



## 2/2 way Angle Seat Valve, manually operated, for media up to +180 °C

- Position indication
- Adjustable flow rates
- Stainless steel valve body
- Compact industrial design with long service life
- Excellent seat tightness due to PTFE soft sealing

Type 2000/2702 can be combined with...



**Type 8034**

Flow Indicator



**Type 8035**

Flow Transmitter



**Type 8311**

Pressure Transmitter with display



**Type 8314**

Pressure Transmitter



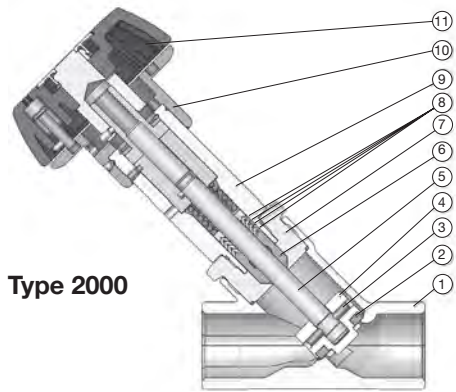
**Type 8400**

Temperature Transmitter with display

Manually-operated angle-seat valve of the type series 2000/2702 are delivered as standard with threaded or weld end port connection. Type 2000 with manual actuator without position indicator is used only for On/Off function. Type 2702 with manual actuator and position indicator is designed with a parabolic trim and therefore it can be used to control a defined flow.

|  |   |
|--|---|
| <b>Technical data</b>  | Flow direction below the seat (for gases and fluids)  |
| <b>Port size</b>   | DN15 - 50   |
| <b>Body material</b><br>Typ 2000 weldend acc. to EN ISO 1127/150 4200 and DIN 11850 S2 | Stainless steel 316L<br>Stainless steel 1.4581  |
| <b>Actuator material</b>   | PPS   |
| <b>Seal material (Type 2000)</b>   | PTFE  |
| <b>Seal material (Type 2702)</b>   | PTFE or stainless steel 1.4571  |
| <b>Medium</b>  | Neutral gases, water, alcohols, oils, fuels, salt solutions, lye, organic solvents, steam   |
| <b>Viscosity</b>   | Max. 600 mm <sup>2</sup> /s   |
| <b>Packing gland</b>   | PTFE V-rings (silicone grease)  |
| <b>Nominal pressure</b>  | PN25 (Body)   |
| <b>Temperatures</b><br>Fluid<br>Ambient  | - 10 to + 180 °C (max. + 130 °C for PTFE/St.st.<br>Sealing recommended<br>- 10 to + 60 °C   |
| <b>Flow direction</b><br>Type 2000<br>Type 2702  | any flow direction<br>below seat  |
| <b>Installation</b>  | As required   |
| Port connections<br>Type 2000/2702   | G threaded port,<br>weld end acc. EN ISO 1127/ISO 4200,<br>weld end acc. DIN 11850 series 2 |
| Optional   | NPT, Rc threaded port,<br>Weld end acc. BS 4825, ASME, SMS 3008                             |
| <b>Options</b>   | Handwheel with locking against unauthorised or unintentional changing of the valve position |

Materials - Flow rates



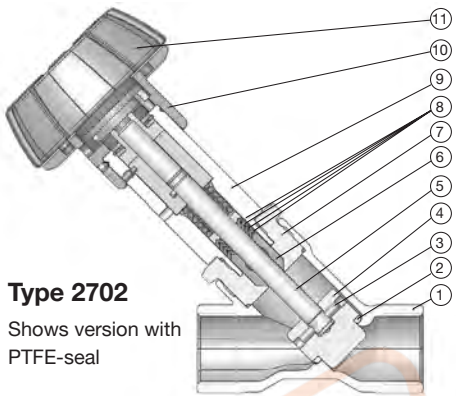
Type 2000

Type 2000

- 1 Valve body: 316 L  
Weld end acc. to EN ISO 1127/150 4200 & DIN 11850 S2 1.4581
- 2 Seal: PTFE
- 3 Pin: 1.4404
- 4 Swivel plate: 1.4404
- 5 Spindle: 1.4404
- 6 Wiper: PTFE
- 7 Nipple: 1.4404
- 8 V-Seals: PTFE
- 9 Tube: 1.4404
- 10 Torque support: PPS
- 11 Manual actuator: PPS  
(without position indicator)

