







# Electromotive 2-way globe control valve

- Hydrogen variant available
- Highly precise, dynamic closed-loop control
- Weather, impact and vibration resistant design
- Several $K_{VS}$ values per port size due to removable valve seats
- Position controller and process controller available

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

## Can be combined with



**Type ME61**
EDIP process display



**Type ME63**
Industrial Ethernet gateway, IP65/IP67/IP69k



**Type ME43**
Fieldbus gateway



**Type 8008**
Flow meter for gases with calorimetric measuring



**Type 8098**
FLOWave SAW flowmeter

## Type description

The innovative process controller Bürkert valve Type 3361 is the solution when it comes to control tasks under demanding operating conditions. The electromotive actuator with ball screw positions the control cone with highest precision. A unique feature is its high positioning speed up to 6 mm/s that reacts almost delay-free to process signals and that can be varied according to customer demands. Pressure variations or shocks in the medium are not transferred to the valve position. Each flow optimised valve body can be equipped with up to 5 different valve seats for a precise adaptation according to customer needs. If necessary, the safety position can be approached by an optional energy storage in case of power failure. Actuator and valve are adapted perfectly to each other with closed design and robust surface. This ensures the hygienic requirements of fast and residue-free cleaning. Harsh environmental conditions are no problem for the Type 3361 because of the degree of protection IP65/IP67 and its high impact and vibration resistance. Unrivalled service life and tightness is guaranteed by the proven self-adjusting packing gland with exchangeable V-seals. The fieldbus-compatible Type 3361 provides many helpful functions for process monitoring, valve diagnostics and predictive maintenance and thus offers the decisive advantage of a modern process automation.

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## 1. General technical data

**Note:**

- AG2: actuator size 2 with a nominal force of 1300 or 2500 N for seat size 3...50
- AG3: actuator size 3 with a nominal force of 7700 or 10000 N for seat size 40...100

| | |
|---|---|
| **Product properties** | |
| Dimensions | Further information can be found in chapter "4. Dimensions" on page 10. |
| Material | Further information can be found in chapter "3. Materials" on page 8. |
| Design | Globe control valve |
| Nominal diameter (port connection) | DN 10...DN 100, NPS ⅜...4 |
| Safety setting in case of power failure | With energy storage SAFEPOS energy-pack: open, closed or freely programmable position<br>Without energy storage SAFEPOS energy-pack: blocked in last position |
| Flow direction | Against closing direction (below seat) |
| Controller variant | Positioner or process controller (option) |
| Weight | Depending on actuator variant up to:<br>AG2: 5.5 kg<br>AG3: 16 kg<br>(Total weight including valve body depending on port connection) |
| **Performance data** | |
| Operating pressure | 0...25 bar(g), 40 bar(g) on request (see "6.1. Fluidic data" on page 23)<br>Vacuum variant...- 0.9 bar(g) (optional) |
| Nominal pressure | PN 25/PN 40 (DIN EN 1333), Class 150 (DIN EN 1759) |
| $K_{VS}$ value | 0.1...140 $m^3/h$ (see "6.1. Fluidic data" on page 23) |
| Flow characteristic | Equal percentage, linear (on request) |
| Seat leakage | Class III, IV and VI (DIN EN 60534 - 4) (see "6.1. Fluidic data" on page 23) |
| Closing time [1.] | AG2: 3.3...6.6 s<br>AG3: 8.7...12.0 s<br>(Depending on travel speed, stroke and operating conditions) |
| Theoretical rangeability | Up to 50:1 (see "6.1. Fluidic data" on page 23) |
| Travel speed [1.] | 6 mm/s (for AG2 actuator force 1300 N)<br>4 mm/s (for AG2 actuator force 2500 N)<br>3 mm/s (for AG3 actuator force 7700 N and 10000 N)<br>(Depending on operating conditions) |
| Dead band of the position control | ± 0.1 % |
| **Electrical data** | |
| Operating voltage | 24 V DC ± 10 % (maximum residual ripple 10 %) |
| Operating current [1.] | AG2: maximum 3 A (at maximum load and including 1 A charging current of the optional energy storage SAFEPOS energy-pack). At minimum operating temperature additionally 2 A<br><br>AG3: maximum 5 A (at maximum load and including charging current of the optional energy storage SAFEPOS energy-pack). At minimum operating temperature additionally 6 A |
| Protection class (DIN EN 61140) | III |
| Duty cycle | 100 % |
| Standby consumption [1.] | 2...5 W |
| **Communication and control** | |
| Standard signal (analogue) | Set-point value: 0/4...20 mA, 0...5/10 V and binary input<br>(further inputs and outputs optional, see "6.3. Electrical control and interfaces" on page 29) |
| Fieldbus (digital) | Bürkert system bus (büS)<br>CANopen (optional)<br>EtherNet/IP, PROFINET, Modbus TCP, EtherCAT (optional via integrated gateway) |
| **Medium data** | |
| Operating medium | Steam, neutral gases, water, alcohols, oils, fuels, hydraulic fluids, salt solutions, organic solvents, oxygen (optional), hydrogen (optional), lyes (optional) |
| Medium temperature | - 40 °C...+ 230 °C (see "6.2. Operating limits" on page 26) |
| Viscosity | Up to 600 $mm^2/s$ |

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| | |
|---|---|
| **Product connections** | |
| **Port connection** [2.] | |
| 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 |
| Threaded connection | G (DIN ISO 228 - 1)<br>NPT (ASME B1.20.1)<br>RC (ISO 7 - 1) |
| Flange connection | DIN EN 1092 - 1<br>ANSI B 16.5<br>JIS 10K |
| **Electrical connection** | |
| Actuator | Terminal strip with cable bushing, 3 x M20 (only AG2) or 2 x M12 circular plugs, 5-pin and 8-pin, 1 x M12 circular socket, 5-pin (only for process controller function) |
| Fieldbus gateway | 2 x M12 circular sockets, 4-pin (only with Industrial Ethernet)<br>Further information can be found in chapter "5. Product connections" on page 18. |
| **Approvals and conformities** | |
| Further information can be found in chapter "2. Approvals and conformities" on page 6. | |
| Detergent resistance | According to Ecolab test method: F&E/P3-E No. 40 - 1 |
| **Environment and installation** | |
| Environmental factors | Protect the device from electromagnetic interference, UV radiation and, when used outdoors, from weather conditions. |
| Ambient temperature | - 25 °C...+ 65 °C (only without additional modules)<br>(Derating see "Operating limits for ambient and medium temperature" on page 27) |
| Degree of protection | IP65/IP67 (DIN EN 60529), NEMA 4X |
| Installation position | Any, preferably with actuator upright |

1.) All values relate to a supply voltage of 24 V at + 25 °C.
2.) Others are available on request.

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# 2. Approvals and conformities

## 2.1. General notes

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

## 2.2. Conformity

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

## 2.3. Standards

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

## 2.4. Explosion protection

| Approval | Description |
|---|---|
| | **Optional: Explosion protection (valid for the variable code PX48)**<br>As a category 3 device suitable for zone 2/22.<br><br>**ATEX:**<br>BVS 17 ATEX E 117 X<br>II 3G Ex ec IIC T4 Gc<br>II 3D Ex tc IIIC T135 °C Dc<br><br>**IECEx:**<br>IECEx BVS 17.0100X<br>Ex ec IIC T4 Gc<br>Ex tc IIIC T135 °C Dc |

## 2.5. North America (USA/Canada)

| Approval | Description |
|---|---|
| | **Optional: Actuators UL Listed for the USA and Canada (valid for the variable code PU11)**<br>The actuators are UL Listed for the USA and Canada according to:<br>• UL 61010-1 (ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE – Part 1: General Requirements)<br>• CAN/CSA-C22.2 No. 61010-1 |

## 2.6. Drinking water

| Conformity | Description |
|---|---|
| $H_2O$ | **Optional: Suitable for use in drinking water applications (valid for the variable code PF39)**<br>The materials comply with the assessment principles (UBA) for materials in contact with drinking water (TrinkwasserV).<br><br>PF39: Suitable for products with a maximum temperature of + 85 °C (hot water) |

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## 2.7. Foods and beverages/Hygiene

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

## 2.8. Others

### Oxygen

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

### Hydrogen

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

### TA Luft

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

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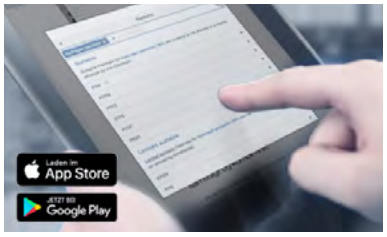
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# 3. Materials

## 3.1. Bürkert resistApp



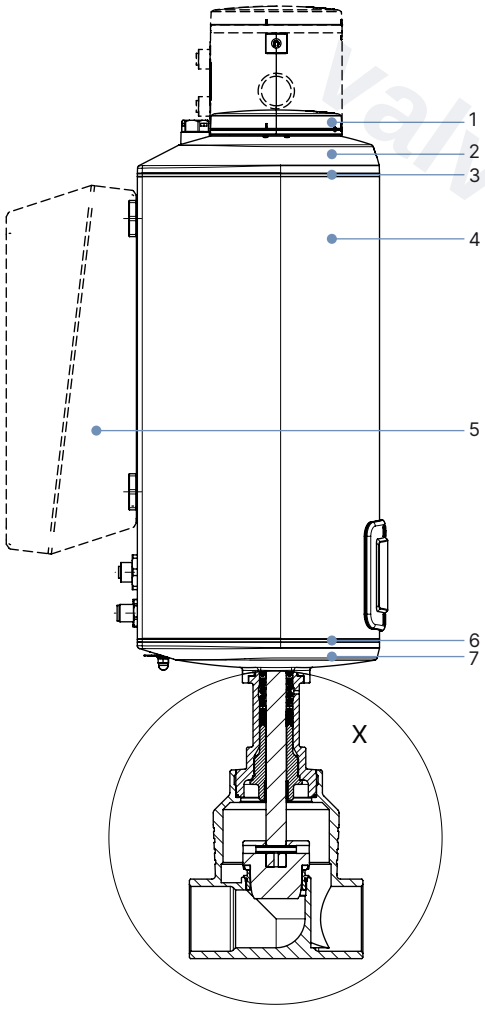

**Bürkert resistApp – Chemical resistance chart**

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

Start chemical resistance check

## 3.2. Material specifications

**Note:**
The Type 3361 globe control valve is supplied with different port connections (flange, thread, weld end and clamp connections). These connections are not shown. They correspond to the valve body material.




