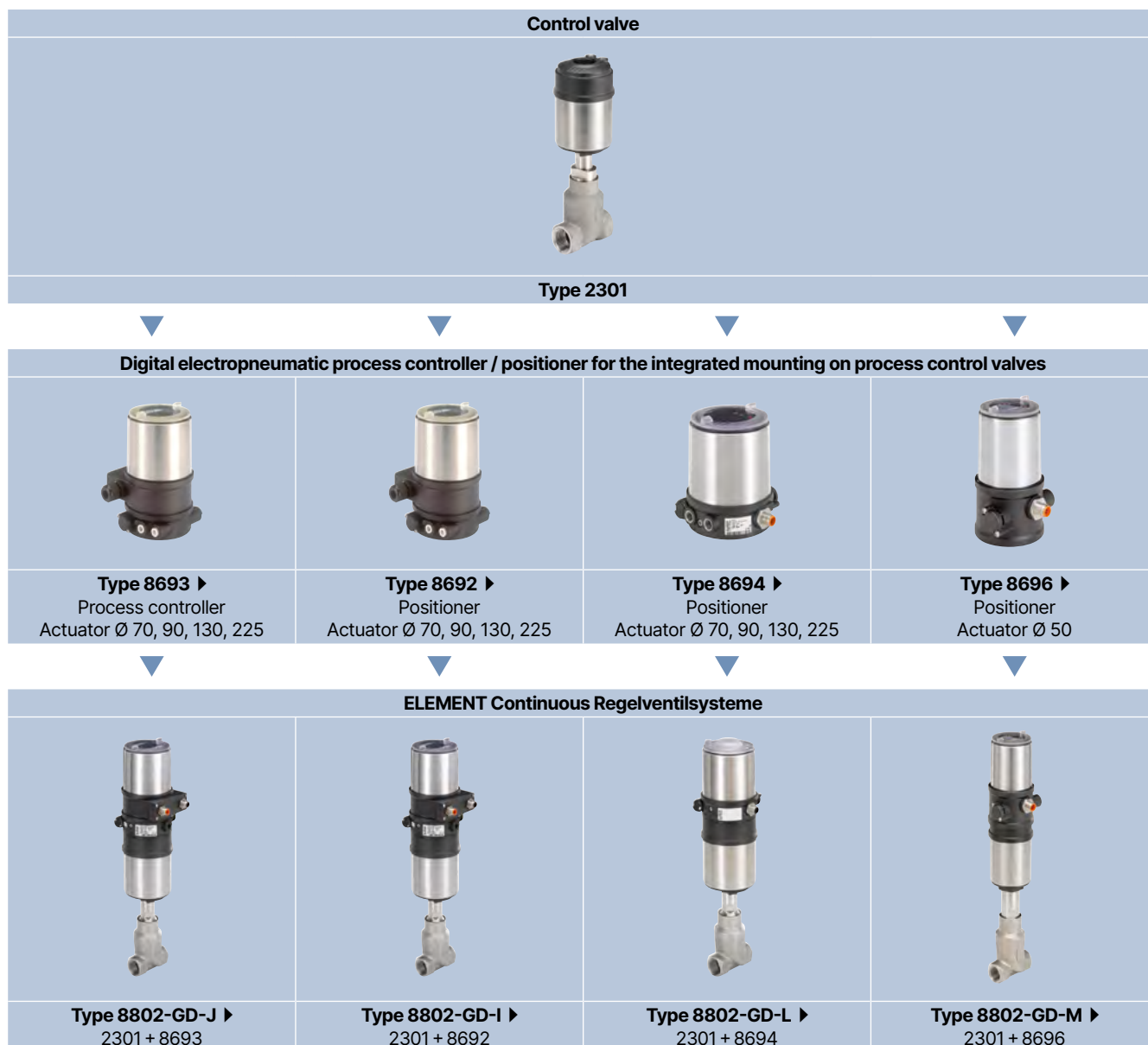
The range of the control unit consists of;

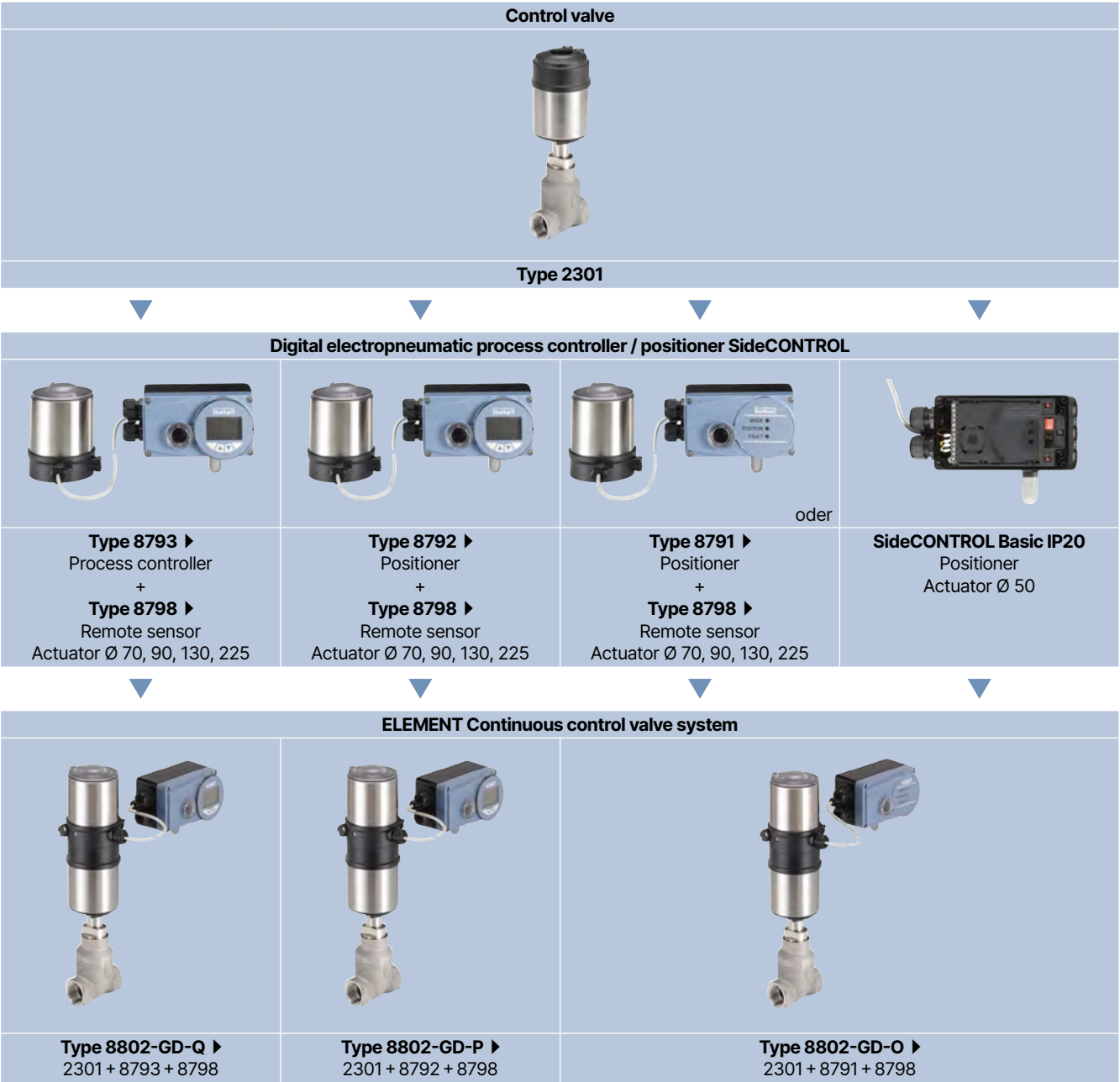
- A digital electropneumatic positioner/process controller **Type 8692/8693** (for valve actuator sizes Ø 70/90/130/225 mm)
- A digital electropneumatic positioner, basic **Type 8694** (for valve actuator size Ø 70/90/130/225 mm)
- A digital electropneumatic positioner, basic **Type 8696** (for valve actuator size Ø 50 mm)
- An electropneumatic positioner, SideCONTROL **Type 8792** or an electropneumatic process controller, **Type 8793** (for valve actuator size Ø 70/90/130/225 mm) and a remote sensor, **Type 8798**
- An electropneumatic positioner, SideCONTROL Basic **Type 8791** (for valve actuator size Ø 70/90/130/225 mm) and a remote sensor, **Type 8798**