K<sub>v</sub> value

| DN | K <sub>vs</sub> [m³/h] |
|----|------------------------|
| 15 | 4.5                    |
| 20 | 10                     |
| 25 | 20                     |
| 32 | 28                     |
| 40 | 42                     |
| 50 | 55                     |



Type 2702

Shows version with PTFE-seal

Type 2702

- 1 Valve body: 316 L
- 2 Seal: PTFE (not applicable for 316 L seat sealing version)
- 3 Pin: 1.4310
- 4 Parabolic trim: 1.4571
- 5 Spindle: 1.4404
- 6 Wiper: PTFE
- 7 Nipple: 1.4404
- 8 V-Seals: PTFE
- 9 Tube: 1.4404
- 10 Torque support: PPS
- 11 Manual actuator: PPS  
(with position indicator)

K<sub>vs</sub>-value

| DN | K <sub>vs</sub> [m³/h] | Min.Stroke [mm] |
|----|------------------------|-----------------|
| 15 | 4.5                    | 12              |
| 20 | 9                      | 18              |
| 25 | 15                     | 20              |
| 32 | 23                     | 20              |
| 40 | 33                     | 24              |
| 50 | 52                     | 26              |

K<sub>v</sub> values 2702

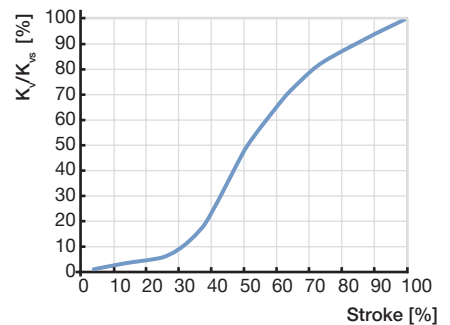
| Port size [mm] | Stroke [mm]           | Stroke [%] |      |      |      |      |      |      |      |      |      |      |
|----------------|-----------------------|------------|------|------|------|------|------|------|------|------|------|------|
|                |                       | 5          | 10   | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  |
| 15             | Stroke [mm]           | 0.6        | 1.2  | 2.4  | 3.6  | 4.8  | 6.0  | 7.2  | 8.4  | 9.6  | 10.8 | 12.0 |
|                | K <sub>v</sub> [m³/h] | 0.23       | 0.24 | 0.26 | 0.35 | 0.7  | 1.85 | 2.9  | 3.5  | 4    | 4.3  | 4.5  |
| 20             | Stroke [mm]           | 0.9        | 1.8  | 3.6  | 5.4  | 7.2  | 9.0  | 10.8 | 12.6 | 14.4 | 16.2 | 18.0 |
|                | K <sub>v</sub> [m³/h] | 0.3        | 0.33 | 0.42 | 0.7  | 2.85 | 5.3  | 6.6  | 7.5  | 8.2  | 8.6  | 9    |
| 25             | Stroke [mm]           | 1.0        | 2.0  | 4.0  | 6.0  | 8.0  | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 |
|                | K <sub>v</sub> [m³/h] | 0.39       | 0.41 | 0.60 | 1.25 | 4.5  | 8.5  | 10.5 | 12.2 | 13.5 | 14.2 | 15   |
| 32             | Stroke [mm]           | 1.0        | 2.0  | 4.0  | 6.0  | 8.0  | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 |
|                | K <sub>v</sub> [m³/h] | 0.55       | 0.65 | 0.95 | 1.5  | 4    | 9.3  | 13.8 | 16.5 | 18.8 | 21   | 23   |
| 40             | Stroke [mm]           | 1.3        | 2.0  | 5.2  | 7.8  | 10.4 | 13   | 15.6 | 18.2 | 20.8 | 23.4 | 24   |
|                | K <sub>v</sub> [m³/h] | 0.65       | 0.85 | 1.5  | 5    | 14   | 20   | 25   | 27   | 30   | 32.5 | 33   |
| 50             | Stroke [mm]           | 1.3        | 2.6  | 5.2  | 7.8  | 10.4 | 13   | 15.6 | 18.2 | 20.8 | 23.4 | 26   |
|                | K <sub>v</sub> [m³/h] | 1          | 1.3  | 2    | 5    | 16   | 27   | 34   | 41   | 45   | 49   | 53   |