**AG2**

| No. | Component | Material |
|---|---|---|
| 1 | Display housing/blind cover/ gateway housing | PPS (standard), stainless steel 1.4301 (for ATEX/IECEx) |
| 2 | Actuator cover | PPS |
| 3 | Seal | EPDM |
| 4 | Actuator housing | Powder-coated aluminium |
| 6 | Seal | EPDM |
| 7 | Actuator base | PPS |

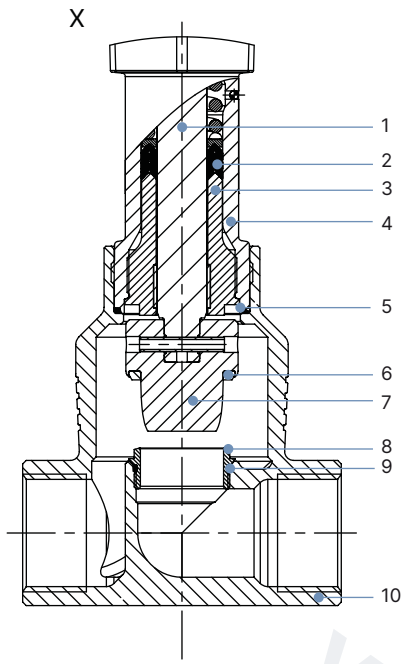
**AG3**

| No. | Component | Material |
|---|---|---|
| 1 | Display housing/blind cover/ gateway housing | PPS (standard), stainless steel 1.4301 (for ATEX/IECEx) |
| 2 | Actuator cover | PC |
| 3 | Seal | EPDM |
| 4 | Actuator housing | Powder-coated aluminium |
| 5 | Energy storage SAFEPOS energy-pack housing | PC |
| 6 | Seal | EPDM |
| 7 | Actuator base | Stainless steel 1.4308 |

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| No. | Component | Material |
|---|---|---|
| **1** | Spindle | Stainless steel 1.4401 (316)/1.4404 (316L) |
| **2** | Spindle seal | PTFE V-seals (filled) with spring compensation |
| **3** | Spindle guide | Stainless steel 1.4404 (316L) |
| **4** | Packing gland tube | Stainless steel 1.4401 (316) |
| **5** | Seal valve body | Graphite or PTFE |
| **6** | Seat seal | Stainless steel 1.4571 (optionally hardened)<br>PTFE or PEEK seal washer |
| **7** | Control cone | Stainless steel 1.4571 (optionally hardened) |
| **8** | Valve seat | Stainless steel 1.4571 (optionally hardened) |
| **9** | O-ring valve seat | EPDM or PTFE |
| **10** | Valve body | Stainless steel CF3M |

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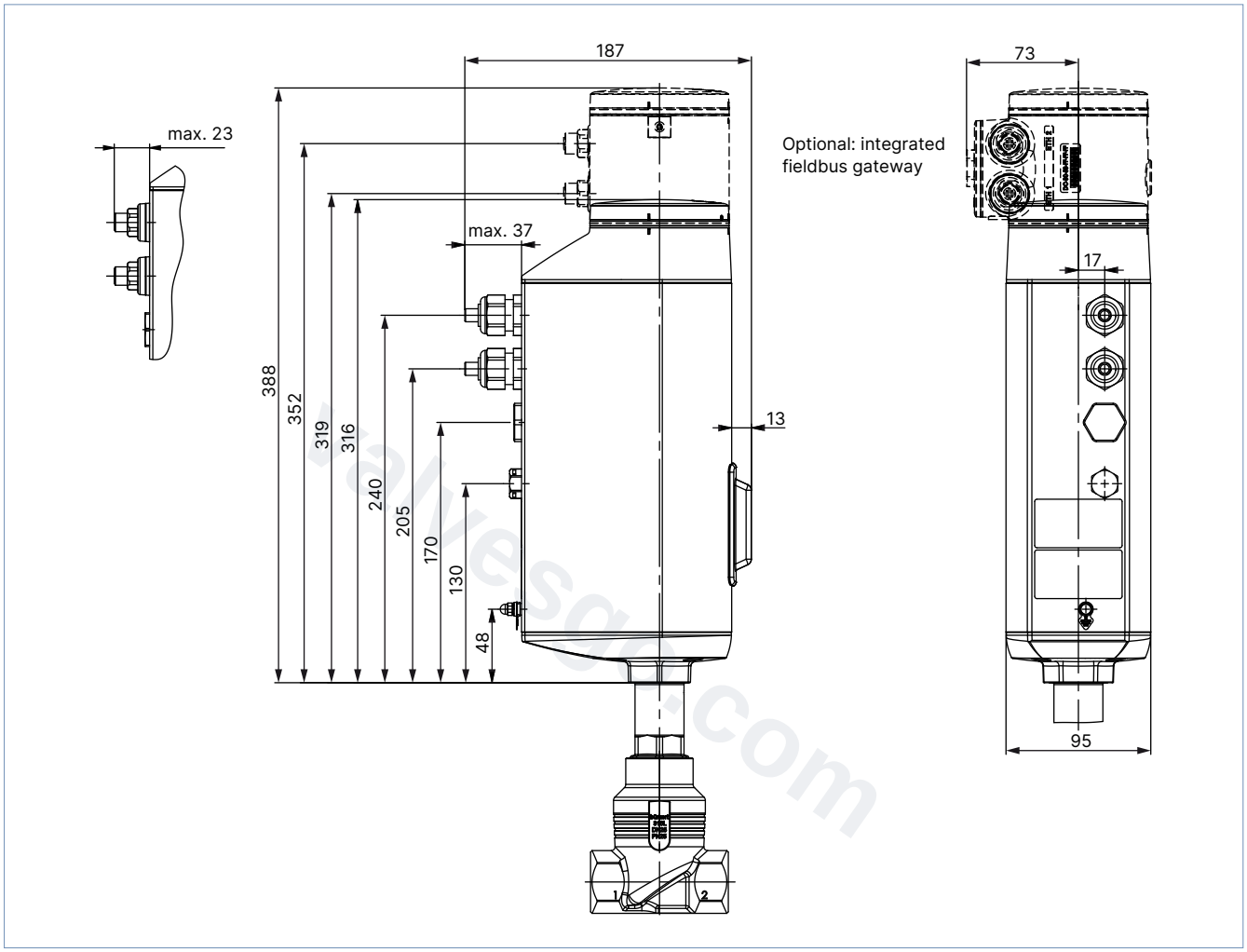
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# 4. Dimensions

## 4.1. Actuator

**AG2**

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

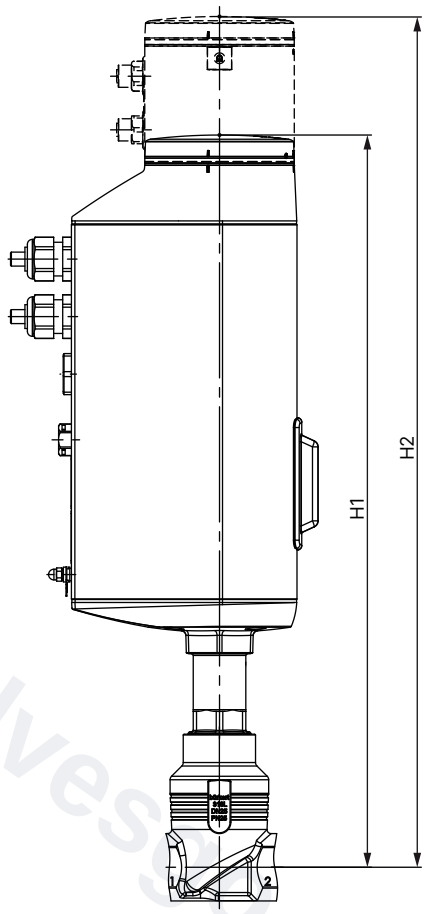



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| Nominal diameter (port connection) | | Height [1.] | |
|---|---|---|---|
| DN | NPS | H1<br>Standard variant | H2 [2.]<br>Fieldbus variant (KOMM ≠ G, N, L) |
| 10 | ⅜ | 417 | 489 |
| 15 | ½ | 417 | 489 |
| 20 | ¾ | 423 | 495 |
| 25 | 1 | 446 | 518 |
| 32 | 1¼ | 474 | 546 |
| 40 | 1½ | 479 | 551 |
| 50 | 2 | 485 | 557 |

1.) Dimensions without sealing function: the actuator is raised by approx. 2 mm in the closed position.
2.) Optional: integrated fieldbus gateway

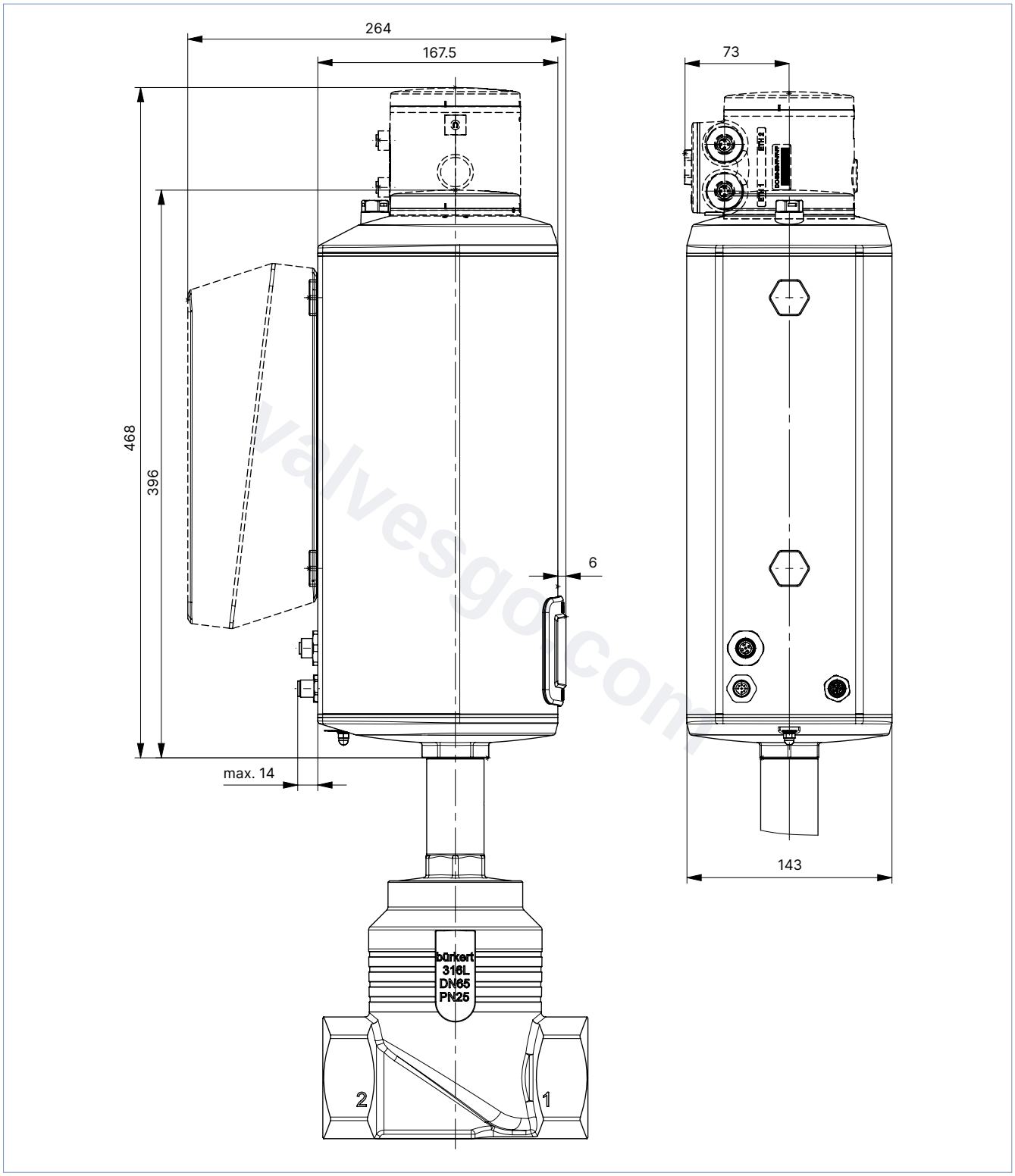
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### AG3