### Note:

- For the configuration of further valve systems please use the **Product Enquiry Form** (see **"10.3. Bürkert Product Enquiry Form" on page 30**).
- You order two components and receive a completely assembled and tested valve.

### Example with threaded connection





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## 10. Ordering information

### 10.1. 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](#)

### 10.2. 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](#)

### 10.3. Bürkert Product Enquiry Form

#### Note:

Please see our Product Enquiry Form for a full explanation of our specification key.

#### 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](#)

#### 10.4. Ordering chart flange connection

Valves with flow direction below seat

| Nominal diameter (port connection) |       | Seat size | Actuator size Ø | K <sub>vs</sub> value | Article no. |                 |
|------------------------------------|-------|-----------|-----------------|-----------------------|-------------|-----------------|
| DN                                 | NPS   |           |                 |                       | Seat seal   |                 |
|                                    |       |           | [mm]            | [m³/h]                | PTFE        | Stainless steel |
| DIN EN 1092 - 1                    |       |           |                 |                       |             |                 |
| 10                                 | 3/8   | 3         | 70 (M)          | 0.1                   | –           | o. r.           |
|                                    |       | 3         | 70 (M)          | 0.2                   | –           | o. r.           |
|                                    |       | 4         | 70 (M)          | 0.5                   | –           | o. r.           |
|                                    |       | 6         | 70 (M)          | 1.25                  | 370257 ₪    | 350725 ₪        |
|                                    |       | 8         | 70 (M)          | 2                     | 213985 ₪    | 215212 ₪        |
|                                    |       | 10        | 70 (M)          | 2.7                   | 213989 ₪    | 215215 ₪        |
| 15                                 | 1/2   | 3         | 70 (M)          | 0.1                   | –           | o. r.           |
|                                    |       | 3         | 70 (M)          | 0.2                   | –           | o. r.           |
|                                    |       | 4         | 70 (M)          | 0.5                   | –           | o. r.           |
|                                    |       | 6         | 70 (M)          | 1.25                  | 234255 ₪    | 378904 ₪        |
|                                    |       | 8         | 70 (M)          | 2.1                   | 213987 ₪    | 215214 ₪        |
|                                    |       | 10        | 70 (M)          | 3.1                   | 213991 ₪    | 215217 ₪        |
|                                    |       | 15        | 70 (M)          | 4.3                   | 204932 ₪    | 205010 ₪        |
| 20                                 | 3/4   | 10        | 70 (M)          | 3.2                   | 210530 ₪    | 215218 ₪        |
|                                    |       | 15        | 70 (M)          | 5.2                   | 213993 ₪    | 214030 ₪        |
|                                    |       | 20        | 70 (M)          | 7.1                   | 204935 ₪    | 205012 ₪        |
| 25                                 | 1     | 15        | 70 (M)          | 5.3                   | 213994 ₪    | 214031 ₪        |
|                                    |       | 20        | 70 (M)          | 7.2                   | 213995 ₪    | 214032 ₪        |
|                                    |       | 25        | 70 (M)          | 12                    | 204937 ₪    | 205014 ₪        |
|                                    |       | 90 (N)    | 70 (M)          | 12                    | 242054 ₪    | 229421 ₪        |
| 32                                 | 1 1/4 | 25        | 90 (N)          | 8.9                   | 213997 ₪    | 210446 ₪        |
|                                    |       | 130 (P)   | 90 (N)          | 13                    | 222634 ₪    | 222655 ₪        |
|                                    |       | 32        | 90 (N)          | 13.4                  | 204939 ₪    | 205016 ₪        |
|                                    |       | 130 (P)   | 90 (N)          | 17.8                  | 223597 ₪    | 223598 ₪        |
| 40                                 | 1 1/2 | 32        | 90 (N)          | 14.4                  | 213999 ₪    | 214035 ₪        |
|                                    |       | 130 (P)   | 90 (N)          | 20.2                  | 222636 ₪    | 222657 ₪        |
|                                    |       | 40        | 90 (N)          | 17.5                  | 204941 ₪    | 205018 ₪        |
|                                    |       | 130 (P)   | 90 (N)          | 23.8                  | 219791 ₪    | 222659 ₪        |
| 50                                 | 2     | 40        | 90 (N)          | 18                    | 214001 ₪    | 214037 ₪        |
|                                    |       | 130 (P)   | 90 (N)          | 24.6                  | 222638 ₪    | 222660 ₪        |
|                                    |       | 50        | 90 (N)          | 28                    | 204942 ₪    | 205019 ₪        |
|                                    |       | 130 (P)   | 90 (N)          | 37                    | 214003 ₪    | 214039 ₪        |
| 65                                 | 2 1/2 | 50        | 130 (P)         | 45                    | 214005 ₪    | 214040 ₪        |
|                                    |       | 225 (L)   | 130 (P)         | 39.5                  | 20060552 ₪  | 20060584 ₪      |
|                                    |       | 65        | 130 (P)         | 65                    | 217772 ₪    | 219618 ₪        |
|                                    |       | 225 (L)   | 130 (P)         | 62                    | 20060553 ₪  | 20060585 ₪      |
| 80                                 | 3     | 65        | 130 (P)         | 73                    | 239545 ₪    | 239581 ₪        |
|                                    |       | 225 (L)   | 130 (P)         | 70                    | 20060554 ₪  | 20060587 ₪      |
|                                    |       | 80        | 130 (P)         | 100                   | 239540 ₪    | 239576 ₪        |
|                                    |       | 225 (L)   | 130 (P)         | 100                   | 20060555 ₪  | 20060589 ₪      |
| 100                                | 4     | 80        | 130 (P)         | 110                   | 239561 ₪    | 239597 ₪        |
|                                    |       | 225 (L)   | 130 (P)         | 115                   | 20060556 ₪  | 20060590 ₪      |
|                                    |       | 100       | 130 (P)         | 140                   | 239556 ₪    | 331125 ₪        |
|                                    |       | 225 (L)   | 130 (P)         | 140                   | 20060557 ₪  | 20060591 ₪      |