Indication

The value of the position indication is a distance in [mm], in general the actual stroke (distance between valve-seat and seat-seal in mm). The digit after the vertical line represents 1/10 mm. Per revolution of the handwheel, the vertical position of the valve will change exactly 1.5 mm. For tuning of a well-defined flow rate, please take the chart with the flow rate and the stroke.



Flow characteristics



## Ordering chart for valves (other versions on request)



**Type 2000**  
Seat sealing PTFE  
Any flow direction


| Port Size  |        | K <sub>vs</sub> value<br>water<br>[m³/h] | Max.<br>operating<br>pressure<br>[bar] | Seal<br>material | Weight<br>[kg] | Article no. |
|--|--------|--|--|------------------|----------------|-------------|
| [mm]   | [inch] |  |  |                  |                |             |
| <b>Type 2000 body with G threaded port (without position indicator)</b>                    |        |  |  |                  |                |             |
| 15   | ½"     | 4.5                                      | 0-16                                   | PTFE             | 1.2            | 219720      |
| 20   | ¾"     | 10                                       | 0-16                                   | PTFE             | 1.25           | 219721      |
| 25   | 1"     | 20                                       | 0-16                                   | PTFE             | 1.58           | 219722      |
| 32   | 1 ¼"   | 28                                       | 0-10                                   | PTFE             | 2.13           | 219723      |
| 40   | 1 ½"   | 42                                       | 0-10                                   | PTFE             | 2.5            | 219724      |
| 50   | 2"     | 55                                       | 0-10                                   | PTFE             | 3.72           | 166080      |
| <b>Type 2000 body with weld end acc. EN ISO 1127/ISO 4200 (without position indicator)</b> |        |  |  |                  |                |             |
| 15   | ½"     | 4.5                                      | 0-16                                   | PTFE             | 1.2            | 166016      |
| 20   | ¾"     | 10                                       | 0-16                                   | PTFE             | 1.25           | 166019      |
| 25   | 1"     | 20                                       | 0-16                                   | PTFE             | 1.58           | 166072      |
| 32   | 1 ¼"   | 28                                       | 0-10                                   | PTFE             | 2.13           | 166075      |
| 40   | 1 ½"   | 42                                       | 0-10                                   | PTFE             | 2.5            | 166078      |
| 50   | 2"     | 55                                       | 0-10                                   | PTFE             | 3.72           | 166081      |
| <b>Type 2000 body with weld end acc. DIN 11850 series 2 (without position indicator)</b>   |        |  |  |                  |                |             |
| 15   | ½"     | 4.5                                      | 0-16                                   | PTFE             | 1.2            | 166017      |
| 20   | ¾"     | 10                                       | 0-16                                   | PTFE             | 1.25           | 166020      |
| 25   | 1"     | 20                                       | 0-16                                   | PTFE             | 1.58           | 166073      |
| 32   | 1 ¼"   | 28                                       | 0-10                                   | PTFE             | 2.13           | 166076      |
| 40   | 1 ½"   | 42                                       | 0-10                                   | PTFE             | 2.5            | 166079      |
| 50   | 2"     | 55                                       | 0-10                                   | PTFE             | 3.72           | 166082      |



