

2006 3/2-way  
stainless steel

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**bürkert**  
FLUID CONTROL SYSTEMS



## Pneumatically operated 3 way seat valve CLASSIC

- For mixing or distributing mediums
- Controlled by a pilot valve or centrally by a valve island
- Flow optimized body in stainless steel or brass/ stainless steel
- Long service life and maintenance-free operation

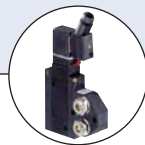
Type 2002 can be combined with...



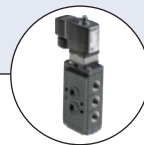
**Type 6012/6014 P**  
Pilot valve



**Type 8640/8644**  
Valve block



**Type 5470**  
Solenoid valve



**Type 6519 NAMUR**



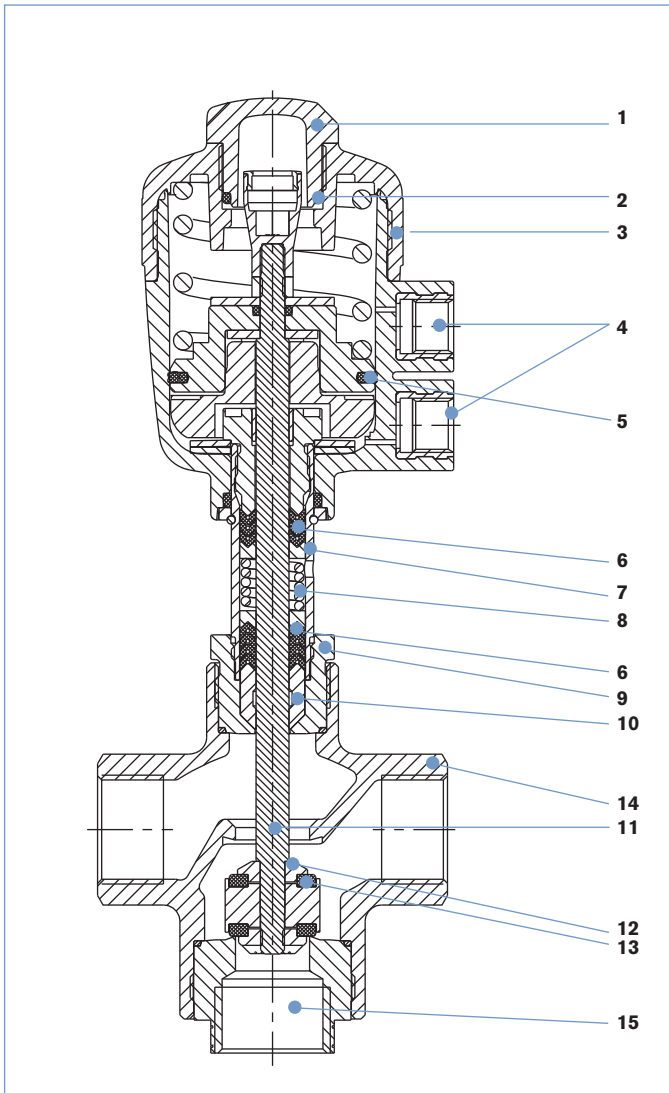
**Type 8697**  
Feedback unit



The Bürkert 3 way seat valve, Type 2006, consists of a pneumatically operated CLASSIC actuator and a 3 way valve body. The actuator is available in two different materials, PA or PPS, depending on the ambient temperature. Available materials for the valve body include stainless steel and a brass/stainless steel variant. Interchanging of pressure and service ports enables different fluidic circuit functions, such as the mixing or distributing of mediums. The flow-optimized valve body of Type 2006 allows excellent flow rates. The tried and tested self-adjusting gland secures a high level of tightness and thus ensures reliable operation over years. The 3 way valve Type 2006 is controlled by a pilot valve, or by centralized automation using a valve island. It can be equipped easily with an electrical position indicator. For the user, the compact Type 2006 is thus often an economic alternative instead of two single shut-off valves.