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



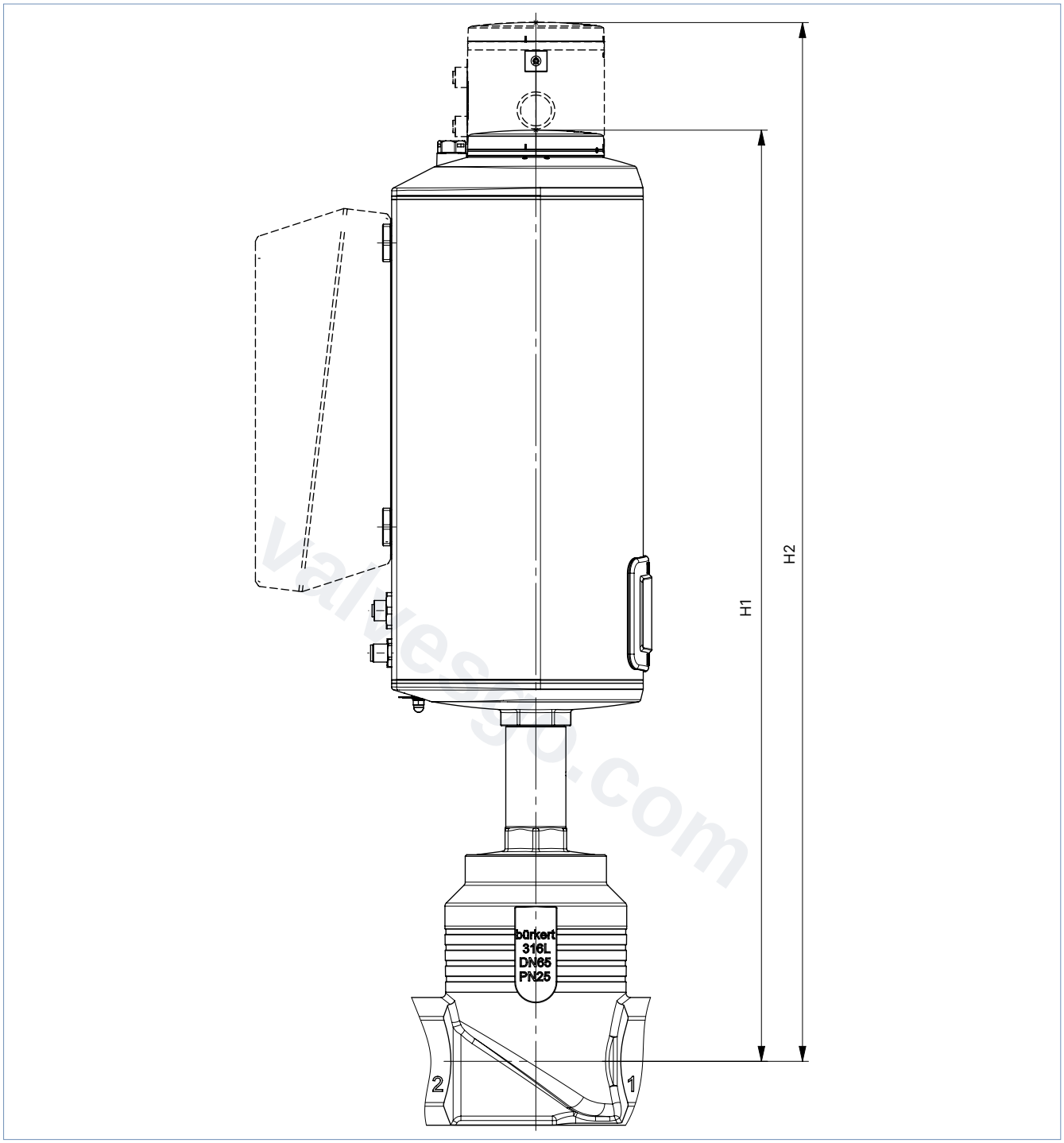

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| Nominal diameter (port connection) | | Height [1.] | |
|---|---|---|---|
| DN | NPS | H1<br>Standard variant | H2 [2.]<br>Fieldbus variant (KOMM ≠ G, N, L) |
| 40 | 1½ | 560 | 632 |
| 50 | 2 | 566 | 638 |
| 65 | 2½ | 620 | 692 |
| 80 | 3 | 628 | 700 |
| 100 | 4 | 638 | 710 |

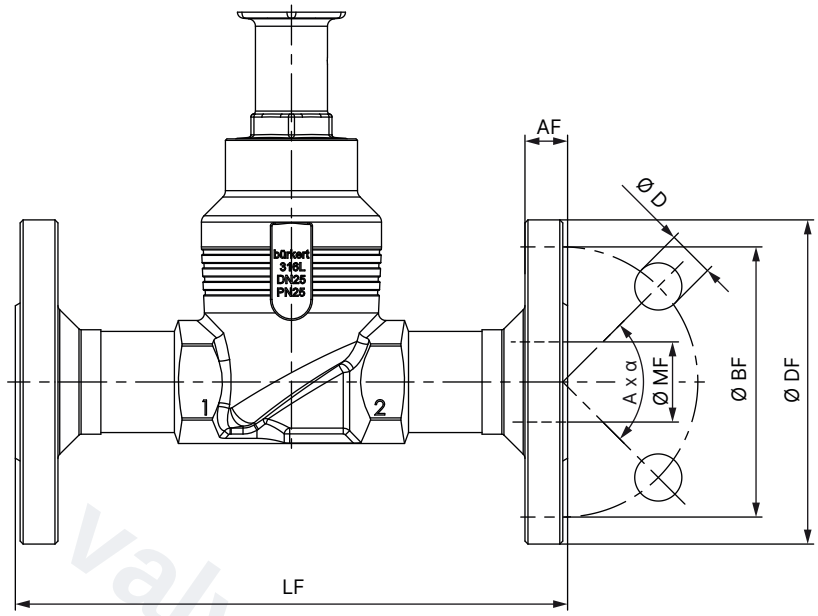
1.) Dimensions without sealing function: the actuator is raised by approx. 2 mm in the closed position.
2.) Optional: integrated fieldbus gateway



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## 4.2. Body with flange connection

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




| Nominal diameter (port connection) | 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 (port connection) | 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 |

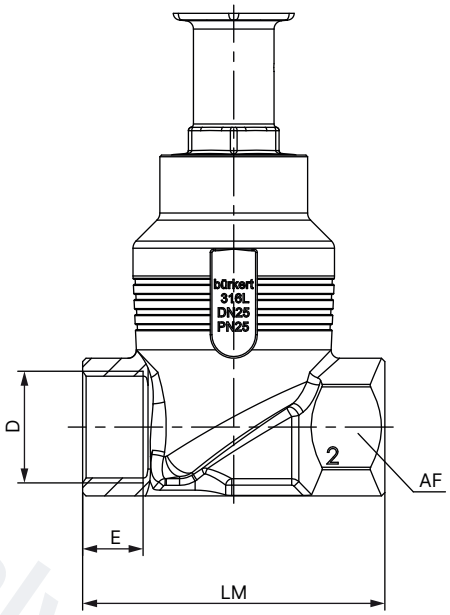
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## 4.3. Body with threaded connection

**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)<br>DIN EN 10226 - 2 | | | | | |
|---|---|---|---|---|---|---|
| | D | E | | | LM | AF |
| DN | NPS | G | NPT | RC | | |
| 10 | ⅜ | 12 | 10.3 | 10.1 | 65 | 27 |
| 15 | ½ | 14 | 13.7 | 13.2 | 65 | 27 |
| 20 | ¾ | 16 | 14 | 14.5 | 75 | 34 |
| 25 | 1 | 18 | 16.8 | 16.8 | 90 | 41 |
| 32 | 1¼ | 20 | 17.3 | 19.1 | 110 | 50 |
| 40 | 1½ | 22 | 17.3 | 19.1 | 120 | 55 |
| 50 | 2 | 24 | 17.6 | 23.4 | 150 | 70 |
| 65 | 2½ | 26 | 23.7 | 26.7 | 185 | 85 |
| 80 | 3 | 28 | 30.5 | 29.8 | 205 | 100 |
| 100 | 4 | 32 | 33 | 35.8 | 240 | 125 |

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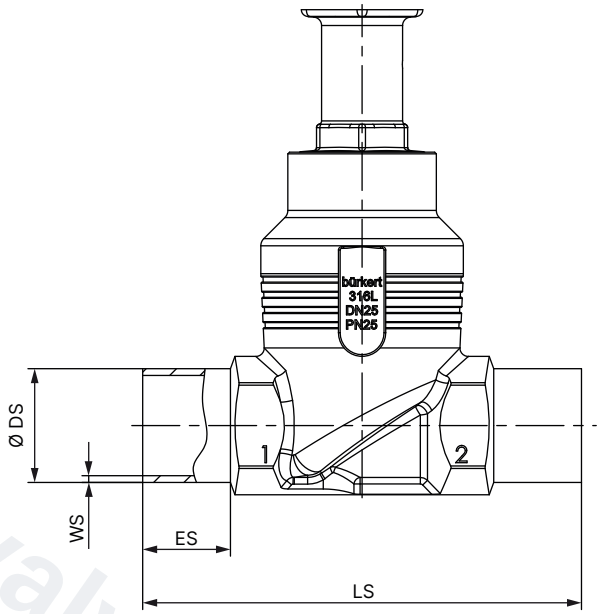
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## 4.4. Body with welded connection

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




| Nominal diameter (port connection) | ES | LS | DIN EN ISO 1127 / ISO 4200 / DIN 11866 series B | | DIN 11850 - 2 / DIN 11866 series A / DIN EN 10357 series A | |
|---|---|---|---|---|---|---|
| DN | | | 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) | ES | LS | ASME BPE / DIN 11866 series C | |
|---|---|---|---|---|
| NPS | | | 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 |

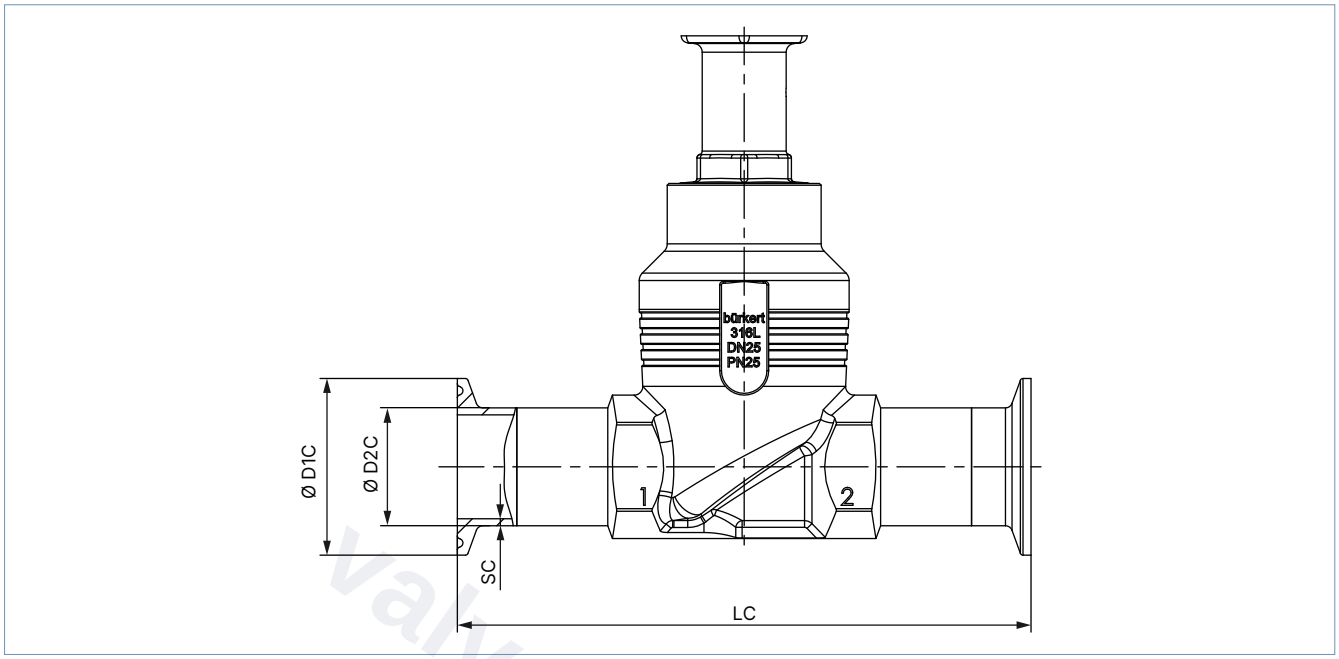
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## 4.5. Body with clamp connection