| Nominal diameter (port connection) |     | Seat size | Actuator size Ø | K <sub>vs</sub> value | Article no. |                 |
|------------------------------------|-----|-----------|-----------------|-----------------------|-------------|-----------------|
| DN                                 | NPS |           |                 |                       | Seat seal   |                 |
|                                    |     |           | [mm]            | [m³/h]                | PTFE        | Stainless steel |
| <b>JIS 10K</b>                     |     |           |                 |                       |             |                 |
| 15                                 | ½   | 3         | 70 (M)          | 0.1                   | –           | o. r.           |
|                                    |     | 3         | 70 (M)          | 0.2                   | –           | o. r.           |
|                                    |     | 4         | 70 (M)          | 0.5                   | –           | o. r.           |
|                                    |     | 6         | 70 (M)          | 1.25                  | 367023 ㉞    | o. r.           |
|                                    |     | 8         | 70 (M)          | 2.1                   | 215203 ㉞    | 215228 ㉞        |
|                                    |     | 10        | 70 (M)          | 3.1                   | 213913 ㉞    | 213911 ㉞        |
|                                    |     | 15        | 70 (M)          | 4.3                   | 204953 ㉞    | 205030 ㉞        |
| 20                                 | ¾   | 10        | 70 (M)          | 3.2                   | 215204 ㉞    | 215229 ㉞        |
|                                    |     | 15        | 70 (M)          | 5.2                   | 213936 ㉞    | 213933 ㉞        |
|                                    |     | 20        | 70 (M)          | 7.1                   | 204955 ㉞    | 205032 ㉞        |
| 25                                 | 1   | 15        | 70 (M)          | 5.3                   | 214020 ㉞    | 214059 ㉞        |
|                                    |     | 20        | 70 (M)          | 7.2                   | 213930 ㉞    | 213914 ㉞        |
|                                    |     | 25        | 70 (M)          | 12                    | 204957 ㉞    | 205034 ㉞        |
|                                    |     |           | 90 (N)          | 12                    | 242165 ㉞    | 242199 ㉞        |
| 32                                 | 1¼  | 25        | 90 (N)          | 8.9                   | 213939 ㉞    | 213937 ㉞        |
|                                    |     |           | 130 (P)         | 13                    | 222643 ㉞    | 222665 ㉞        |
|                                    |     | 32        | 90 (N)          | 13.4                  | 213177 ㉞    | 213178 ㉞        |
|                                    |     |           | 130 (P)         | 17.8                  | 222645 ㉞    | 222667 ㉞        |
| 40                                 | 1½  | 32        | 90 (N)          | 14.4                  | 213932 ㉞    | 213931 ㉞        |
|                                    |     |           | 130 (P)         | 20.2                  | 222647 ㉞    | 222668 ㉞        |
|                                    |     | 40        | 90 (N)          | 17.5                  | 204959 ㉞    | 205037 ㉞        |
|                                    |     |           | 130 (P)         | 23.8                  | 222649 ㉞    | 222670 ㉞        |
| 50                                 | 2   | 40        | 90 (N)          | 18                    | 213941 ㉞    | 213940 ㉞        |
|                                    |     |           | 130 (P)         | 24.6                  | 222650 ㉞    | 222671 ㉞        |
|                                    |     | 50        | 90 (N)          | 28                    | 204960 ㉞    | 205038 ㉞        |
|                                    |     |           | 130 (P)         | 37                    | 214023 ㉞    | 214062 ㉞        |
| 65                                 | 2½  | 50        | 130 (P)         | 45                    | 214024 ㉞    | 214063 ㉞        |
|                                    |     |           | 225 (L)         | 39.5                  | 20060565 ㉞  | 20060599 ㉞      |
|                                    |     | 65        | 130 (P)         | 65                    | 219617 ㉞    | 219620 ㉞        |
|                                    |     |           | 225 (L)         | 62                    | 20060568 ㉞  | 20060600 ㉞      |
| 80                                 | 3   | 65        | 130 (P)         | 73                    | 239547 ㉞    | 239584 ㉞        |
|                                    |     |           | 225 (L)         | 70                    | 20060569 ㉞  | 20060601 ㉞      |
|                                    |     | 80        | 130 (P)         | 100                   | 239542 ㉞    | 239578 ㉞        |
|                                    |     |           | 225 (L)         | 100                   | 20060570 ㉞  | 20060602 ㉞      |
| 100                                | 4   | 80        | 130 (P)         | 110                   | 239563 ㉞    | 239599 ㉞        |
|                                    |     |           | 225 (L)         | 115                   | 20060571 ㉞  | 20060604 ㉞      |
|                                    |     | 100       | 130 (P)         | 140                   | 239558 ㉞    | 239594 ㉞        |
|                                    |     |           | 225 (L)         | 140                   | 20060572 ㉞  | 20060605 ㉞      |