**Type 2702**  
Seat sealing PTFE,  
parabolic plug  
Flow direction  
below seat

| Port Size   |        | K <sub>vs</sub> value<br>water<br>[m³/h] | Max.<br>operating<br>pressure<br>[bar] | Seal<br>material | Weight<br>[kg] | Article no. |
|---|--------|--|--|------------------|----------------|-------------|
| [mm]  | [inch] |  |  |                  |                |             |
| <b>Type 2702 body with G threaded port (with position indicator)</b>                    |        |  |  |                  |                |             |
| 15  | ½"     | 4.5                                      | 0-16                                   | PTFE             | 1.2            | 219725      |
| 20  | ¾"     | 9.0                                      | 0-16                                   | PTFE             | 1.25           | 219727      |
| 25  | 1"     | 15                                       | 0-16                                   | PTFE             | 1.58           | 219729      |
| 32  | 1 ¼"   | 23                                       | 0-10                                   | PTFE             | 2.13           | 219731      |
| 40  | 1 ½"   | 33                                       | 0-10                                   | PTFE             | 2.5            | 219733      |
| 50  | 2"     | 53                                       | 0-10                                   | PTFE             | 3.72           | 166111      |
| <b>Type 2702 body with weld end acc. EN ISO 1127/ISO 4200 (with position indicator)</b> |        |  |  |                  |                |             |
| 15  | ½"     | 4.5                                      | 0-16                                   | PTFE             | 1.2            | 166097      |
| 20  | ¾"     | 9.0                                      | 0-16                                   | PTFE             | 1.25           | 166100      |
| 25  | 1"     | 15                                       | 0-16                                   | PTFE             | 1.58           | 166103      |
| 32  | 1 ¼"   | 23                                       | 0-10                                   | PTFE             | 2.13           | 166106      |
| 40  | 1 ½"   | 33                                       | 0-10                                   | PTFE             | 2.5            | 166109      |
| 50  | 2"     | 53                                       | 0-10                                   | PTFE             | 3.72           | 166112      |
| <b>Type 2702 body with weld end acc. DIN 11850 series 2 (with position indicator)</b>   |        |  |  |                  |                |             |
| 15  | ½"     | 4.5                                      | 0-16                                   | PTFE             | 1.2            | 166098      |
| 20  | ¾"     | 9.0                                      | 0-16                                   | PTFE             | 1.25           | 166101      |
| 25  | 1"     | 15                                       | 0-16                                   | PTFE             | 1.58           | 166104      |
| 32  | 1 ¼"   | 23                                       | 0-10                                   | PTFE             | 2.13           | 166107      |
| 40  | 1 ½"   | 33                                       | 0-10                                   | PTFE             | 2.5            | 166110      |
| 50  | 2"     | 53                                       | 0-10                                   | PTFE             | 3.72           | 166113      |

Ordering chart for valves (other versions on request)