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




| Nominal diameter (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 |
| 32 | 179 | 35 | 50.5 | 1.5 | – | – | – | – |
| 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 |
| 65 | 266 | 70 | 91 | 2.0 | 266 | 76.1 | 91 | 2.0 |
| 80 | – | – | – | – | 286 | 88.9 | 106 | 2.3 |
| 100 | – | – | – | – | 316 | 114.3 | 130 | 2.3 |

| Nominal diameter (port connection) | LC | Clamp: ASME BPE / DIN 32676 series C<br>Pipe: ASME BPE / DIN 11866 series C | | |
|---|---|---|---|---|
| **NPS** | | **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 |

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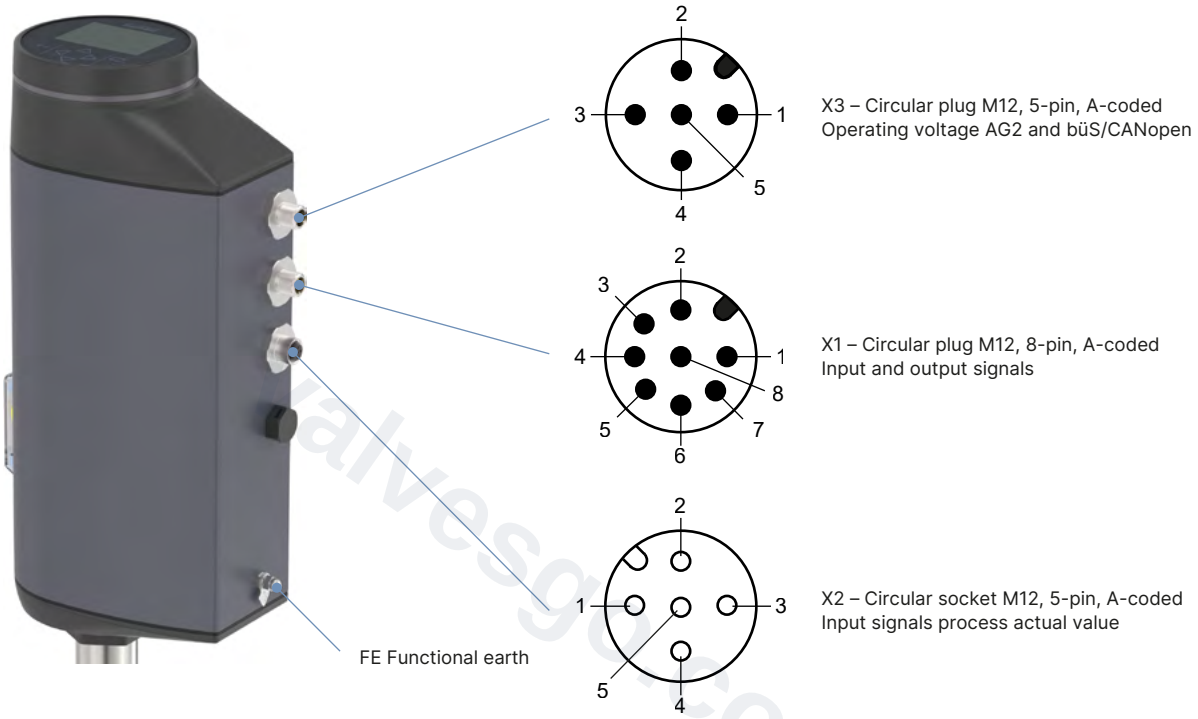
# 5. Product connections

## 5.1. Electrical connection

**Note:**
For the terminal assignment of the connection variant “cable gland with connection terminals”, see **operating instructions Type 3361** ▶.

**Description of circular plug-in connectors**

**AG2 variant**

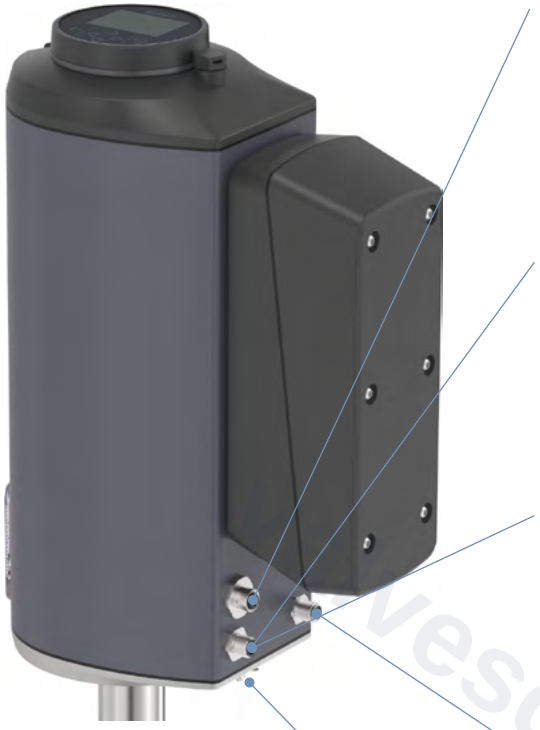


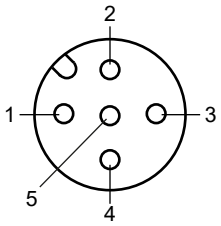

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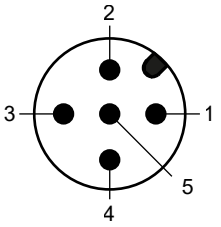

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### AG3 variant

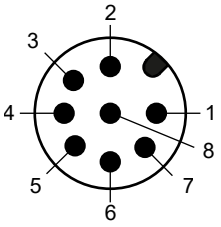


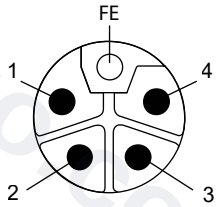

X2 – Circular socket M12, 5-pin, A-coded
Input signals process actual value




X3 – Circular plug M12, 5-pin, A-coded
büS/CANopen



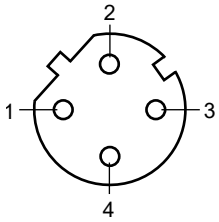

X1 – Circular plug M12, 8-pin, A-coded
Input and output signals




X4 – Circular plug M12, 5-pin, L-coded
Actuator supply AG3

### Fieldbus gateway (optional)






X7 – M12 round socket, 4-pin, D-coded,
fieldbus connection (2-port Ethernet switch)

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**The following circular plug-in connectors are used depending on the device variant:**

| Circular plug-in connector | AG2 | | | AG3 | | |
|---|---|---|---|---|---|---|
| | Electrical variant | | | Electrical variant | | |
| | Analogue (büS service interface) | With fieldbus gateway | büS/CANopen | Analogue (büS service interface) | With fieldbus gateway | büS/CANopen |
| | 0...10 V<br>0...5 V<br>4...20 mA,<br>0...20 mA<br>adjustable | for EtherNet/IP, PROFINET, Modbus TCP, EtherCAT protocols | | 0...10 V<br>0...5 V<br>4...20 mA<br>0...20 mA<br>adjustable | for EtherNet/IP, PROFINET, Modbus TCP, EtherCAT protocols | |
| X1 | X | – | – | X | – | – |
| X2 [1.] | X [1.] | X [1.] | X [1.] | X [1.] | X [1.] | X [1.] |
| X3 | X | X | X | – | X | X |
| X4 | – | – | – | X | X | X |
| X7 | – | X | – | – | X | – |

1.) Optional, only for devices with process controller function
X = available
– = not available

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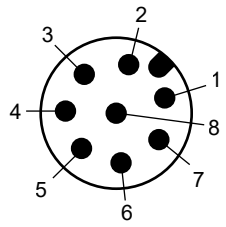
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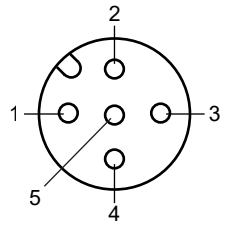
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## Circular plug-in connector with pin assignment

### Input and output signals

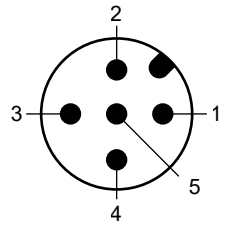
| X1 – Circular plug M12, 8-pin, A-coded | Pin | Assignment |
|---|---|---|
|  | **1** | Digital input + |
| | **2** | GND for digital input and digital outputs |
| | **3** | Digital output 2 + |
| | **4** | Digital output 1 + |
| | **5** | Analogue output - |
| | **6** | Analogue output + |
| | **7** | Set-point value / Analogue input - |
| | **8** | Set-point value / Analogue input + |

### Input signal process actual value (4..20 mA, frequency, PT100) (Only for devices with process controller function)

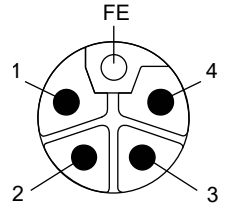
| X2 – Circular socket M12, 5-pin, A-coded | Pin | Assignment for signal type 4..20 mA, sensor supplied externally [1.)] |
|---|---|---|
|  | **1** | Do not connect |
| | **2** | Do not connect |
| | **3** | Do not connect |
| | **4** | Process actual value / 4..20 mA |
| | **5** | Process actual value / 4..20 mA GND |

1.) Further signal types (frequency, PT100) are possible. For further information see **operating instructions Type 3361** ▸.

### Operating voltage AG2 and büS/CANopen

| X3 – Circular plug M12, 5-pin, A-coded | Pin | Assignment |
|---|---|---|
|  | **1** | CAN Shield / shield |
| | **2** | Operating voltage 24 V DC ± 10 % |
| | **3** | GND / CAN_GND |
| | **4** | CAN_H |
| | **5** | CAN_L |

### Operating voltage AG3

| X4 – Circular plug M12, 5-pin, L-coded | Pin | Assignment |
|---|---|---|
|  | **1** | Operating voltage 24 V DC ± 10 % |
| | **2** | Do not connect |
| | **3** | GND |
| | **4** | Do not connect |
| | **FE** | Functional earth, connected to housing |

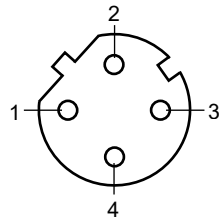
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### Fieldbus connection

| X7 – Circular socket M12, 4-pin, D-coded | Pin | Assignment |
|---|---|---|
|  | **1** | Transmit + |
| | **2** | Receive + |
| | **3** | Transmit - |
| | **4** | Receive - |

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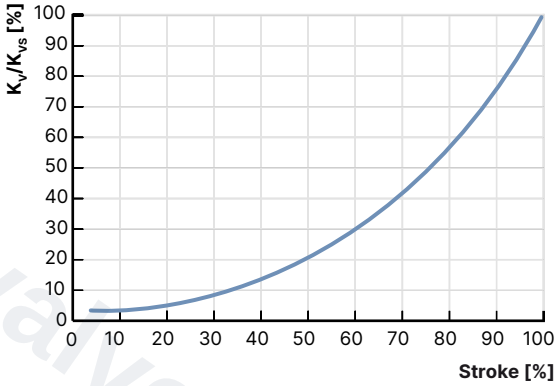
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# 6. Performance specifications

## 6.1. Fluidic data

### Flow characteristics

- Equal-percentage flow characteristic according to DIN EN 60534 - 2 - 4 (linear characteristic curve on request)
- Theoretical rangeability: $K_{VS}/K_{V0}$ (see "Overview of fluidic data for flow below seat (for liquids, steam and gases)" on page 24)
- $K_{VR}$ value at 5 % of the stroke for seat size > 10
  $K_{VR}$ value at 10 % of the stroke for seat size ≤ 10
- $K_{VR}$ value = lowest $K_V$ value at which the angularity can still be observed according to DIN EN 60534 - 2 - 4.
- The globe control valve has different theoretical rangeabilities depending on the seat size
  (see "Overview of fluidic data for flow below seat (for liquids, steam and gases)" on page 24).