o. r. = on request

| Nominal diameter (port connection) |     | Seat size | Actuator size Ø | K <sub>vs</sub> value | Article no.                                                                                    |                                                                                                |
|------------------------------------|-----|-----------|-----------------|-----------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| DN                                 | NPS |           |                 |                       | Seat seal                                                                                      |                                                                                                |
|                                    |     |           | [mm]            | [m³/h]                | PTFE                                                                                           | Stainless steel                                                                                |
| <b>ANSI B 16.5</b>                 |     |           |                 |                       |                                                                                                |                                                                                                |
| 15                                 | ½   | 3         | 70 (M)          | 0.1                   | –                                                                                              | o. r.                                                                                          |
|                                    |     |           | 70 (M)          | 0.2                   | –                                                                                              | o. r.                                                                                          |
|                                    |     | 4         | 70 (M)          | 0.5                   | –                                                                                              | o. r.                                                                                          |
|                                    |     | 6         | 70 (M)          | 1.25                  | 367211      | 380948      |
|                                    |     | 8         | 70 (M)          | 2.1                   | 215198      | 215221      |
|                                    |     | 10        | 70 (M)          | 3.1                   | 215199      | 215222      |
|                                    |     | 15        | 70 (M)          | 4.3                   | 204944      | 205021      |
| 20                                 | ¾   | 10        | 70 (M)          | 3.2                   | 215200      | 215223      |
|                                    |     | 15        | 70 (M)          | 5.2                   | 214009      | 214046      |
|                                    |     | 20        | 70 (M)          | 7.1                   | 204946      | 205023      |
| 25                                 | 1   | 15        | 70 (M)          | 5.3                   | 214010      | 214047      |
|                                    |     | 20        | 70 (M)          | 7.2                   | 214011      | 214048      |
|                                    |     | 25        | 70 (M)          | 12                    | 204948      | 205025      |
|                                    |     |           | 90 (N)          | 12                    | 464851      | 464367      |
| 40                                 | 1½  | 32        | 90 (N)          | 14.4                  | 215201      | 215224      |
|                                    |     |           | 130 (P)         | 20.2                  | 463905      | 463913      |
|                                    |     | 40        | 90 (N)          | 17.5                  | 204950      | 205027      |
|                                    |     |           | 130 (P)         | 23.8                  | 463907      | 463915      |
| 50                                 | 2   | 40        | 90 (N)          | 18                    | 214013      | 214050      |
|                                    |     |           | 130 (P)         | 24.6                  | 463908     | 463916     |
|                                    |     | 50        | 90 (N)          | 28                    | 204951    | 205028    |
|                                    |     |           | 130 (P)         | 37                    | 214015    | 214052    |
| 65                                 | 2½  | 50        | 130 (P)         | 45                    | 239537    | 239573    |
|                                    |     |           | 225 (L)         | 39.5                  | 20060558  | 20060592  |
|                                    |     | 65        | 130 (P)         | 65                    | 239535    | 239572    |
|                                    |     |           | 225 (L)         | 62                    | 20060559  | 20060594  |
| 80                                 | 3   | 65        | 130 (P)         | 73                    | 239546    | 239582    |
|                                    |     |           | 225 (L)         | 70                    | 20060560  | 20060595  |
|                                    |     | 80        | 130 (P)         | 100                   | 239541    | 239577    |
|                                    |     |           | 225 (L)         | 100                   | 20060562  | 20060596  |
| 100                                | 4   | 80        | 130 (P)         | 110                   | 239562    | 239598    |
|                                    |     |           | 225 (L)         | 115                   | 20060563  | 20060597  |
|                                    |     | 100       | 130 (P)         | 140                   | 239557    | 239593    |
|                                    |     |           | 225 (L)         | 140                   | 20060564  | 20060598  |

o. r. = on request

## Further variants on request

**Approval**

FDA, ATEX, (EC Gas Appliance Directive 2009/142/EC)

**Control function/Circuit function**

B (normally open: NO)

**Process connection**

Further valve body connections

## 10.5. Ordering chart threaded connection

Valves with flow direction below seat

| Nominal diameter (port connection) |     | Seat size | Actuator size Ø | K <sub>vs</sub> value | Article no. |                 |          |          |
|------------------------------------|-----|-----------|-----------------|-----------------------|-------------|-----------------|----------|----------|
|                                    |     |           |                 |                       | Seat seal   |                 |          |          |
| DN                                 | NPS |           | [mm]            | [m³/h]                | PTFE        | Stainless steel |          |          |
| DIN EN ISO 228 - 1                 |     |           |                 |                       |             |                 |          |          |
| 10                                 | ⅜   | 3         | 70 (M)          | 0.1                   | —           | o. r.           |          |          |
|                                    |     | 3         | 70 (M)          | 0.2                   | —           | o. r.           |          |          |
|                                    |     | 4         | 70 (M)          | 0.5                   | —           | o. r.           |          |          |
|                                    |     | 6         | 70 (M)          | 1.25                  | 322059 ⅜    | 350407 ⅜        |          |          |
|                                    |     | 8         | 70 (M)          | 2                     | 215233 ⅜    | 215242 ⅜        |          |          |
|                                    |     | 10        | 70 (M)          | 2.7                   | 215235 ⅜    | 215245 ⅜        |          |          |
| 15                                 | ½   | 3         | 70 (M)          | 0.1                   | —           | o. r.           |          |          |
|                                    |     | 3         | 70 (M)          | 0.2                   | —           | o. r.           |          |          |
|                                    |     | 4         | 70 (M)          | 0.5                   | —           | o. r.           |          |          |
|                                    |     | 6         | 70 (M)          | 1.25                  | 236138 ⅝    | 354643 ⅝        |          |          |
|                                    |     | 8         | 70 (M)          | 2.1                   | 212964 ⅝    | 215243 ⅝        |          |          |
|                                    |     | 10        | 70 (M)          | 3.1                   | 215236 ⅝    | 215246 ⅝        |          |          |
| 20                                 | ¾   | 15        | 70 (M)          | 4.3                   | 206432 ⅝    | 213955 ⅝        |          |          |
|                                    |     | 10        | 70 (M)          | 3.2                   | 215237 ⅝    | 215247 ⅝        |          |          |
|                                    |     | 15        | 70 (M)          | 5.2                   | 214067 ⅝    | 215248 ⅝        |          |          |
|                                    |     | 20        | 70 (M)          | 7.1                   | 206584 ⅝    | 211239 ⅝        |          |          |
|                                    |     | 25        | 1               | 15                    | 70 (M)      | 5.3             | 206588 ⅝ | 210460 ⅝ |
|                                    |     |           |                 | 20                    | 70 (M)      | 7.2             | 206586 ⅝ | 210721 ⅝ |
| 32                                 | 1¼  | 25        | 70 (M)          | 12                    | 189145 ⅝    | 210485 ⅝        |          |          |
|                                    |     | 90 (N)    | 12              | 242203 ⅝              | 242207 ⅝    |                 |          |          |
|                                    |     | 32        | 90 (N)          | 8.9                   | 214070 ⅝    | 210407 ⅝        |          |          |
|                                    |     |           | 130 (P)         | 13                    | 222677 ⅝    | 222687 ⅝        |          |          |
| 40                                 | 1½  | 32        | 90 (N)          | 13.4                  | 210097 ⅝    | 210458 ⅝        |          |          |
|                                    |     |           | 130 (P)         | 17.8                  | 223599 ⅝    | 223600 ⅝        |          |          |
|                                    |     | 40        | 90 (N)          | 14.4                  | 214072 ⅝    | 214084 ⅝        |          |          |
|                                    |     |           | 130 (P)         | 20.2                  | 222679 ⅝    | 222689 ⅝        |          |          |
| 50                                 | 2   | 40        | 90 (N)          | 17.5                  | 210098 ⅝    | 207800 ⅝        |          |          |
|                                    |     |           | 130 (P)         | 23.8                  | 222681 ⅝    | 222691 ⅝        |          |          |
|                                    |     | 50        | 90 (N)          | 18                    | 214074 ⅝    | 214086 ⅝        |          |          |
|                                    |     |           | 130 (P)         | 24.6                  | 222682 ⅝    | 222692 ⅝        |          |          |
| 65                                 | 2½  | 50        | 90 (N)          | 28                    | 210099 ⅝    | 203693 ⅝        |          |          |
|                                    |     |           | 130 (P)         | 37                    | 214076 ⅝    | 214088 ⅝        |          |          |
|                                    |     | 65        | 130 (P)         | 45                    | 214077 ⅝    | 214089 ⅝        |          |          |
|                                    |     |           | 130 (P)         | 65                    | 219621 ⅝    | 219622 ⅝        |          |          |