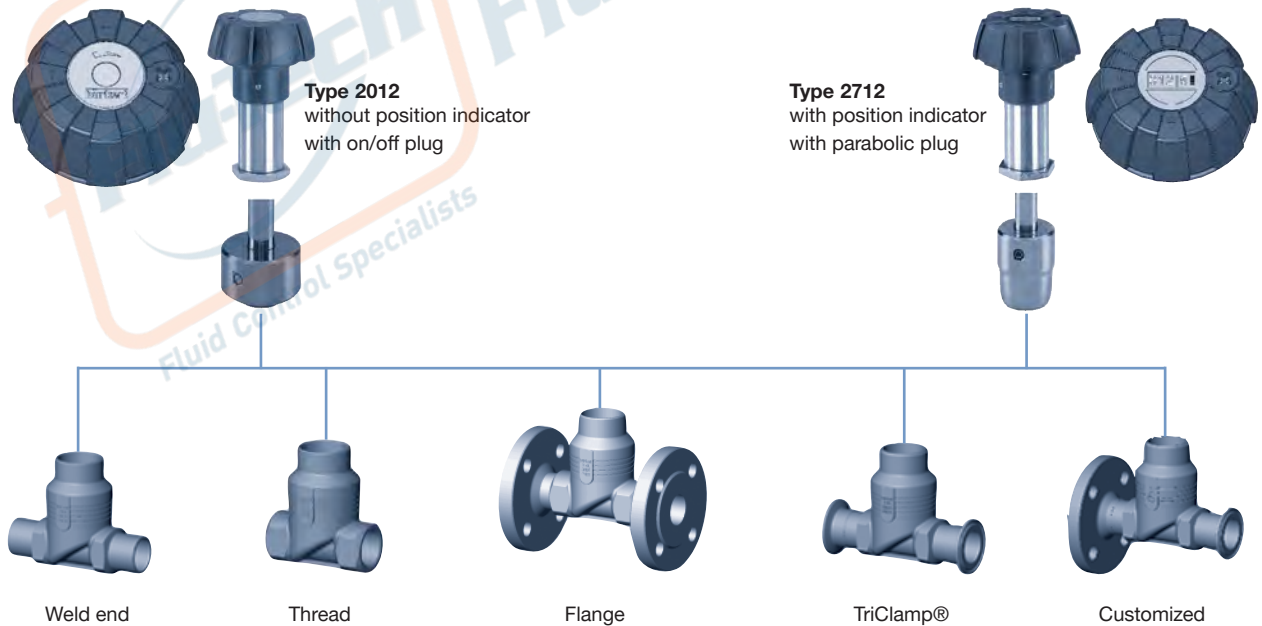


**Type 2702**  
Seat sealing  
stainless steel  
parabolic plug

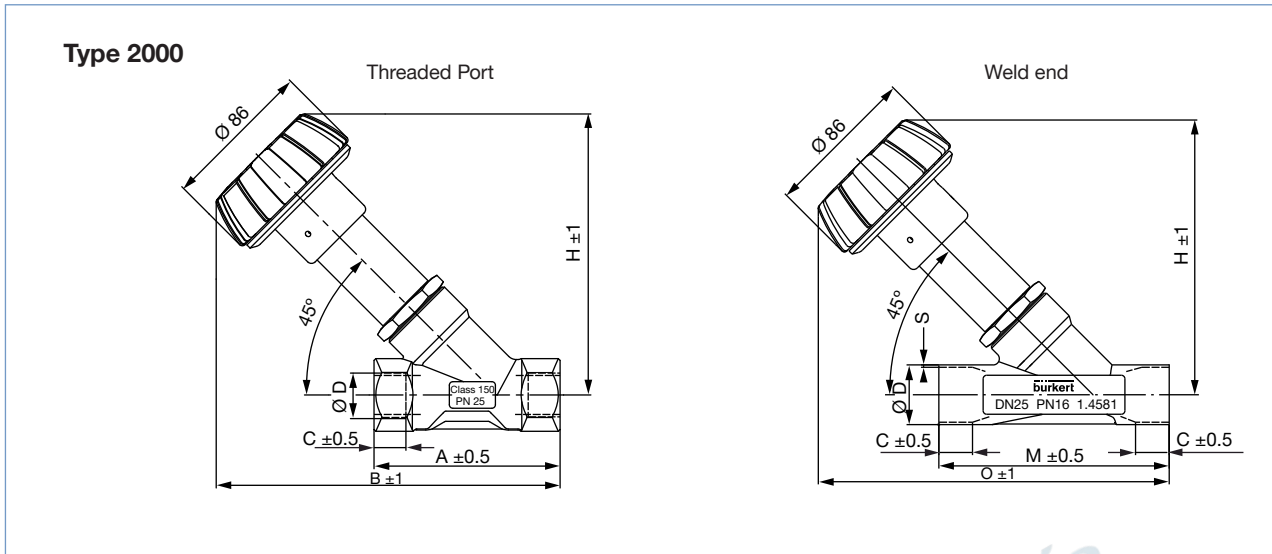
Flow direction  
below seat

| Port Size   |        | K <sub>vs</sub> value<br>water [m³/h] | Max.<br>operating<br>pressure<br>[bar] | Seal<br>material<br>(parabolic<br>trim) | Weight<br>[kg] | Article no. |
|---|--------|---------------------------------------|--|---|----------------|-------------|
| [mm]  | [inch] |                                       |  |   |                |             |
| <b>Type 2702 body with G threaded port (with position indicator)</b>                    |        |                                       |  |   |                |             |
| 15  | ½"     | 4.5                                   | 0-16                                   | 1.4571                                  | 1.2            | 219726      |
| 20  | ¾"     | 9.0                                   | 0-16                                   | 1.4571                                  | 1.3            | 219728      |
| 25  | 1"     | 15                                    | 0-16                                   | 1.4571                                  | 1.6            | 219730      |
| 32  | 1 ¼"   | 23                                    | 0-10                                   | 1.4571                                  | 2.1            | 219732      |
| 40  | 1 ½"   | 33                                    | 0-10                                   | 1.4571                                  | 2.5            | 219734      |
| 50  | 2"     | 53                                    | 0-10                                   | 1.4571                                  | 3.7            | 166129      |
| <b>Type 2702 body with weld end acc. EN ISO 1127/ISO 4200 (with position indicator)</b> |        |                                       |  |   |                |             |
| 15  | ½"     | 4.5                                   | 0-16                                   | 1.4571                                  | 1.2            | 166115      |