Equal percentage flow curve – detailed values see below

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## 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 "6.2. Operating limits" on page 26

| Nominal diameter (port connection) | | Seat size | Actuator force [1] | Max. operating pressure (seat leakage class) | | | Theoretical rangeability | $K_V$ value at stroke | | | | | | | | | | $K_{VS}$ value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Seat seal | | | | 5 % | 10 % | 20 % | 30 % | 40 % | 50 % | 60 % | 70 % | 80 % | 90 % | 100 % |
| | | | | Stainless steel | PTFE | PEEK | | | | | | | | | | | | |
| DN | NPS | | [N] | [bar(g)] | | | | [m³/h] | | | | | | | | | | |
| 10 | ⅜ [2] | 3 | 1300 | 25 (IV) 40 (IV) [3] | – | – | 20:1 | – | 0.005 | 0.009 | 0.013 | 0.019 | 0.026 | 0.034 | 0.044 | 0.060 | 0.077 | 0.1 |
| | | 3 | | | | | 20:1 | – | 0.009 | 0.015 | 0.023 | 0.033 | 0.046 | 0.063 | 0.085 | 0.11 | 0.16 | 0.2 |
| | | 4 | | | | | 30:1 | – | 0.023 | 0.033 | 0.049 | 0.070 | 0.097 | 0.14 | 0.18 | 0.26 | 0.35 | 0.5 |
| | | 6 | | | | 25 (VI) 40 (VI) [3] | 50:1 | – | 0.007 | 0.011 | 0.045 | 0.085 | 0.16 | 0.26 | 0.41 | 0.65 | 1.1 | 1.25 |
| | | 8 | | | | | | – | 0.070 | 0.090 | 0.12 | 0.18 | 0.26 | 0.42 | 0.61 | 0.92 | 1.5 | 2.0 |
| | | 10 | | | | | | – | 0.11 | 0.13 | 0.19 | 0.30 | 0.48 | 0.73 | 1.0 | 1.6 | 2.3 | 2.7 |
| 15 | ½ [2] | 3 | 1300 | 25 (IV) 40 (IV) [3] | – | – | 20:1 | – | 0.005 | 0.009 | 0.013 | 0.019 | 0.026 | 0.034 | 0.044 | 0.060 | 0.077 | 0.1 |
| | | 3 | | | | | 20:1 | – | 0.009 | 0.015 | 0.023 | 0.033 | 0.046 | 0.063 | 0.085 | 0.11 | 0.16 | 0.2 |
| | | 4 | | | | | 30:1 | – | 0.023 | 0.033 | 0.049 | 0.070 | 0.097 | 0.14 | 0.18 | 0.26 | 0.35 | 0.5 |
| | | 6 | | | | 25 (VI) 40 (VI) [3] | 50:1 | – | 0.007 | 0.011 | 0.045 | 0.085 | 0.16 | 0.26 | 0.41 | 0.65 | 1.1 | 1.25 |
| | | 8 | | | | | | – | 0.080 | 0.11 | 0.13 | 0.19 | 0.27 | 0.43 | 0.63 | 0.95 | 1.6 | 2.1 |
| | | 10 | | | | | | – | 0.11 | 0.15 | 0.19 | 0.31 | 0.49 | 0.75 | 1.1 | 1.7 | 2.5 | 3.1 |
| | | 15 | | | | | | 0.14 | 0.17 | 0.22 | 0.35 | 0.52 | 0.80 | 1.2 | 1.8 | 2.7 | 3.7 | 4.3 |
| 20 | ¾ [2] | 10 | 1300 | 25 (IV) 40 (IV) [3] | – | 25 (VI) | | – | 0.12 | 0.16 | 0.20 | 0.33 | 0.52 | 0.77 | 1.2 | 1.8 | 2.6 | 3.2 |
| | | 15 | | | | | | 0.14 | 0.17 | 0.22 | 0.35 | 0.52 | 0.80 | 1.2 | 1.8 | 2.9 | 4.0 | 5.2 |
| | | 20 | | | 25 (VI) 40 (VI) [3] | | | 0.20 | 0.25 | 0.30 | 0.45 | 0.70 | 1.1 | 1.6 | 2.4 | 3.5 | 5.2 | 7.1 |
| 25 | 1 | 3 | 1300 | 25 (IV) 40 (IV) [3] | – | – | 20:1 | – | 0.005 | 0.009 | 0.013 | 0.019 | 0.026 | 0.034 | 0.044 | 0.060 | 0.077 | 0.1 |
| | | 3 | | | | | 20:1 | – | 0.009 | 0.015 | 0.023 | 0.033 | 0.046 | 0.063 | 0.085 | 0.11 | 0.16 | 0.2 |
| | | 4 | | | | | 30:1 | – | 0.023 | 0.033 | 0.049 | 0.070 | 0.097 | 0.14 | 0.18 | 0.26 | 0.35 | 0.5 |
| | | 6 | | | | 25 (VI) | 50:1 | – | 0.007 | 0.011 | 0.045 | 0.085 | 0.16 | 0.26 | 0.41 | 0.65 | 1.1 | 1.25 |
| | | 8 | | | | | | – | 0.080 | 0.11 | 0.13 | 0.19 | 0.27 | 0.43 | 0.63 | 0.95 | 1.6 | 2.1 |
| | | 10 | | | | | | – | 0.12 | 0.16 | 0.20 | 0.33 | 0.52 | 0.77 | 1.2 | 1.8 | 2.6 | 3.2 |
| | | 15 | | | | | | 0.14 | 0.17 | 0.22 | 0.35 | 0.52 | 0.80 | 1.2 | 1.8 | 2.9 | 4.1 | 5.3 |
| | | 20 | | | 25 (VI) 40 (VI) [3] | 20 (VI) | | 0.20 | 0.25 | 0.31 | 0.47 | 0.70 | 1.1 | 1.6 | 2.5 | 3.8 | 5.4 | 7.2 |
| | | 25 | | 25 (IV) | 25 (VI) | 20 (VI) | | 0.35 | 0.38 | 0.65 | 1.0 | 1.5 | 2.2 | 3.4 | 5.1 | 7.0 | 9.4 | 12 |
| 32 | 1¼ [2] | 20 | 1300 | 25 (IV) | 25 (VI) | 25 (VI) | | 0.22 | 0.25 | 0.35 | 0.50 | 0.70 | 1.1 | 1.6 | 2.5 | 3.8 | 5.8 | 8 |
| | | 25 | | | | 20 (VI) | | 0.40 | 0.47 | 0.73 | 1.1 | 1.6 | 2.5 | 3.7 | 5.4 | 7.5 | 10.3 | 13 |
| | | 32 | | 16 (IV) | 16 (VI) | 10 (VI) | | 0.48 | 0.60 | 0.85 | 1.3 | 2.1 | 3.1 | 4.5 | 6.8 | 10.2 | 14.0 | 17.8 |
| | | | 2500 | 25 (IV) | 25 (VI) | 20 (VI) | | | | | | | | | | | | |
| 40 | 1½ [2] | 25 | 1300 | 25 (IV) | 25 (VI) | 20 (VI) | | 0.40 | 0.50 | 0.75 | 1.1 | 1.7 | 2.6 | 3.8 | 5.6 | 8.0 | 10.7 | 13.6 |
| | | 32 | 1300 | 16 (IV) | 16 (VI) | 10 (VI) | | 0.48 | 0.60 | 0.85 | 1.3 | 2.1 | 3.2 | 4.6 | 6.9 | 11.0 | 15.0 | 20 |
| | | | 2500 | 25 (IV) | 25 (VI) | 20 (VI) | | | | | | | | | | | | |
| | | 40 | 1300 | 10 (III) | 10 (VI) | 6 (VI) | | 0.60 | 0.70 | 1.1 | 1.7 | 2.7 | 4.0 | 6.0 | 9.2 | 13.8 | 18.2 | 24 |
| | | | 2500 | 18 (IV) | 18 (VI) | 14 (VI) | | | | | | | | | | | | |
| | | | 7700 | 25 (IV) | – | 25 (VI) | | | | | | | | | | | | |

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| Nominal diameter (port connection) | | Seat size | Actuator force [1] | Max. operating pressure (seat leakage class) | | | Theoretical rangeability | $K_V$ value at stroke | | | | | | | | | | $K_{VS}$ value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Seat seal | | | | | | | | | | | | | | |
| | | | | Stainless steel | PTFE | PEEK | | 5 % | 10 % | 20 % | 30 % | 40 % | 50 % | 60 % | 70 % | 80 % | 90 % | 100 % |
| DN | NPS | | [N] | [bar(g)] | | | | [m³/h] | | | | | | | | | | |
| 50 | 2 [2] | 20 | 1300 | 25 (20 [4]) (IV) | – | – | 50:1 | – | 0.14 | 0.25 | 0.38 | 0.57 | 0.85 | 1.3 | 1.9 | 2.8 | 4.1 | 6.3 |
| | | 32 | 1300 | 16 (IV) | – | – | | – | 0.31 | 0.51 | 0.76 | 1.1 | 1.7 | 2.5 | 3.6 | 5.3 | 7.9 | 12 |
| | | | 2500 | 25 (20 [4]) (IV) | | | | | | | | | | | | | | |
| | | 32 | 1300 | 16 (IV) | 16 (VI) | 10 (VI) | | 0.48 | 0.60 | 0.90 | 1.3 | 2.1 | 3.2 | 4.6 | 6.9 | 11.6 | 16.0 | 21 |
| | | | 2500 | 25 (20 [4]) (IV) | 25 (20 [4]) (VI) | 20 (VI) | | | | | | | | | | | | |
| | | 40 | 1300 | 10 (III) | 10 (VI) | 6 (VI) | | 0.60 | 0.70 | 1.0 | 1.7 | 2.6 | 4.0 | 5.9 | 9.2 | 14.0 | 18.9 | 24.5 |
| | | | 2500 | 18 (IV) | 18 (VI) | 14 (VI) | | | | | | | | | | | | |
| | | | 7700 | 25 (20 [4]) (IV) | – | 25 (20 [4]) (VI) | | | | | | | | | | | | |
| | | 50 | 1300 | 6 (III) | 6 (VI) | – | | 0.90 | 1.1 | 1.9 | 2.9 | 4.5 | 6.8 | 10.5 | 15.5 | 22.0 | 29.5 | 37 |
| | | | 2500 | 10 (III) | 10 (VI) | 8 (VI) | | | | | | | | | | | | |
| | | | 7700 | 25 (20 [4]) (IV) | – | 25 (20 [4]) (VI) | | | | | | | | | | | | |
| 65 | 2½ [2] | 40 | 10000 | 25 (15 [4]) (IV) | – | – | | 0.45 | 0.55 | 0.85 | 1.3 | 2 | 3.1 | 4.6 | 6.8 | 10.7 | 17.2 | 25.5 |
| | | 50 | | | | | | 0.75 | 0.9 | 1.5 | 2.3 | 3.5 | 4.9 | 7.1 | 11.0 | 17.5 | 26.0 | 39.5 |
| | | 65 | | | | 25 (15 [4]) (VI) | | 1.1 | 1.4 | 2.1 | 3.2 | 4.9 | 8.0 | 12.0 | 18.5 | 31.5 | 46.5 | 62 |
| 80 | 3 [2] | 50 | | 25 (12.5 [4]) (IV) | – | – | | 0.85 | 1.0 | 1.5 | 2.3 | 3.5 | 5.0 | 7.1 | 10.5 | 16.0 | 25.0 | 42 |
| | | 65 | | | | 25 (12.5 [4]) (VI) | | 1.4 | 1.7 | 2.5 | 3.8 | 5.7 | 8.2 | 12.2 | 19.5 | 32.5 | 50 | 70 |
| | | 80 | | 21 (12.5 [4]) (IV) | 21 (12.5 [4]) (VI) | 17 (12.5 [4]) (VI) | | 2.1 | 2.6 | 4.2 | 7.0 | 10.5 | 16.0 | 25.0 | 40.0 | 60 | 83 | 100 |
| 100 | 4 | 65 | | 25 (10 [4]) (IV) | – | 25 (10 [4]) (VI) | | 1.4 | 1.7 | 2.6 | 3.8 | 5.7 | 8.3 | 12.6 | 20.0 | 32.0 | 51 | 75 |
| | | 80 | | 21 (10 [4]) (IV) | 21 (10 [4]) (VI) | 17 (10 [4]) (VI) | | 2.1 | 2.6 | 4.3 | 7.0 | 11.0 | 17.0 | 26.5 | 44.0 | 65 | 89 | 115 |
| | | 100 | | 13.5 (10 [4]) (III) | 13.5 (10 [4]) (VI) | 10.5 (10 [4]) (VI) | | 3.2 | 3.9 | 5.7 | 9.0 | 13.5 | 20.5 | 32.0 | 51 | 83 | 118 | 140 |

1.) AG2: actuator size 2 with a nominal force of 1300 or 2500 N
AG3: actuator size 3 with a nominal force of 7700 or 10000 N

2.) Deviation for port connections according to ASME BPE: the nominal diameter (port connection) next in size is used, e.g. NPS 1 instead of NPS ¾.