| Nominal diameter (port connection) |       | Seat size | Actuator size Ø | K <sub>vs</sub> value | Article no. |                 |
|------------------------------------|-------|-----------|-----------------|-----------------------|-------------|-----------------|
| DN                                 | NPS   |           |                 |                       | Seat seal   |                 |
|                                    |       |           | [mm]            | [m³/h]                | PTFE        | Stainless steel |
| ISO 7-1 / DIN EN 10226-2           |       |           |                 |                       |             |                 |
| 10                                 | 3/8   | 3         | 70 (M)          | 0.1                   | –           | o. r.           |
|                                    |       | 3         | 70 (M)          | 0.2                   | –           | o. r.           |
|                                    |       | 4         | 70 (M)          | 0.5                   | –           | o. r.           |
|                                    |       | 6         | 70 (M)          | 1.25                  | o. r.       | o. r.           |
|                                    |       | 8         | 70 (M)          | 2                     | 220418 ⅞    | 220453 ⅞        |
|                                    |       | 10        | 70 (M)          | 2.7                   | 220421 ⅞    | 220457 ⅞        |
| 15                                 | 1/2   | 3         | 70 (M)          | 0.1                   | –           | o. r.           |
|                                    |       | 3         | 70 (M)          | 0.2                   | –           | o. r.           |
|                                    |       | 4         | 70 (M)          | 0.5                   | –           | o. r.           |
|                                    |       | 6         | 70 (M)          | 1.25                  | o. r.       | o. r.           |
|                                    |       | 8         | 70 (M)          | 2.1                   | 220881 ⅞    | 220455 ⅞        |
|                                    |       | 10        | 70 (M)          | 3.1                   | 220423 ⅞    | 220459 ⅞        |
| 20                                 | 3/4   | 15        | 70 (M)          | 4.3                   | 220882 ⅞    | 220886 ⅞        |
|                                    |       | 10        | 70 (M)          | 3.2                   | 220425 ⅞    | 220461 ⅞        |
|                                    |       | 15        | 70 (M)          | 5.2                   | 220427 ⅞    | 220463 ⅞        |
| 25                                 | 1     | 20        | 70 (M)          | 7.1                   | 220430 ⅞    | 220466 ⅞        |
|                                    |       | 15        | 70 (M)          | 5.3                   | 220428 ⅞    | 220464 ⅞        |
|                                    |       | 20        | 70 (M)          | 7.2                   | 220431 ⅞    | 220467 ⅞        |
| 32                                 | 1 1/4 | 25        | 70 (M)          | 12                    | 220434 ⅞    | 220470 ⅞        |
|                                    |       |           | 90 (N)          | 12                    | 464864 ⅞    | 464867 ⅞        |
|                                    |       | 25        | 90 (N)          | 8.9                   | 220435 ⅞    | 220471 ⅞        |
| 40                                 | 1 1/2 |           | 130 (P)         | 13                    | 463921 ⅞    | 463931 ⅞        |
|                                    |       | 32        | 90 (N)          | 13.4                  | 220437 ⅞    | 220473 ⅞        |
|                                    |       |           | 130 (P)         | 17.8                  | 463956 ⅞    | 463957 ⅞        |
| 50                                 | 2     | 40        | 90 (N)          | 14.4                  | 220438 ⅞    | 463803 ⅞        |
|                                    |       |           | 130 (P)         | 20.2                  | 463923 ⅞    | 463933 ⅞        |
|                                    |       | 40        | 90 (N)          | 17.5                  | 220440 ⅞    | 220476 ⅞        |
| 65                                 | 2 1/2 |           | 130 (P)         | 23.8                  | 463925 ⅞    | 463935 ⅞        |
|                                    |       | 40        | 90 (N)          | 18                    | 220441 ⅞    | 220477 ⅞        |
|                                    |       |           | 130 (P)         | 24.6                  | 463926 ⅞    | 463936 ⅞        |
| 65                                 | 2 1/2 | 50        | 90 (N)          | 28                    | 220443 ⅞    | 220479 ⅞        |
|                                    |       |           | 130 (P)         | 37                    | 220444 ⅞    | 220480 ⅞        |
|                                    |       | 50        | 130 (P)         | 45                    | 239536 ⅞    | 239620 ⅞        |
|                                    |       | 65        | 130 (P)         | 65                    | 239534 ⅞    | 239571 ⅞        |