| 20  | ¾"     | 9.0                                   | 0-16                                   | 1.4571                                  | 1.3            | 166118      |
| 25  | 1"     | 15                                    | 0-16                                   | 1.4571                                  | 1.6            | 166121      |
| 32  | 1 ¼"   | 23                                    | 0-10                                   | 1.4571                                  | 2.1            | 166124      |
| 40  | 1 ½"   | 33                                    | 0-10                                   | 1.4571                                  | 2.5            | 166127      |
| 50  | 2"     | 53                                    | 0-10                                   | 1.4571                                  | 3.7            | 166130      |
| <b>Type 2702 body with weld end acc. DIN 11850 series 2 (with position indicator)</b>   |        |                                       |  |   |                |             |
| 15  | ½"     | 4.5                                   | 0-16                                   | 1.4571                                  | 1.2            | 166116      |
| 20  | ¾"     | 9.0                                   | 0-16                                   | 1.4571                                  | 1.3            | 166119      |
| 25  | 1"     | 15                                    | 0-16                                   | 1.4571                                  | 1.6            | 166122      |
| 32  | 1 ¼"   | 23                                    | 0-10                                   | 1.4571                                  | 2.1            | 166125      |
| 40  | 1 ½"   | 33                                    | 0-10                                   | 1.4571                                  | 2.5            | 166128      |
| 50  | 2"     | 53                                    | 0-10                                   | 1.4571                                  | 3.7            | 166131      |

The manual actuator of Type 2000 and 2702 can also be combined with different globe valve bodies (on request)



Dimensions [mm]