3.) Only for valve bodies with nominal pressure PN 40 (optional)

4) In accordance with the Pressure Equipment Directive 97/23/EC for compressible fluids of group 1 (dangerous gases and vapours in accordance with Article 3(1.3)(a), first indent)

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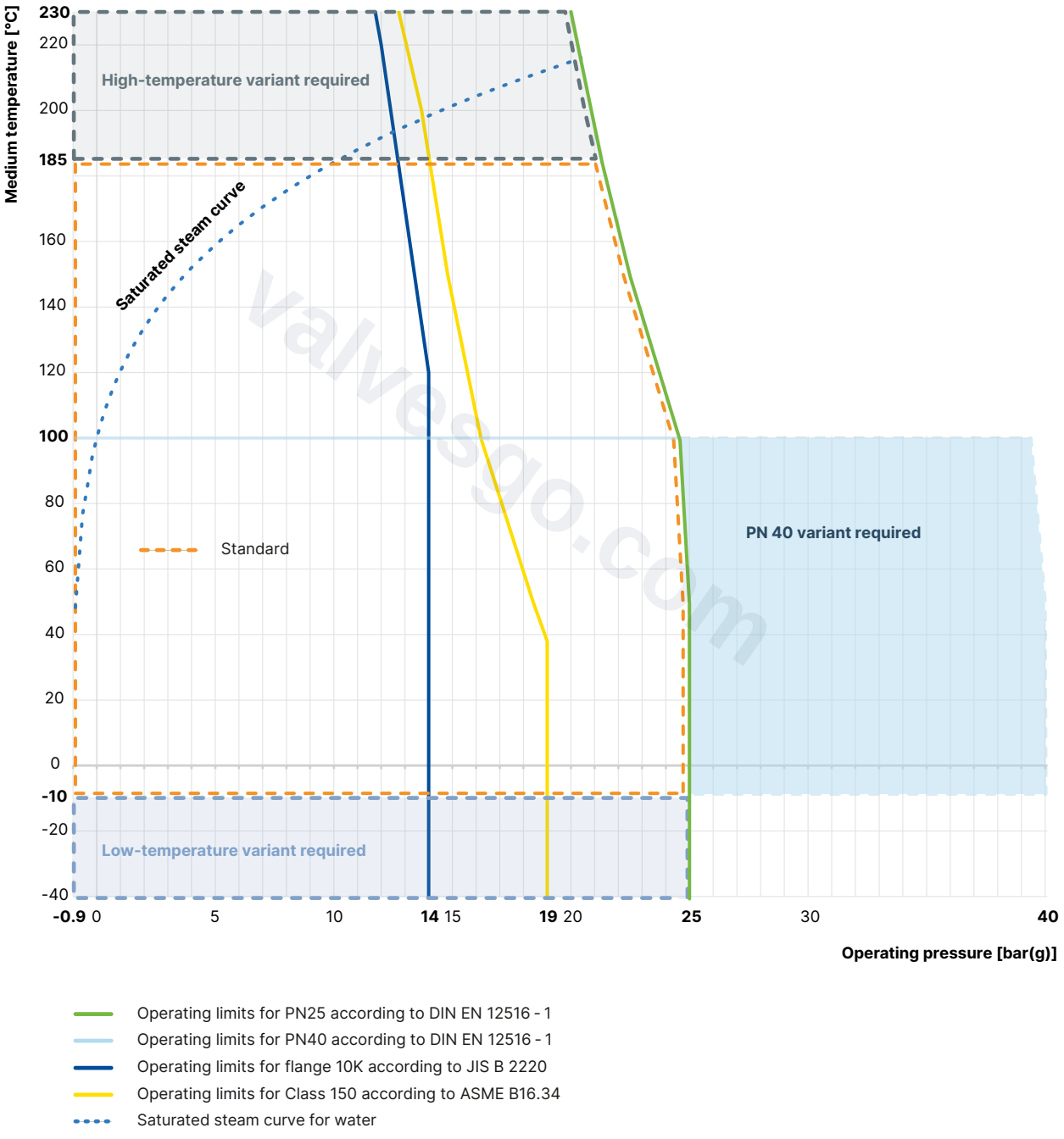
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## 6.2. Operating limits

**Note:**
For device variants with approvals or conformities, deviating technical operating limits (temperature, pressure) may apply. Refer to the corresponding approval-related documentation.

### Operating limits for medium temperature and operating pressure

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



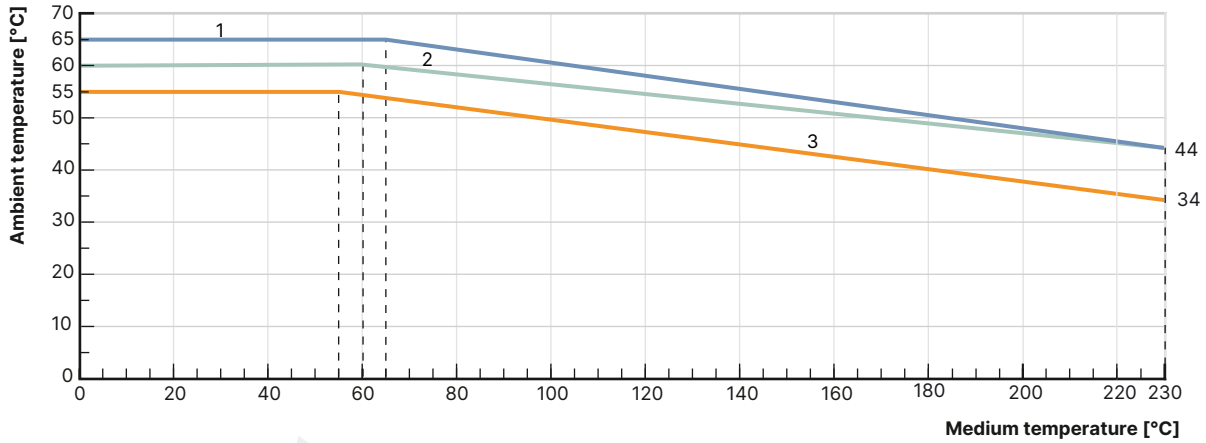

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### Operating limits for ambient and medium temperature

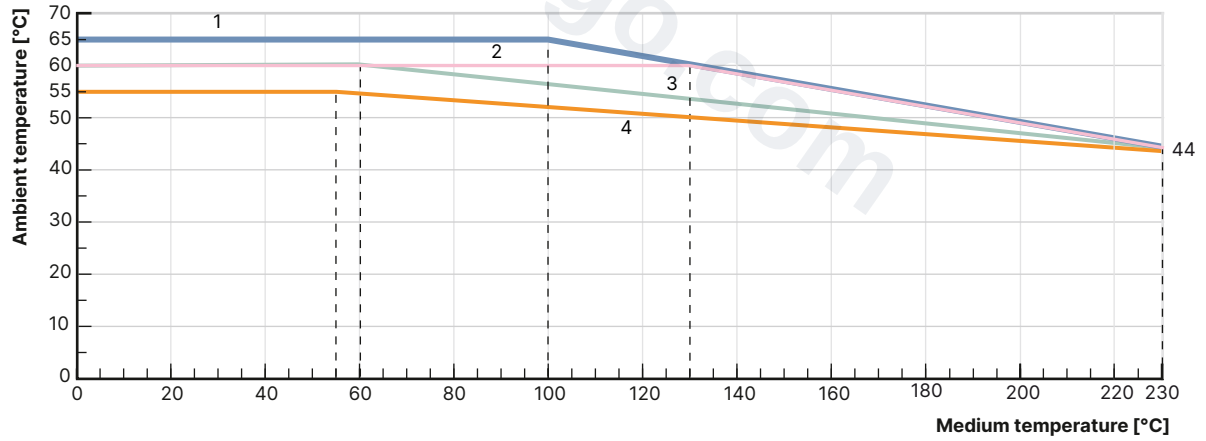
The maximum permissible temperature for the environment and the medium are dependent on each other. The maximum allowable temperature curves of different device variants are shown in the temperature chart. The curves were determined for maximum operating conditions (maximum operating pressure and motor power). For deviating operating conditions an individual verification can be carried out. Contact your Bürkert sales department for more information.

**AG2**




| No. | Description |
|---|---|
| 1 | Devices without module |
| 2 | Devices with display |
| 3 | Devices with energy storage SAFEPOS energy-pack or fieldbus gateway, with/without display module |

**AG3**




| No. | Description |
|---|---|
| 1 | Devices without module |
| 2 | Devices with energy storage SAFEPOS energy-pack |
| 3 | Devices with display module with/without energy storage SAFEPOS energy-pack |
| 4 | Devices with fieldbus gateway with/without display module with/without energy storage SAFEPOS energy-pack |

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### 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 °C...+ 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 °C...+ 130 °C (recommended for ≤ + 130 °C) | PTFE |
| | | - 10 °C...+ 230 °C (recommended for > + 130 °C) | PEEK |

### 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.

**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 media 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 3361 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.

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## 6.3. Electrical control and interfaces

**Interface diagram**

The position of the actuator is regulated according to the position set-point value. The position set-point value is specified either by an external standard signal or via a fieldbus (digital).

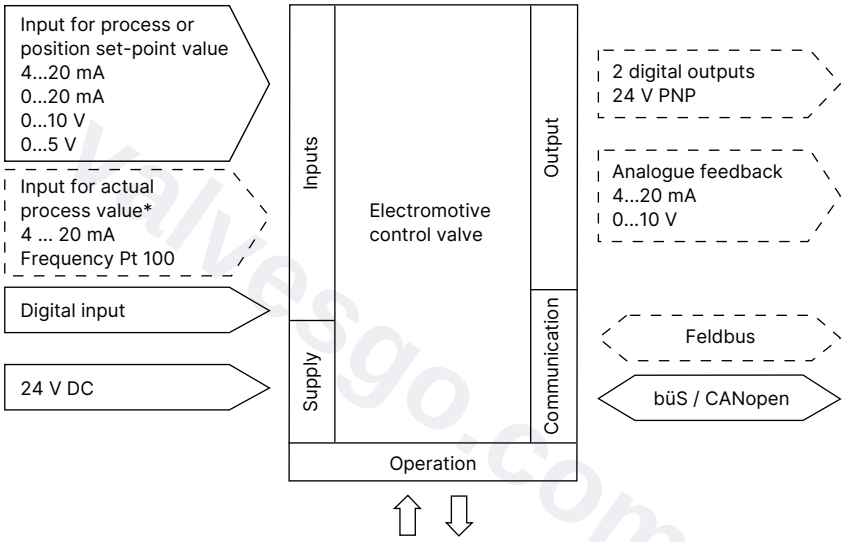
**Analogue control**
For analogue control, 2 variants are available for each the inputs and outputs and the connection interface.