| Technical data                              |  |
|---|--|
| <b>Orifice</b>                              | DN 15 - 50   |
| <b>Body materials</b>                       | Stainless steel 316L   |
| <b>Nominal pressure</b>                     | PN16 (body)  |
| <b>Actuator material</b>                    | PA (PPS on request)  |
| <b>Seal material</b>                        | PTFE   |
| <b>Media</b>                                | Water, alcohol, oils, fuels, hydraulic fluid, alkaline solutions, salt solution, organic solutions, hot water, steam |
| <b>Viscosity</b>                            | Max. 600 mm <sup>2</sup> /s  |
| <b>Packing gland (with silicone grease)</b> | PTFE V-rings with spring compensation  |
| <b>Media temperature</b>                    | -10 to +180°C  |
| <b>Ambient temperature</b>                  |  |
| <b>PA actuator</b>                          | -10 to +60°C   |
| <b>PPS actuator</b>                         |  |
| Actuator sizes Ø 50-80                      | +5 to +140°C   |
| Actuator sizes Ø 125                        | +5 to +90°C, (up to 140°C for a short period)  |
| <b>Installation</b>                         | As required, preferably with actuator in upright position  |
| <b>Control medium</b>                       | Neutral gases, air   |
| <b>Max. pilot pressure</b>                  | 10 bar<br>7 bar with actuator Ø 125  |
| <b>Port connections</b>                     | G thread acc. to EN ISO 228-1<br>NPT thread acc. to ANSI B 1.20.1<br>(RC thread on request)                          |

Materials



| Description             | Material  |
|-------------------------|---|
| 1 Transparent cap       | Polycarbonate (PC)<br>(with PPS - actuator PSU)                             |
| 2 O-Ring                | FKM   |
| 3 Actuator              | Polyamide (PPS)   |
| 4 Pilot air ports G 1/4 | Stainless steel 1.4305  |
| 5 Cylinder seal         | NBR<br>(with PPS - actuator FKM)  |
| 6 Spindle seal          | PTFE  |
| 7 Tube <sup>2)</sup>    | Stainless steel 1.4401 / 316<br>Stainless steel 1.4404 / 316L <sup>3)</sup> |
| 8 Tension spring        | Stainless steel 1.4310  |
| 9 Nipple <sup>2)</sup>  | Stainless steel 1.4401 / 316<br>Stainless steel 1.4404 / 316L <sup>3)</sup> |
| 10 Wiper                | PTFE<br>PEEK <sup>1)</sup>  |
| 11 Spindle              | Stainless steel 1.4404 / 316L   |
| 12 Plug                 | Stainless steel 1.4404 / 316L   |
| 13 Seals                | PTFE  |
| 14 Valve body           | Stainless steel 1.4404 / 316L   |
| 15 Seat nipple          | Stainless steel 1.4404 / 316L   |

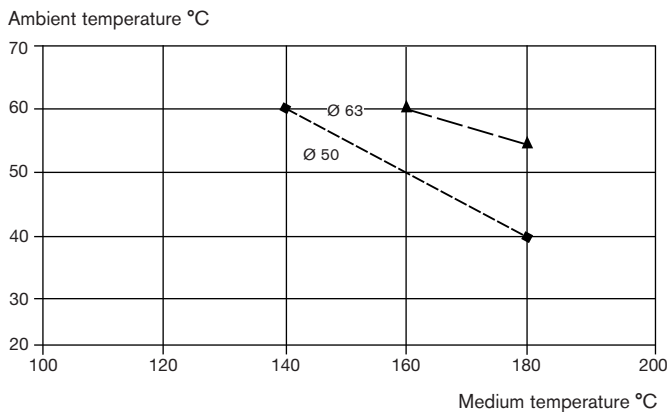
<sup>1)</sup> For actuator size 125 mm

<sup>2)</sup> One-piece with the drive sizes 63 mm to 125 mm

<sup>3)</sup> For actuator sizes 63 mm to 125 mm

Temperature chart

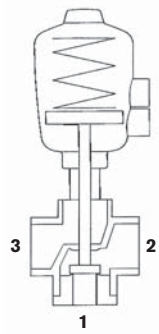
■ **Note:** For PA actuators in the sizes 50 and 63, the combination of max. media temperature and max. ambient temperature is as shown in the following chart:



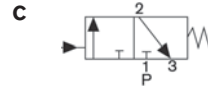
Connections for fluidic circuit functions C, D, E and F

Actuator with control function A  
When de-energised port connection 1 is closed with spring