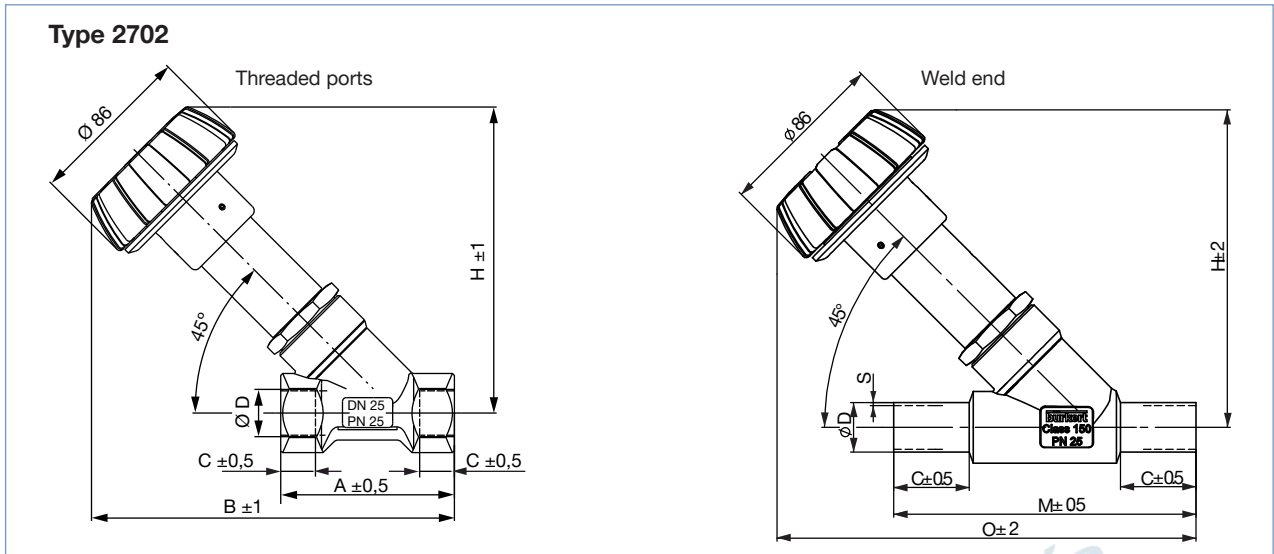
| All bodies orifice [mm] | All threaded ports |       |       | G thread |    | NPT thread |      | Rc thread |      | All weld end bodies |       |       | EN ISO 1127/ ISO 4200 |     |    | DIN 11850 S2 |     |    |
|-------------------------|--------------------|-------|-------|----------|----|------------|------|-----------|------|---------------------|-------|-------|-----------------------|-----|----|--------------|-----|----|
|                         | A                  | B     | H     | ØD       | C  | ØD         | C    | ØD        | C    | M                   | O     | H     | ØD                    | S   | C  | ØD           | S   | C  |
| 15                      | 65                 | 178   | 153.6 | G ½      | 14 | NPT ½      | 13.7 | Rc ½      | 13.2 | 100                 | 186.2 | 152.2 | 21.3                  | 1.6 | 5  | 19           | 1.5 | 6  |
| 20                      | 75                 | 180   | 152.9 | G ¾      | 16 | NPT ¾      | 14.0 | Rc ¾      | 14.5 | 115                 | 190.5 | 151.5 | 26.9                  | 1.6 | 5  | 23           | 1.5 | 6  |
| 25                      | 90                 | 188   | 158.8 | G 1      | 18 | NPT 1      | 16.8 | Rc 1      | 16.8 | 130                 | 198.0 | 155.0 | 33.7                  | 2   | 8  | 29           | 1.5 | 10 |
| 32                      | 110                | 201   | 165.0 | G 1 ¼    | 20 | NPT 1 ¼    | 17.3 | Rc 1 ¼    | 19.1 | 145                 | 210.0 | 165   | 42.4                  | 2   | 8  | 35           | 1.5 | 6  |
| 40                      | 120                | 211   | 175.6 | G 1 ½    | 22 | NPT 1 ½    | 17.3 | Rc 1 ½    | 19.1 | 160                 | 218.2 | 169.2 | 48.3                  | 2   | 8  | 41           | 1.5 | 10 |
| 50                      | 150                | 239.1 | 194.1 | G 2      | 24 | NPT 2      | 17.6 | Rc 2      | 23.4 | 175                 | 235.6 | 185.6 | 60.3                  | 2.6 | 12 | 53           | 1.5 | 10 |