**Inputs and outputs:**

- 1 analogue input, 1 digital input
- 1 analogue input, 1 digital input, 1 analogue output, 2 digital output (optional)
- 1 analogue input process actual value (for optional variant with process controller)

**Interface:**

- Cable gland with connection terminals (only AG2)
- M12 circular plug-in connectors (optional)




Note: Optional outputs are represented with a broken line

| | |
|---|---|
| **Control data** | |
| Analogue input set-point value | Galvanically isolated from the supply voltage and analogue output<br>0/4...20 mA (input resistance 70 Ω)<br>0...5/10 V (input resistance 22 kΩ) |
| Analogue output | Maximum current 10 mA (for voltage output 0...5/10 V)<br>Load 0...800 Ω (for current output 0/4...20 mA) |
| Digital input | 0...5 V = log „0“, 10...30 V = log „1“, inverted input reversed accordingly |
| Digital output | PNP, current limitation 100 mA |
| **Analogue input actual value (optional)** | |
| 4...20 mA | Input resistance: 80 Ω<br>Resolution: 12 bit |
| Frequency | Measuring range: up to 1000 Hz<br>Input resistance: > 30 kΩ<br>Resolution: 0.1 % of measurement value<br>Input signal: > 300 mVss<br>Signal form: sine, rectangle, triangle |
| Pt 100 | Measuring range: - 20 °C...+ 220 °C<br>Resolution: 0.01 °C<br>Measurement current: 1 mA |
| **Communication** | |
| Communication interface (büS) | Connection to PC via USB büS interface set |
| Communication software (büS) | Bürkert Communicator, see **Type 8920** ▶ |

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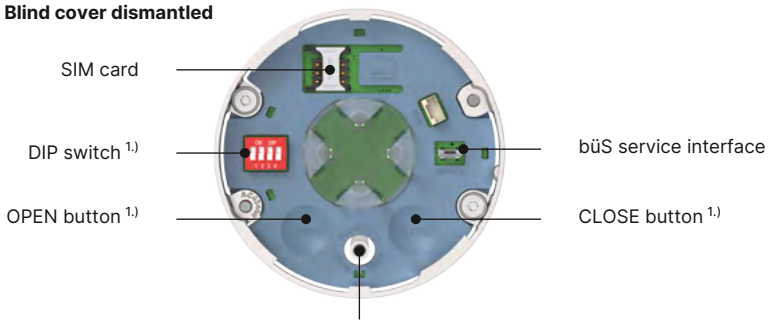
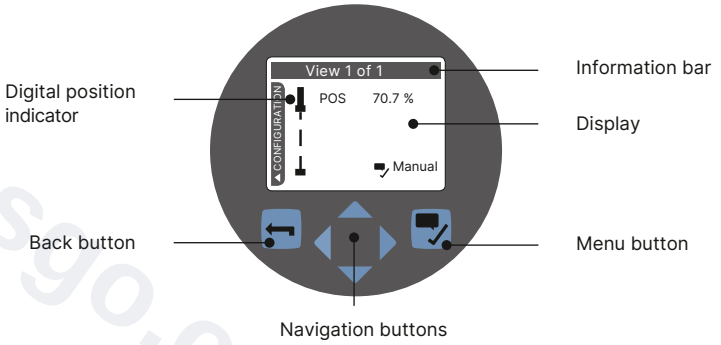
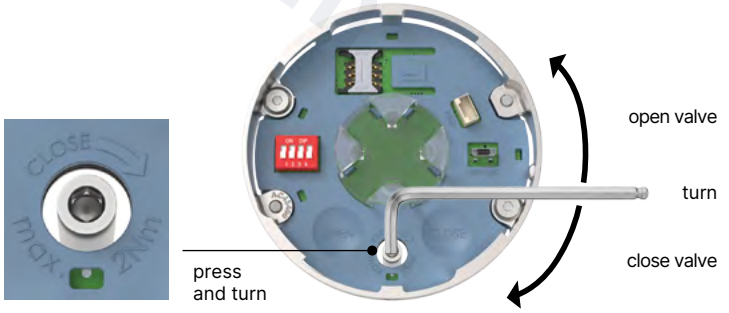
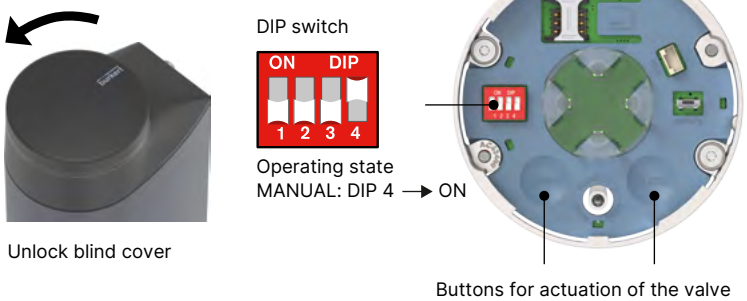


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# 7. Product design and assembly

## 7.1. Product features

**Note**
Further information can be found in the **operating instructions Type 3361** ▶.

| User interface | |
|---|---|
| **Device without display module**<br>The basic functions are operated by 4 DIP switches and 2 push buttons. These are located under the blind cover which can be removed manually by turning. Through the büS service interface, the device can also be configured in detail with the Bürkert Communicator software.<br><br>For this, the optional USB-büS interface set is required (see "8.4. Ordering chart accessories" on page 36). | **Blind cover dismantled**<br><br><br>1.) Non-functional in devices with display module. The display must be used for operation. |
| **Device with display module (option)**<br>The robust display module is easy to use, it configures and displays all the required functions. In addition to the start screen you can also switch to the configuration view and user-specified views as needed. The display cannot be retrofitted in the field. | <br> |
| **Actuation** | |
| **Mechanical manual override**<br>The manual override for mechanical movement of the valve is located for AG2 under the blind cover or display module and for AG3 under the pressure compensation element. It ensures that the actuator can be operated even if the power supply fails. | Mechanical manual override AG2<br><br> |
| **Electrical manual override**<br>The electrical manual override for the procedure is carried out via two buttons under the blind cover or via the operating buttons on devices with a display module. | <br> |

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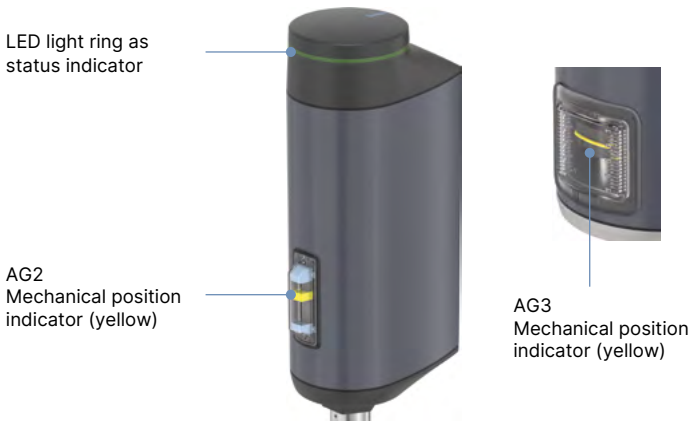


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## Display elements

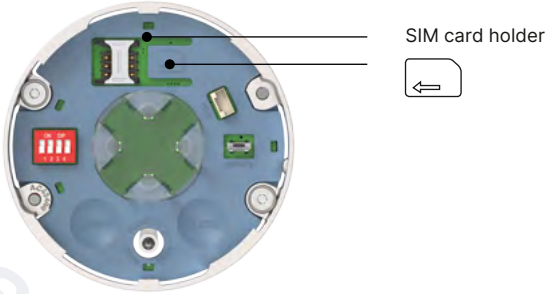
**Display 360° LED light ring**
A clearly visible 360° LED ring is attached to the blind cover or display module to indicate the device status, the valve end position and the operating state.
The LED light ring lights up, blinks or flashes in one or changing colours, depending on the LED mode set.

Mechanical position indicator:
The mechanical position indicator shows the current valve position even if the supply voltage fails.

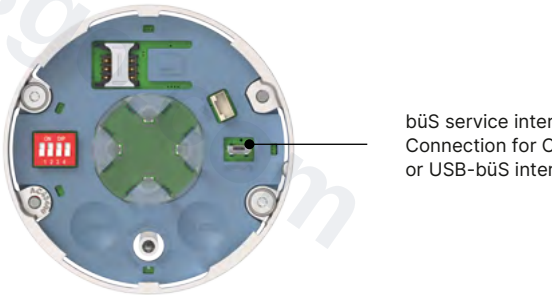



## Data transmission (optional)

**SIM card (optional)**
With the optionally available SIM card, device-specific values and user settings can be stored and quickly transferred to another device.




**büS service interface**
The büS service interface connects the device with the Bürkert Communicator software on a PC, laptop or smartphone. From there a configuration of the device or error diagnosis can be carried out.




## Safety position via energy storage (optional)

The safety starting positions in case of power interruption is realised with the optional energy storage SAFEPOS energy-pack. The desired position is set via the menu. In addition to the end positions (open/closed), any desired intermediate position can be defined here. The energy storage has a lifespan of up to 10 years, depending on the operating conditions. The power of the energy storage is monitored and a warning is displayed to indicate its service life is coming to an end. The storage device is designed as a plug-in module to facilitate replacement. Without energy storage, the valve remains in the last position it was in.

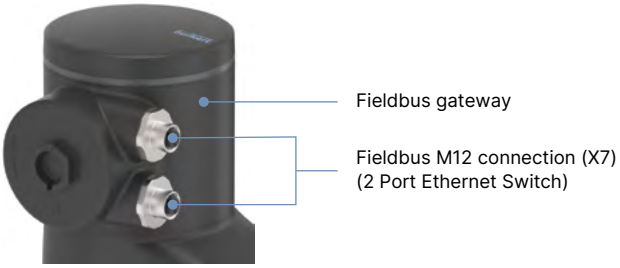
The energy storage device is fully charged and ready for operation after a maximum of 120 seconds (depending on the operating conditions).

The energy storage device cannot be retrofitted in the field.