o. r. = on request

| Nominal diameter (port connection) |     | Seat size | Actuator size Ø | K <sub>vs</sub> value | Article no.<br>RC (ASME B 1.20.1) |                 |
|------------------------------------|-----|-----------|-----------------|-----------------------|-----------------------------------|-----------------|
|                                    |     |           |                 |                       | Seat seal                         |                 |
| DN                                 | NPS |           | [mm]            | [m³/h]                | PTFE                              | Stainless steel |
| ASME B 1.20.1                      |     |           |                 |                       |                                   |                 |
| 10                                 | ⅜   | 3         | 70 (M)          | 0.1                   | —                                 | o. r.           |
|                                    |     | 3         | 70 (M)          | 0.2                   | —                                 | o. r.           |
|                                    |     | 4         | 70 (M)          | 0.5                   | —                                 | o. r.           |
|                                    |     | 6         | 70 (M)          | 1.25                  | o. r.                             | o. r.           |
|                                    |     | 8         | 70 (M)          | 2                     | 220484 ⅞                          | 220519 ⅞        |
|                                    |     | 10        | 70 (M)          | 2.7                   | 220487 ⅞                          | 220523 ⅞        |
| 15                                 | ½   | 3         | 70 (M)          | 0.1                   | —                                 | o. r.           |
|                                    |     | 3         | 70 (M)          | 0.2                   | —                                 | o. r.           |
|                                    |     | 4         | 70 (M)          | 0.5                   | —                                 | o. r.           |
|                                    |     | 6         | 70 (M)          | 1.25                  | 359073 ⅞                          | 388407 ⅞        |
|                                    |     | 8         | 70 (M)          | 2.1                   | 220888 ⅞                          | 220521 ⅞        |
|                                    |     | 10        | 70 (M)          | 3.1                   | 220489 ⅞                          | 220525 ⅞        |
| 20                                 | ¾   | 15        | 70 (M)          | 4.3                   | 220889 ⅞                          | 220894 ⅞        |
|                                    |     | 10        | 70 (M)          | 3.2                   | 220491 ⅞                          | 220527 ⅞        |
|                                    |     | 15        | 70 (M)          | 5.2                   | 220493 ⅞                          | 220529 ⅞        |
| 25                                 | 1   | 20        | 70 (M)          | 7.1                   | 220496 ⅞                          | 220532 ⅞        |
|                                    |     | 15        | 70 (M)          | 5.3                   | 220494 ⅞                          | 220530 ⅞        |
|                                    |     | 20        | 70 (M)          | 7.2                   | 220497 ⅞                          | 220533 ⅞        |
|                                    |     | 25        | 70 (M)          | 12                    | 220500 ⅞                          | 220536 ⅞        |
| 32                                 | 1¼  | 90 (N)    | 12              | 242377 ⅞              | 242380 ⅞                          |                 |
|                                    |     | 25        | 90 (N)          | 8.9                   | 220501 ⅞                          | 220537 ⅞        |
|                                    |     | 130 (P)   | 13              | 222740 ⅞              | 222777 ⅞                          |                 |
|                                    |     | 32        | 90 (N)          | 13.4                  | 220503 ⅞                          | 220539 ⅞        |
| 40                                 | 1½  | 130 (P)   | 17.8            | 223605 ⅞              | 223606 ⅞                          |                 |
|                                    |     | 32        | 90 (N)          | 14.4                  | 220504 ⅞                          | 220540 ⅞        |
|                                    |     | 130 (P)   | 20.2            | 222742 ⅞              | 222763 ⅞                          |                 |
|                                    |     | 40        | 90 (N)          | 17.5                  | 220506 ⅞                          | 220542 ⅞        |
| 50                                 | 2   | 130 (P)   | 23.8            | 222765 ⅞              | 222767 ⅞                          |                 |
|                                    |     | 40        | 90 (N)          | 18                    | 220507 ⅞                          | 220543 ⅞        |
|                                    |     | 130 (P)   | 24.6            | 222768 ⅞              | 222766 ⅞                          |                 |
|                                    |     | 50        | 90 (N)          | 28                    | 220509 ⅞                          | 220545 ⅞        |
| 65                                 | 2½  | 130 (P)   | 37              | 220510 ⅞              | 220546 ⅞                          |                 |
|                                    |     | 50        | 130 (P)         | 45                    | 220511 ⅞                          | 220547 ⅞        |
|                                    |     | 65        | 130 (P)         | 65                    | 220512 ⅞                          | 220548 ⅞        |

o. r. = on request

## Further variants on request



## Approval

FDA, ATEX, (EC Gas Appliance Directive 2009/142/EC)



## Control function/Circuit function

B (normally open: NO)



## Process connection

Further valve body connections

## 10.6. Ordering chart welded connection

Valves with flow direction below seat

| Nominal diameter<br>(port connection)               |       | Seat size | Actuator size Ø | K <sub>vs</sub> value | Connection<br>MW x TW | Article no.                                                                                    |                                                                                                |
|-----------------------------------------------------|-------|-----------|-----------------|-----------------------|-----------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| DN                                                  | NPS   |           |                 |                       |                       | Seat seal                                                                                      |                                                                                                |
|                                                     |       |           | [mm]            | [m³/h]                |                       | PTFE                                                                                           | Stainless steel                                                                                |
| DIN EN ISO 1127 - 1 / ISO 4200 / DIN 11866 series B |       |           |                 |                       |                       |                                                                                                |                                                                                                |
| 10                                                  | 3/8   | 3         | 70 (M)          | 0.1                   | 17.2 x 1.6            | —                                                                                              | o. r.                                                                                          |
|                                                     |       | 3         | 70 (M)          | 0.2                   | 17.2 x 1.6            | —                                                                                              | o. r.                                                                                          |
|                                                     |       | 4         | 70 (M)          | 0.5                   | 17.2 x 1.6            | —                                                                                              | o. r.                                                                                          |
|                                                     |       | 6         | 70 (M)          | 1.25                  | 17.2 x 1.6            | 232888      | 378908      |
|                                                     |       | 8         | 70 (M)          | 2                     | 17.2 x 1.6            | 232891      | 315915      |
|                                                     |       | 10        | 70 (M)          | 2.7                   | 17.2 x 1.6            | o. r.                                                                                          | 337061      |
| 15                                                  | 1/2   | 3         | 70 (M)          | 0.1                   | 21.3 x 1.6            | —                                                                                              | o. r.                                                                                          |
|                                                     |       | 3         | 70 (M)          | 0.2                   | 21.3 x 1.6            | —                                                                                              | o. r.                                                                                          |
|                                                     |       | 4         | 70 (M)          | 0.5                   | 21.3 x 1.6            | —                                                                                              | o. r.                                                                                          |
|                                                     |       | 6         | 70 (M)          | 1.25                  | 21.3 x 1.6            | 288140      | 360750      |
|                                                     |       | 8         | 70 (M)          | 2.1                   | 21.3 x 1.6            | 212392      | 216407      |
|                                                     |       | 10        | 70 (M)          | 3.1                   | 21.3 x 1.6            | 212393      | 215873      |
|                                                     |       | 15        | 70 (M)          | 4.3                   | 21.3 x 1.6            | 209571      | 216409      |
| 20                                                  | 3/4   | 15        | 70 (M)          | 5.2                   | 26.9 x 1.6            | 214094      | 214132      |
|                                                     |       | 20        | 70 (M)          | 7.1                   | 26.9 x 1.6            | 214096      | 210696      |
| 25                                                  | 1     | 20        | 70 (M)          | 7.2                   | 33.7 x 2.0            | 214097      | 214135      |
|                                                     |       | 25        | 70 (M)          | 12                    | 33.7 x 2.0            | 209572     | 214138     |
| 32                                                  | 1 1/4 | 25        | 90 (N)          | 8.9                   | 42.4 x 2.0            | 214101    | 214139    |
|                                                     |       | 32        | 90 (N)          | 13.4                  | 42.4 x 2.0            | 214103    | 214141    |
| 40                                                  | 1 1/2 | 32        | 90 (N)          | 14.4                  | 48.3 x 2.0            | 214104    | 214142    |
|                                                     |       |           | 130 (P)         | 20.2                  | 48.3 x 2.0            | 222700    | 222721    |
|                                                     |       | 40        | 90 (N)          | 17.5                  | 48.3 x 2.0            | 209440    | 214144    |
|                                                     |       |           | 130 (P)         | 23.8                  | 48.3 x 2.0            | 222702    | 222723    |
| 50                                                  | 2     | 40        | 90 (N)          | 18                    | 60.3 x 2.0            | 210756    | 213561    |
|                                                     |       |           | 130 (P)         | 24.6                  | 60.3 x 2.0            | 222703    | 222724    |
|                                                     |       | 50        | 90 (N)          | 28                    | 60.3 x 2.0            | 214107    | 214146    |
|                                                     |       |           | 130 (P)         | 37                    | 60.3 x 2.0            | 214108    | 214147    |
| 65                                                  | 2 1/2 | 65        | 130 (P)         | 65                    | 76.1 x 2.3            | 219623    | 219626    |
|                                                     |       |           | 225 (L)         | 62                    | 76.1 x 2.3            | 20060573  | 20060607  |
| 80                                                  | 3     | 80        | 130 (P)         | 100                   | 88.9 x 2.3            | 239543    | 239579    |
|                                                     |       |           | 225 (L)         | 100                   | 88.9 x 2.3            | 20060574  | 20060608  |
| 100                                                 | 4     | 100       | 130 (P)         | 140                   | 114.3 x 2.6           | 239559    | 239595    |
|                                                     |       |           | 225 (L)         | 140                   | 114.3 x 2.6           | 20060575  | 20060609  |

