

# → Series Hygienic 4000

## Hygienic 4000

Safety valve made of stainless steel, angle type, with stainless steel spring



### ■ MATERIAL



### ■ SPECIFICATION



DN 25 – DN 100



–40°C to + 200°C  
depending on version



0,4 – 16 bar  
depending on valve  
pressure range and  
service temperature

### ■ SUITABLE FOR

|                        |                         |  |
|------------------------|-------------------------|--|
| Liquids                | neutral and non-neutral |  |
| Air, gases and vapours | neutral and non-neutral |  |
| Steam                  |                         |  |

### ■ EXAMPLES OF USE

For the protection of:

- processes, plants and containers in the food and pharmaceutical industry for air, neutral and non-neutral vapours and gases, steam and liquids
- food industry
- Dairy industry
- breweries and beverage industry
- pharmaceutical industry
- Cosmetic industry
- Medical technology
- Clean Service applications

### ■ FEATURES

- Smooth and faultless surface finish optimized for cleaning process
- Minimal dead space in inlet area and no gaps in the valve
- Exposed and rinsed o-ring seals
- Shape of valve body avoids forming of puddles in the valve after it has opened
- Suitable for CIP/SIP due to pneumatic lifting device
- Gap-free installation of seals in contact with the medium
- Surface roughness in the primary area  $R_a < 0.75\mu m$
- Optional: electropolished and/or mechanically polished
- Moulded diaphragm for separating the product space from the springhousing
- Dead space ratio  $L/D \sim 2,0$

For explanation see chapter 1.1 General information on the hygienic valves. Definition of surface quality and options according to Chapter 1.1 Table V-301.

### ■ APPROVALS

|                                 |                        |
|---------------------------------|------------------------|
| TÜV-Type test approval 2095     | D/G, F                 |
| EU type examination             | S/G, L                 |
| ASME                            | S, G, L                |
| CRN                             | S, G, L                |
| TSG ZF001-2006                  | D/G (S/G), F (L)       |
| TR ZU 032/2013 - TR ZU 010/2011 | D/G (S/G), F (L)       |
| KGS                             | G                      |
| <b>Requirements</b>             |                        |
| DIN EN ISO 4126-1               | VdTÜV Guideline SV 100 |
| PED 2014/68/EU                  | ASME-Code Sec. XIII    |
| TRD 421                         | KGS AA 319             |
| AD 2000 Data sheet A2           |                        |
| <b>Classification society</b>   |                        |
| American Bureau of Shipping     | ABS                    |
| Bureau Veritas                  | BV                     |
| Registro Italiano Navale        | RINA                   |

### ■ MATERIALS

| Component                        | Material        | DIN EN | ASME  |
|----------------------------------|-----------------|--------|-------|
| Body                             | Stainless steel | 1.4404 | 316 L |
| Inner parts, wetted              | Stainless steel | 1.4404 | 316 L |
| Upper section, other inner parts | Stainless steel | 1.4404 | 316 L |
| Spring                           | Stainless steel | 1.4310 | 302   |

|                                                                                                                                                              |                         |                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| t                                                                                                                                                            | Standard with diaphragm | for neutral and non-neutral media.<br>Spring, moving parts and the environment are protected from being affected by the medium. |
| Parts which are difficult to clean in the guide, the spring housing and the spindle / disc combination are protected against soiling by elastomer diaphragm. |                         |                                                                                                                                 |

■ MEDIUM

|    |                    |                                                                                                   |
|----|--------------------|---------------------------------------------------------------------------------------------------|
| GF | gaseous and liquid | Air, vapours, gases, liquids and - depending on safety valve version and seal<br>- also for steam |
|----|--------------------|---------------------------------------------------------------------------------------------------|

■ TYPE OF LIFTING MECHANISM

|   |                                                       |
|---|-------------------------------------------------------|
| P | Pneumatic lifting device                              |
| L | with lifting lever                                    |
| O | without lifting device, standard for gastight version |

■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

| Nominal diameter DN |          | 25 | 40 | 50 | 65  | 80  | 100 |
|---------------------|----------|----|----|----|-----|-----|-----|
| Inlet DN            | Standard | 25 | 40 | 50 | 65  | 80  | 100 |
|                     | optional | 40 | 65 | 80 | 100 | 125 | 150 |
| Outlet DN           | 40       | ■  |    |    |     |     |     |
|                     | 65       |    | ■  |    |     |     |     |
|                     | 80       |    |    | ■  |     |     |     |
|                     | 100      |    |    |    | ■   |     |     |
|                     | 125      |    |    |    |     | ■   |     |
|                     | 150      |    |    |    |     |     | ■   |