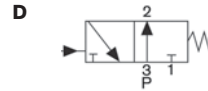
| Fluidic circuit function | Connection - port |   |    |
|--------------------------|-------------------|---|----|
|                          | 1                 | 2 | 3  |
| C                        | P                 | A | R  |
| D                        | R                 | A | P  |
| E                        | P1                | A | P2 |
| F                        | A                 | P | B  |



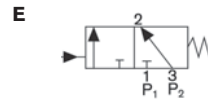
A, B service ports  
P, P1, P2 pressure ports  
R exhaust port



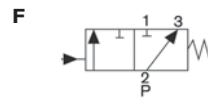
When de-energised, pressure port 1 closed, service port 2 exhausted



When de-energised, pressure port 3 connected to service port 2, exhaust port 1 closed

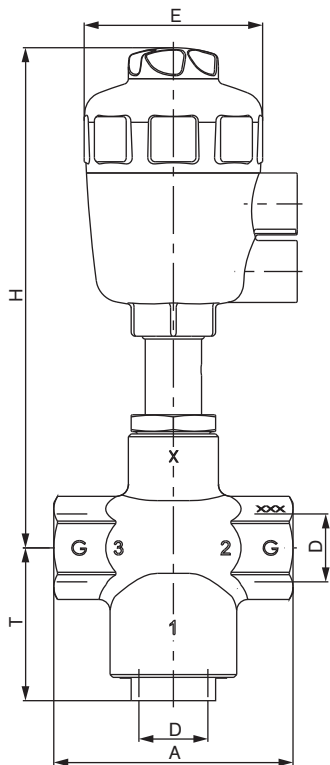


Mixer valve  
When de-energised, pressure port 3 connected to service port 2, pressure port 1 closed



Distributor valve  
When de-energised, pressure port 2 connected to service port 3, service port 1 closed

Dimensions [mm]



| Orifice | Actuator size Ø | Port connection D | A   | E   | H   | T  |     |
|---------|-----------------|-------------------|-----|-----|-----|----|-----|
| 15      | 50              | G 1/2             | 85  | 64  | 178 | 54 |     |
|         | 63              |                   |     | 80  |     |    | 220 |
| 20      | 50              | G 3/4             | 85  | 64  | 178 | 54 |     |
|         | 63              |                   |     | 80  |     |    | 220 |
| 25      | 63              | G 1               | 105 | 80  | 220 | 54 |     |
| 32      | 80              | G 1 1/4           | 130 | 101 | 249 | 68 |     |
|         | 125             |                   |     | 158 |     |    | 345 |
| 40      | 63              | G 1 1/2           | 130 | 80  | 226 | 68 |     |
|         | 80              |                   |     | 101 |     |    | 249 |
|         | 125             |                   |     | 158 |     |    | 345 |
| 50      | 125             | G 2               | 150 | 158 | 352 | 72 |     |

Ordering chart for valves with port 1 closed by spring action (other versions on request)

Threaded connection acc. to EN ISO 228-1

| Control function                         | Port connection | Orifice [mm] | Actuator size Ø [mm] | Kv value water [m³/h] |       | Min. pilot pressure [bar] | Max. operating pressure to 180°C [bar] |                | Weight [kg] | Item no. PA actuator | Item no. PPS actuator |
|--|-----------------|--------------|----------------------|-----------------------|-------|---------------------------|--|----------------|-------------|----------------------|-----------------------|
|  |                 |              |                      | 1 → 2                 | 2 → 3 |                           | 1 → 2                                  | 2 → 3<br>2 → 1 |             |                      |                       |
| A 3/2 way, normally closed (NC) (port 1) | G 1/2           | 15           | 50                   | 7                     | 4.5   | 4.4                       | 11                                     | 16             | 1.3         | 287 191              | 287 202               |
|  |                 |              | 63                   | 8                     | 4.5   | 4.7                       | 16                                     | 16             | 1.6         | 287 192              | 287 203               |
|  | G 3/4           | 20           | 50                   | 9                     | 6.2   | 4.4                       | 11                                     | 16             | 1.3         | 287 193              | 287 204               |
|  |                 |              | 63                   | 11                    | 5.6   | 4.7                       | 16                                     | 16             | 1.6         | 287 194              | 287 205               |
|  | G 1             | 25           | 63                   | 17                    | 11    | 4.9                       | 10                                     | 16             | 2.1         | 287 195              | 287 206               |
|  |                 |              | 80                   | 32                    | 21    | 6.0                       | 9                                      | 16             | 4.3         | 287 196              | 287 207               |
|  | G 1 1/4         | 32           | 125                  | 35                    | 24    | 3.4                       | 14                                     | 16             | 8.1         | 287 197              | 287 208               |
|  |                 |              | 80                   | 35                    | 24    | 6.0                       | 9                                      | 16             | 4.3         | 287 199              | 287 210               |
|  | G 1 1/2         | 40           | 125                  | 35                    | 24    | 3.4                       | 14                                     | 16             | 8.1         | 287 200              | 287 211               |
|  |                 |              | 50                   | 51                    | 35    | 4.3                       | 10                                     | 16             | 9.5         | 287 201              | 287 212               |