| Nominal diameter<br>(port connection)                      |     | Seat size | Actuator size Ø | K <sub>vs</sub> value | Connection<br>MW x TW | Article no. |                 |
|------------------------------------------------------------|-----|-----------|-----------------|-----------------------|-----------------------|-------------|-----------------|
|                                                            |     |           |                 |                       |                       | Seat seal   |                 |
| DN                                                         | NPS |           | [mm]            | [m³/h]                |                       | PTFE        | Stainless steel |
| DIN 11850 - 2 / DIN 11866 series A / DIN EN 10357 series A |     |           |                 |                       |                       |             |                 |
| 10                                                         | ⅜   | 3         | 70 (M)          | 0.1                   | 13.0 × 1.5            | —           | o. r.           |
|                                                            |     | 3         | 70 (M)          | 0.2                   | 13.0 × 1.5            | —           | o. r.           |
|                                                            |     | 4         | 70 (M)          | 0.5                   | 13.0 × 1.5            | —           | o. r.           |
|                                                            |     | 6         | 70 (M)          | 1.25                  | 13.0 × 1.5            | 260632 ㉔    | 357231 ㉔        |
|                                                            |     | 8         | 70 (M)          | 2                     | 13.0 × 1.5            | 300236 ㉔    | 284179 ㉔        |
|                                                            |     | 10        | 70 (M)          | 2.7                   | 13.0 × 1.5            | 257412 ㉔    | 208553 ㉔        |
| 15                                                         | ½   | 3         | 70 (M)          | 0.1                   | 19.0 × 1.5            | —           | o. r.           |
|                                                            |     | 3         | 70 (M)          | 0.2                   | 19.0 × 1.5            | —           | o. r.           |
|                                                            |     | 4         | 70 (M)          | 0.5                   | 19.0 × 1.5            | —           | o. r.           |
|                                                            |     | 6         | 70 (M)          | 1.25                  | 19.0 × 1.5            | 248881 ㉔    | 367704 ㉔        |
|                                                            |     | 8         | 70 (M)          | 2.1                   | 19.0 × 1.5            | 215250 ㉔    | 215911 ㉔        |
|                                                            |     | 10        | 70 (M)          | 3.1                   | 19.0 × 1.5            | 215251 ㉔    | 215913 ㉔        |
| 20                                                         | ¾   | 15        | 70 (M)          | 4.3                   | 19.0 × 1.5            | 215253 ㉔    | 209173 ㉔        |
|                                                            |     | 20        | 70 (M)          | 5.2                   | 23.0 × 1.5            | 214113 ㉔    | 208555 ㉔        |
| 25                                                         | 1   | 20        | 70 (M)          | 7.1                   | 23.0 × 1.5            | 211937 ㉔    | 211953 ㉔        |
|                                                            |     | 25        | 70 (M)          | 7.2                   | 29.0 × 1.5            | 214116 ㉔    | 214154 ㉔        |
| 32                                                         | 1¼  | 25        | 70 (M)          | 12                    | 29.0 × 1.5            | 209384 ㉔    | 209089 ㉔        |
|                                                            |     | 25        | 90 (N)          | 8.9                   | 35.0 × 1.5            | 214119 ㉔    | 214156 ㉔        |
|                                                            |     | 32        | 90 (N)          | 13.4                  | 35.0 × 1.5            | 211965 ㉔    | 209181 ㉔        |
|                                                            |     | 32        | 90 (N)          | 14.4                  | 41.0 × 1.5            | 214121 ㉔    | 213487 ㉔        |
| 40                                                         | 1½  | 40        | 130 (P)         | 20.2                  | 41.0 × 1.5            | 222711 ㉔    | 222732 ㉔        |
|                                                            |     |           | 40              | 90 (N)                | 17.5                  | 41.0 × 1.5  | 211967 ㉔        |
|                                                            |     | 40        | 130 (P)         | 23.8                  | 41.0 × 1.5            | 222713 ㉔    | 222734 ㉔        |
|                                                            |     |           | 40              | 90 (N)                | 18                    | 53.0 × 1.5  | 214123 ㉔        |
| 50                                                         | 2   | 50        | 130 (P)         | 24.6                  | 53.0 × 1.5            | 222714 ㉔    | 222735 ㉔        |
|                                                            |     |           | 50              | 90 (N)                | 28                    | 53.0 × 1.5  | 211968 ㉔        |
|                                                            |     | 50        | 130 (P)         | 37                    | 53.0 × 1.5            | 214125 ㉔    | 214159 ㉔        |
|                                                            |     |           | 65              | 130 (P)               | 65                    | 70.0 × 2.0  | 219625 ㉔        |
| 65                                                         | 2½  | 65        | 225 (L)         | 62                    | 70.0 × 2.0            | 20060577 ㉔  | 20060610 ㉔      |
|                                                            |     |           | 80              | 130 (P)               | 100                   | 85.0 × 2.0  | 239544 ㉔        |
| 80                                                         | 3   | 80        | 225 (L)         | 100                   | 85.0 × 2.0            | 20060578 ㉔  | 20060612 ㉔      |
|                                                            |     |           | 100             | 130 (P)               | 140                   | 104.0 × 2.0 | 239560 ㉔        |
| 100                                                        | 4   | 100       | 225 (L)         | 140                   | 104.0 × 2.0           | 20060580 ㉔  | 20060613 ㉔      |