Other valve bodies on request

DTS 1000098491 EN Version: G Status: RL (released | freigegeben | valide) printed: 04.02.2020



Dimensions [mm]



| All bodies orifice [mm] | All threaded ports |       |       | G thread |    | NPT thread |      | Rc thread |      |
|-------------------------|--------------------|-------|-------|----------|----|------------|------|-----------|------|
|                         | A                  | B     | H     | ØD       | C  | ØD         | C    | ØD        | C    |
| 15                      | 65                 | 178   | 154   | G ½      | 14 | NPT ½      | 13.7 | Rc ½      | 13.2 |
| 20                      | 75                 | 180   | 153   | G ¾      | 16 | NPT ¾      | 14.0 | Rc ¾      | 14.5 |
| 25                      | 90                 | 188   | 159   | G 1      | 18 | NPT 1      | 16.8 | Rc 1      | 16.8 |
| 32                      | 110                | 201   | 165   | G 1 ¼    | 20 | NPT 1 ¼    | 17.3 | Rc 1 ¼    | 19.1 |
| 40                      | 120                | 211   | 176   | G 1 ½    | 22 | NPT 1 ½    | 17.3 | Rc 1 ½    | 19.1 |
| 50                      | 150                | 239.5 | 194.5 | G 2      | 24 | NPT 2      | 17.6 | Rc 2      | 23.4 |

| All bodies orifices [mm] | EN ISO 1127/ISO 4200 and DIN 11850 R2 |       |       |                      |     |    |              |     |    | BS 4825 Part 1, ASME, SMS 3008 |       |       |    |       |      |          |      |    |     |
|--------------------------|---------------------------------------|-------|-------|----------------------|-----|----|--------------|-----|----|--------------------------------|-------|-------|----|-------|------|----------|------|----|-----|
|                          |                                       |       |       | EN ISO 1127/ISO 4200 |     |    | DIN 11850 S2 |     |    | BS 4825 Part 1                 |       |       |    | ASME  |      | SMS 3008 |      |    |     |
|                          | M                                     | O     | H     | ØD                   | S   | C  | ØD           | S   | C  | M                              | O     | H     | C  | ØD    | S    | ØD       | S    | ØD | S   |
| 15                       | 100                                   | 192.5 | 158.5 | 21.3                 | 1.6 | 20 | 19           | 1.5 | 20 | 135                            | 204.5 | 158.5 | 38 | 12.7  | 1.2  | 12.7     | 1.65 | 12 | 1   |
| 20                       | 115                                   | 197.0 | 158   | 26.9                 | 1.6 | 25 | 23           | 1.5 | 20 | 145                            | 210   | 158   | 38 | 19.05 | 1.2  | 19.05    | 1.65 | 18 | 1   |
| 25                       | 130                                   | 202.2 | 159.5 | 33.7                 | 2   | 30 | 29           | 1.5 | 26 | 152                            | 210.5 | 159.5 | 38 | 25.4  | 1.65 | 25.4     | 1.65 | 25 | 1.2 |
| 32                       | 145                                   | 210.0 | 170   | 42.4                 | 2   | 26 | 35           | 1.5 | 26 | -                              | -     | -     | -  | -     | -    | -        | -    | -  | -   |
| 40                       | 160                                   | 223.0 | 173   | 48.3                 | 2   | 30 | 41           | 1.5 | 26 | 182                            | 233   | 173   | 38 | 38.1  | 1.65 | 38.1     | 1.65 | 38 | 1.2 |
| 50                       | 175                                   | 240.5 | 190.5 | 60.3                 | 2.6 | 35 | 53           | 1.5 | 38 | 210                            | 254.5 | 190.5 | 45 | 50.8  | 1.65 | 50.8     | 1.65 | 51 | 1.2 |

Other valve bodies on request