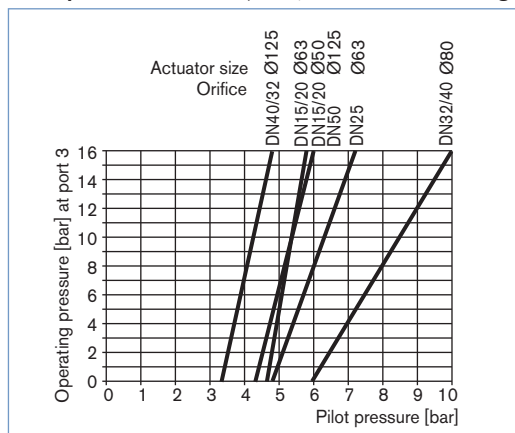
Threaded connection with NPT thread acc. to ANSI B 1.20.1

| Control function                         | Port connection | Orifice [mm] | Actuator size Ø [mm] | Kv value water [m³/h] |       | Min. pilot pressure [bar] | Max. operating pressure to 180°C [bar] |                | Weight [kg] | Item no. PA actuator | Item no. PPS actuator |
|--|-----------------|--------------|----------------------|-----------------------|-------|---------------------------|--|----------------|-------------|----------------------|-----------------------|
|  |                 |              |                      | 1 → 2                 | 2 → 3 |                           | 1 → 2                                  | 2 → 3<br>2 → 1 |             |                      |                       |
| A 3/2 way, normally closed (NC) (port 1) | NPT 1/2         | 15           | 50                   | 7                     | 4.5   | 4.4                       | 11                                     | 16             | 1.3         | 292 542              | 292 553               |
|  |                 |              | 63                   | 8                     | 4.5   | 4.7                       | 16                                     | 16             | 1.6         | 292 543              | 292 554               |
|  | NPT 3/4         | 20           | 50                   | 9                     | 6.2   | 4.4                       | 11                                     | 16             | 1.3         | 292 544              | 292 555               |
|  |                 |              | 63                   | 11                    | 5.6   | 4.7                       | 16                                     | 16             | 1.6         | 292 545              | 292 556               |
|  | NPT 1           | 25           | 63                   | 17                    | 11    | 4.9                       | 10                                     | 16             | 2.1         | 292 546              | 292 557               |
|  |                 |              | 80                   | 32                    | 21    | 6.0                       | 9                                      | 16             | 4.3         | 292 547              | 292 558               |
|  | NPT 1 1/4       | 32           | 125                  | 35                    | 24    | 3.4                       | 14                                     | 16             | 8.1         | 292 548              | 292 559               |
|  |                 |              | 80                   | 35                    | 24    | 6.0                       | 9                                      | 16             | 4.3         | 292 550              | 292 560               |
|  | NPT 1 1/2       | 40           | 125                  | 35                    | 24    | 3.4                       | 14                                     | 16             | 8.1         | 292 551              | 292 561               |
|  |                 |              | 50                   | 51                    | 35    | 4.3                       | 10                                     | 16             | 9.5         | 292 552              | 292 562               |

**i** Further versions on request

 Port connection  
RC thread

Pilot pressure chart (CFA, flow direction 3 g 2)