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| Fieldbus: EtherNet/IP, PROFINET, Modbus TCP, EtherCAT (optional) | |
|---|---|
| The fieldbus gateway for EtherNet/IP, PROFINET, Modbus TCP and EtherCAT is integrated in an additional module. It has 2 fieldbus connections with 4-pin M12 circular sockets. The interfaces for the fieldbus connection and the status LEDs are located under the gateway housing cover. If there is a need for it to be included in a network, the Ethernet configuration can be performed via the web server.<br><br>The gateway cannot be retrofitted in the field. |  |

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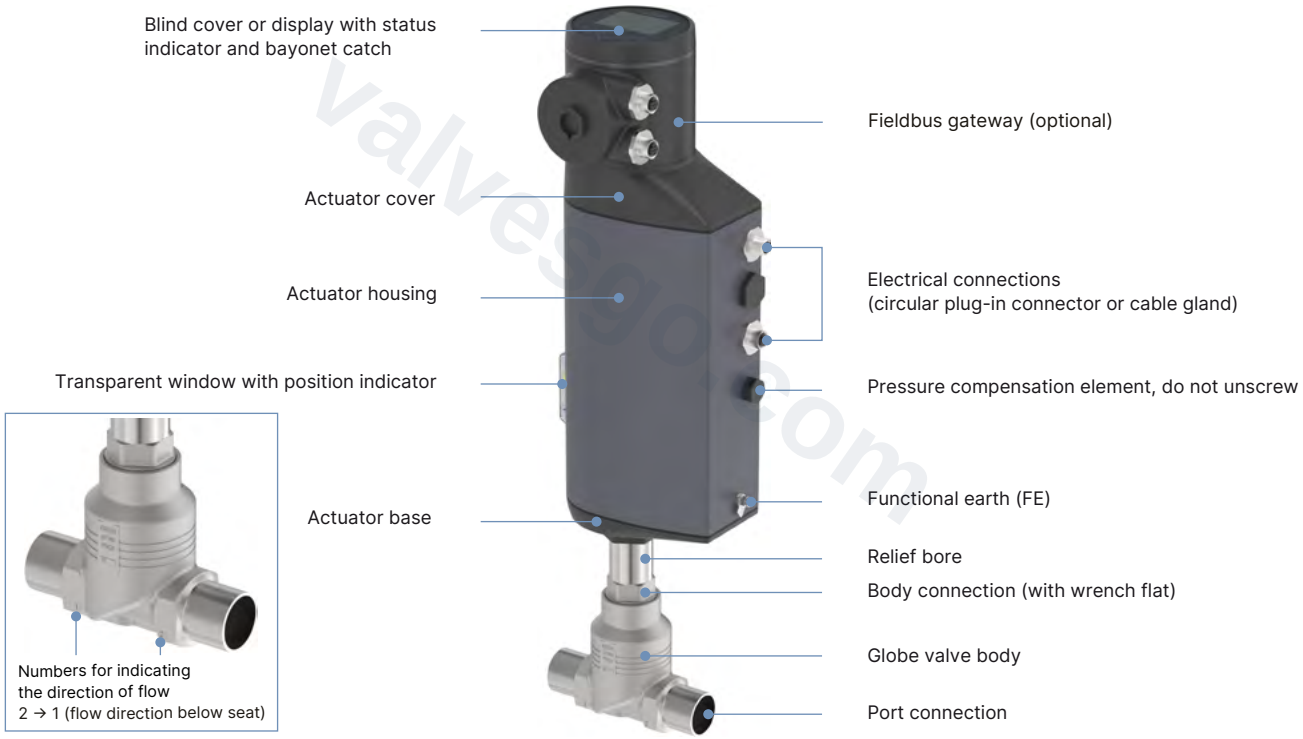
## 7.2. Product assembly

The electromotive linear drive consists of a brushless DC motor, a gear and a spindle system that transfers the force to the closing element. The integrated electronics are controlled either by standard signals or via a fieldbus (digital). A positioner and a process controller are available as controller variants. The electromotive linear actuator is designed to provide optimum efficiency. At the same time, it keeps the valve tight and in position even at the maximum specified medium pressure in a powerless standstill. The optional energy storage device SAFEPOS energy-pack is available for the device. If the supply voltage fails, it supplies the actuator with the energy required to move the valve into the desired position, which can be set in the menu.

The valve position can be changed manually in 2 ways. Either via the electrical manual control or via a mechanical manual override if no supply voltage is available. The device can be set and operated either via 2 capacitive keys switches or, optionally, on a display with touch screen. Additionally, you can always operate the device via the büS service interface and using the Bürkert Communicator software.

The intelligent process valve Type 3361 offers the operator options for process monitoring, valve diagnosis and preventive maintenance. Internal measurements of the operating state are evaluated and, if necessary, issued as a warning or error message. They signal, for example, impermissible ambient and process conditions, functional deviations of components or the status of the energy storage device. A special feature of the globe control valve is the screwed-in valve seat which can be replaced to reduce the seat size.

**Design of electromotive valve Type 3361 AG2**



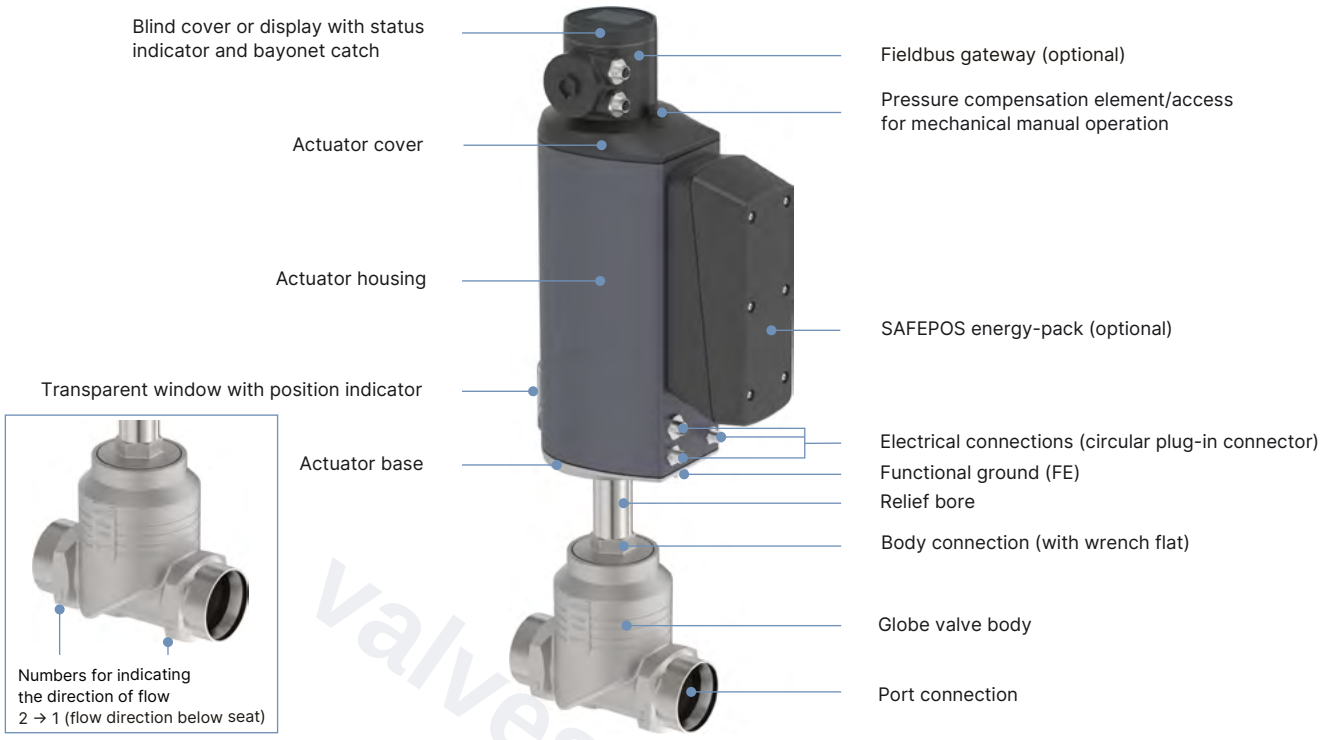

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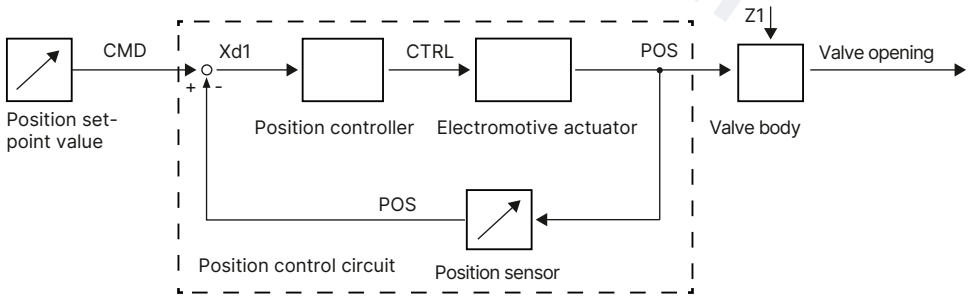
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## Design of electromotive valve Type 3361 AG3



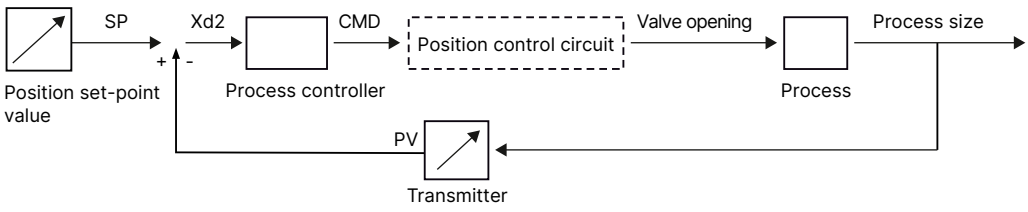

### Integrated position controller

The position of the actuator (stroke) is controlled according to the position set-point value. The position set-point value is either given by an external standard signal (analogue) or via a fieldbus (digital). The displacement transducer records the actual position (POS) of the electric linear actuator. The positioner compares the actual position value with the position set-point value (CMD) specified as standard signal. If there is a system deviation (Xd1), the electric motor drive is controlled via the actuating variable CTRL and the actual position value is changed accordingly.




### Integrated process controller (optional)

The additionally implemented PID controller allows process control. The set-point position of the valve is calculated from the external signal (e.g. level, pressure, flow rate, temperature) for the process set-point and the actual process value via the control parameters (PID controller).




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# 8. Ordering information

## 8.1. 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

## 8.2. Bürkert product filter

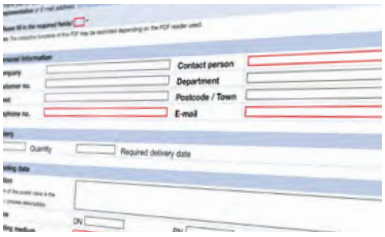


**Bürkert product filter – Get quickly to the right product**

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

## 8.3. Bürkert Product Enquiry Form




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

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

Fill out the form now

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## 8.4. Ordering chart accessories

**Note:**
For device variants with approvals or conformities, additional accessories may be required for intended use. Refer to the relevant approval documentation.

### Standard accessories

| Description | Article no. |
|---|---|
| SIM card for data transmission between units | 291773 |
| Holding device for port connection DN 15...20 | 693770 |
| Holding device for port connection DN 25...50 | 693771 |
| Blind cover made of plastic | 277881 |
| Wearing part energy storage SAFEPOS energy-pack (AG2) | 285834 |
| Wearing part energy storage SAFEPOS energy-pack (AG3) | 20046438 |

### Connection cable

**Note:**
For connection to a büS/CANopen network see „Supplement | Cabling guide büS/EDIP" on our website under „User Manuals", **Type 3361** ▶.

| Description | Article no. |
|---|---|
| M12 circular socket with cable, 4-pin, A-coded, cable length: 5 m, for X3, operating voltage AG2 (without communication) | 918038 |
| M12 circular socket with cable, 5-pin, L-coded, cable length: 5 m, for X4, operating voltage AG3 (without communication) | 20010840 |
| M12 circular socket with cable, 8-pin, A-coded, cable length: 2 m, for X1, input and output signals | 919061 |
| M12 circular plug with cable (shielded), 5-pin, A-coded, cable length: 2 m, for X2, input signals process actual value (only for variant with process controller) | 559177 |
| M12 circular plug with cable, 4-pin, D-coded to M12 straight plug, cable length: 5 m, for X7, fieldbus connection | 775043 |
| M12 circular plug with cable, 4-pin, D-coded to RJ45 plug, cable length: 5 m, for X7, fieldbus connection | 775053 |

### büS interface

**Note:**
- For connection to a büS/CANopen network see „Supplement | Cabling guide büS/EDIP" on our website under „User Manuals", **Type 3361** ▶.
- Detailed charts of accessories can be found in the cabling guide, see „Supplement | Cabling guide büS/EDIP" on our website under „User Manuals", **Type 3361** ▶.

| Description | Article no. |
|---|---|
| Bürkert Communicator software, Type 8920 | **Type 8920** ▶ |
| USB-büS interface set 1 (Type 8923) | 772426 |
| USB-büS interface set 2 (Type 8923) | 772551 |
| büS adapter for büS service interface (M12 on büS service interface micro USB), cable length: 0.3 mm | 774931 |

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