o. r. = on request

| Nominal diameter<br>(port connection) | Seat size | Actuator size<br>Ø | K <sub>vs</sub> value | Connection Ø<br>DS x WS | Operating<br>pressure       | Article no.                                                                                    |                                                                                                |
|---------------------------------------|-----------|--------------------|-----------------------|-------------------------|-----------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
|                                       |           |                    |                       |                         |                             | Seat seal                                                                                      |                                                                                                |
| NPS                                   |           | [mm]               | [m³/h]                |                         |                             | PTFE (VI)                                                                                      | Stainless steel (IV)                                                                           |
| <b>ASME BPE / DIN 11866 series C</b>  |           |                    |                       |                         |                             |                                                                                                |                                                                                                |
| 1/2                                   | 3         | 70 (M)             | 0.1                   | 12.7 × 1.65             | 25 (IV)                     | –                                                                                              | o. r.                                                                                          |
|                                       | 3         | 70 (M)             | 0.2                   | 12.7 × 1.65             | –                           | –                                                                                              | o. r.                                                                                          |
|                                       | 4         | 70 (M)             | 0.5                   | 12.7 × 1.65             | 25 (IV)                     | –                                                                                              | o. r.                                                                                          |
|                                       | 6         | 70 (M)             | 1.25                  | 12.7 × 1.65             | 25 (IV)                     | 226651      | 20001538    |
|                                       | 8         | 70 (M)             | 2                     | 12.7 × 1.65             | 25 (IV)                     | 379940      | 216879      |
|                                       | 10        | 70 (M)             | 2.7                   | 12.7 × 1.65             | 25 (IV)                     | 225463      | 313806      |
| 3/4                                   | 10        | 70 (M)             | 3.1                   | 19.05 × 1.65            | 25 (IV)                     | 241143      | o. r.                                                                                          |
|                                       | 15        | 70 (M)             | 4.3                   | 19.05 × 1.65            | 25 (IV)                     | 335739      | 335741      |
| 1                                     | 10        | 70 (M)             | 3.2                   | 25.4 × 1.65             | 25 (IV)                     | 241633      | 242576      |
|                                       | 15        | 70 (M)             | 5.2                   | 25.4 × 1.65             | 25 (IV)                     | 226329      | 242579      |
|                                       | 20        | 70 (M)             | 7.1                   | 25.4 × 1.65             | 16 (IV)                     | 230405      | 216902      |
| 1 1/2                                 | 32        | 90 (N)             | 13.4                  | 38.1 × 1.65             | 16 (IV)                     | 230409      | 242587      |
|                                       |           | 130 (P)            | 17.8                  | 38.1 × 1.65             | 25 (IV)                     | 242557      | 242589      |
| 2                                     | 40        | 90 (N)             | 17.5                  | 50.8 × 1.65             | 12 (IV)                     | 211655      | 242592      |
|                                       |           | 130 (P)            | 23.8                  | 50.8 × 1.65             | 25 (IV)                     | 242561      | 242593      |
| 2 1/2                                 | 50        | 130 (P)            | 37                    | 63.5 × 1.65             | 25 (20 <sup>1)</sup> ) (IV) | 335735      | 335737      |
| 3                                     | 65        | 130 (P)            | 65                    | 76.2 × 1.65             | 16 (15 <sup>1)</sup> ) (IV) | 268682      | 350667      |
|                                       |           | 225 (L)            | 62                    | 76.2 × 1.65             | –                           | 20060581    | 20060615    |
| 4                                     | 80        | 130 (P)            | 110                   | 101.6 × 2.11            | 10 (IV)                     | 298386     | o. r.                                                                                          |
|                                       |           | 225 (L)            | 115                   | 101.6 × 2.11            | –                           | 20060582  | 20060616  |
|                                       | 100       | 130 (P)            | 140                   | 101.6 × 2.11            | 6 (IV)                      | 275103    | 289251    |
|                                       |           | 225 (L)            | 140                   | 101.6 × 2.11            | –                           | 20060583  | 20060617  |

o. r. = on request

1.) According to the Pressure Equipment Directive 97/23/EC for compressible fluids of Group 1 (hazardous gases and vapours according to Article 3 No. 1.3 letter a first dash)

## Further variants on request

**Approval**

FDA, ATEX, (EC Gas Appliance Directive 2009/142/EC)

**Control function/Circuit function**

B (normally open: NO)

**Process connection**

Further valve body connections

## 10.7. Ordering chart clamp connection

Valves with flow direction below seat

| Nominal diameter<br>(port connection) |     | Seat size | Actuator size Ø | K <sub>vs</sub> value | Connection<br>MC x TC, CC | Article no.                                                                                |                                                                                            |
|---------------------------------------|-----|-----------|-----------------|-----------------------|---------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| DN                                    | NPS |           |                 |                       |                           | Seat seal                                                                                  |                                                                                            |
|                                       |     |           | [mm]            | [m³/h]                |                           | PTFE                                                                                       | Stainless steel                                                                            |
| <b>DIN 32676 series A</b>             |     |           |                 |                       |                           |                                                                                            |                                                                                            |
| 15                                    | ½   | 15        | 70 (M)          | 4.3                   | 19 × 1.5. 34              | 222593  | 282208  |
| 20                                    | ¾   | 20        | 70 (M)          | 7.1                   | 23 × 1.5. 34              | 225647  | 282209  |
| 25                                    | 1   | 25        | 90 (N)          | 12.0                  | 29 × 1.5. 50.5            | 222594  | 282210  |
| 32                                    | 1¼  | 32        | 90 (N)          | 13.4                  | 35 × 1.5. 50.5            | 240415  | 282211  |
| 40                                    | 1½  | 40        | 130 (P)         | 23.8                  | 41 × 1.5. 50.5            | 240351  | 282212  |
| 50                                    | 2   | 50        | 130 (P)         | 37.0                  | 53 × 1.5. 64              | 282258  | 282259  |
| <b>DIN 32676 series B</b>             |     |           |                 |                       |                           |                                                                                            |                                                                                            |
| 15                                    | ½   | 15        | 70 (M)          | 4.3                   | 21.3 × 1.6. 50.5          | 273974  | 282213  |
| 20                                    | ¾   | 20        | 70 (M)          | 7.1                   | 26.9 × 1.6. 50.5          | 209438  | 282214  |
| 25                                    | 1   | 25        | 90 (N)          | 12.0                  | 33.7 × 2.0. 50.5          | 241115  | 282215  |
| 40                                    | 1½  | 40        | 130 (P)         | 23.8                  | 48.3 × 2.0. 64.0          | 209880  | 284181  |
| 50                                    | 2   | 50        | 130 (P)         | 37.0                  | 60.3 × 2.0. 77.5          | 282261  | 282263  |

### Further variants on request

|                                                                                    |                                                                        |                                                                                    |                                                                   |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------|
|  | <b>Approval</b><br>FDA, ATEX, (EC Gas Appliance Directive 2009/142/EC) |  | <b>Control function/Circuit function</b><br>B (normally open: NO) |
|                                                                                    | <b>Process connection</b><br>Further valve body connections            |                                                                                    |                                                                   |