## Ordering chart for accessories

### 3/2 way pilot valves with banjo bolts

Seal material valve FKM, seal material banjo bolt NBR

| Valve for actuator size [Ø mm] | Type  | Pressure inlet P (valve body) | Service port A (banjo bolt) | Orifice [mm] | Q <sub>Nn</sub> value air [l/min] | Pressure range [bar] | Electrical coil connection Ind. Std. | Power consumption [W] | Item no. Voltage/frequency [V/Hz] |         |
|--------------------------------|-------|-------------------------------|-----------------------------|--------------|-----------------------------------|----------------------|--------------------------------------|-----------------------|-----------------------------------|---------|
|                                |       |                               |                             |              |                                   |                      |                                      |                       | 024/DC                            | 230/50  |
| 50-63                          | 6012P | Tube fitting ø6 mm            | G 1/4                       | 1.2          | 48                                | 0-10                 | Form B                               | 4                     | 552 283                           | 552 286 |
| 50-125                         | 6014P | G 1/4                         | G 1/4                       | 2            | 120                               | 0-10                 | Form A                               | 8                     | 424 103                           | 424 107 |

### Cable plug Type 2507, Form B or Type 2508, Form A

|  | Item no. |
|--|----------|
| Type 2507, Form B Industrial standard, 0 to 250 V without circuitry (Type 6012 P)                | 423 845  |
| Type 2508, Form A acc. DIN EN 175301-803, 0 to 250 V without circuitry (Type 6014 P, Type 0331P) | 008 376  |

For further accessories see the accessories datasheet Type 2XXX for the full options programme.

## Type 8697 Pneumatic feedback unit

| End position feedback                 |                               |                                |                     |                            |                      |                       |  |  |   |       |   |
|---------------------------------------|-------------------------------|--------------------------------|---------------------|----------------------------|----------------------|-----------------------|--|--|---|-------|---|
| Inductive Switch 3-wire PNP           | Inductive Switch 2-wire NAMUR | Inductive Switch 2-wire 24V DC | Micro Switch 24V DC | Micro Switch 50-250V AC/DC | Feedback status LEDs | Electrical connection | ATEX / IECEX Cat. 3D/G Zone 22/2 <sup>2)</sup> | ATEX / IECEX Cat. 2D/G Zone 21/1 <sup>3)</sup> | ATEX / IECEX Cat. 2G Zone 1 <sup>4)</sup> | cULus | Item no. Actuator series CLASSIC Types 20XX |
| <b>Feedback (without pilot valve)</b> |                               |                                |                     |                            |                      |                       |  |  |   |       |   |
| 2                                     |                               |                                |                     |                            | yes                  | Cable gland           |  |  |   | yes   | 248 827                                     |
| 2                                     |                               |                                |                     |                            | yes                  | Cable gland           | yes  |  |   |       | 255 851                                     |
| 2                                     |                               |                                |                     |                            | yes                  | M12 connector         | yes  |  |   |       | 255 858                                     |
| 2                                     |                               |                                |                     |                            | yes                  | M12 connector         |  |  |   | yes   | 250 472                                     |
|                                       | 2                             |                                |                     |                            | yes                  | Cable gland           |  | yes  |   |       | 248 831                                     |
|                                       | 2                             |                                |                     |                            | yes                  | Cable gland           |  |  | yes                                       |       | 255 863                                     |
|                                       |                               | 2                              |                     |                            | yes                  | Cable gland           |  |  |   | yes   | 248 826                                     |
|                                       |                               | 2                              |                     |                            | yes                  | Cable gland           | yes  |  |   |       | 255 850                                     |
|                                       |                               |                                | 2                   |                            |                      | Cable gland           |  |  |   | yes   | 248 833                                     |
|                                       |                               |                                |                     | 2                          |                      | Cable gland           |  |  |   | yes   | 248 825                                     |

**Note:** cULus only valid for versions without ATEX approval

<sup>2)</sup> II 3D Ex tc IIIC T135 / II 3G Ex nA IIC T4 Gc

<sup>3)</sup> II 2D Ex ia IIIC T135°C IP64 / II 2G Ex ia IIC T4 Gb

<sup>4)</sup> II 2G Ex ia IIC T4 Gb

### Adapter kit

| Description | Actuator size | Control function | Item no. |
|-------------|---------------|------------------|----------|
| Feedback    | Ø50/63/80 mm  | universal        | 682 264  |
| Feedback    | Ø125 mm       | universal        | 682 265  |

Weitere Informationen siehe Datenblatt Typ 8697