■ TYPE OF CONNECTION INLET / OUTLET

| KLSDIN / KLS DIN | Standard | Clamp connection /<br>Clamp connection                       | DIN 32676-A / DIN 32676-A | Pipe Standard DIN 11850-2 / 11866-A |
|------------------|----------|--------------------------------------------------------------|---------------------------|-------------------------------------|
| KS1 / KS1        |          | Taper nipple / Taper nipple                                  | DIN 11851 / DIN 11851     | Pipe Standard DIN 11850-2 / 11866-A |
| GS1 / GS1        |          | Threaded ferrule connection /<br>Threaded ferrule connection | DIN 11851 / DIN 11851     | Pipe Standard DIN 11850-2 / 11866-A |



■ SEALS / DIAPHRAGM

|      |                          |                    |          |                 |
|------|--------------------------|--------------------|----------|-----------------|
| FKM  | Fluorcarbon              | Seals / diaphragms | FDA, USP | -20°C to +200°C |
| EPDM | Ethylene propylene diene | Seals / diaphragms | FDA, USP | -40°C to +170°C |

## ■ NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

### Series Hygienic 4000: Connection, installation dimensions, ranges of adjustment

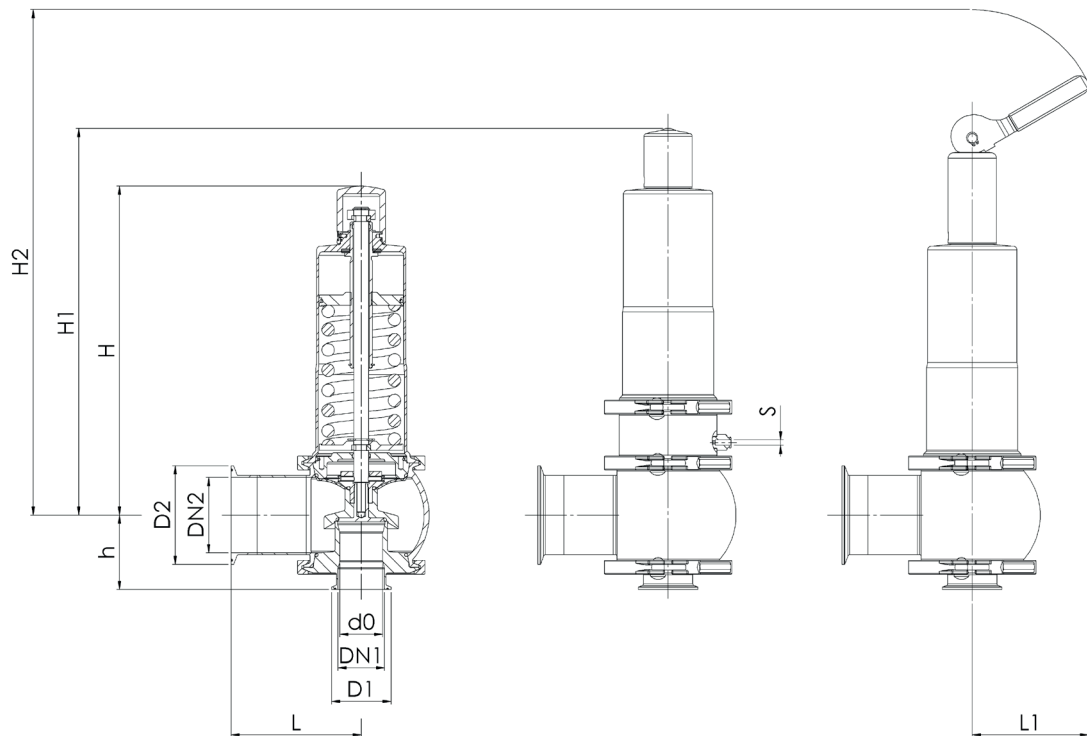
| Nominal diameter                                | DN                                 | 25                         | 40       | 50       | 65       | 80       | 100      |
|-------------------------------------------------|------------------------------------|----------------------------|----------|----------|----------|----------|----------|
| Connection                                      |                                    | Clamp connection DIN 32676 |          |          |          |          |          |
| Connection Inlet                                | DN1                                | 25                         | 40       | 50       | 65       | 80       | 100      |
| Connection Outlet                               | DN2                                | 40                         | 65       | 80       | 100      | 125      | 150      |
| Installation dimensions in mm                   | L                                  | 80                         | 120      | 140      | 153      | 178      | 181      |
|                                                 | L <sup>1</sup> <sub>3</sub>        | 132                        | 166      | 200      | 125      | 140      | 140      |
|                                                 | h                                  | 47                         | 64       | 80       | 92       | 112      | 126      |
|                                                 | D1                                 | 50,5                       | 50,5     | 64       | 91       | 106      | 119      |
|                                                 | D2                                 | 50,5                       | 91       | 106      | 119      | 155      | 183      |
|                                                 | H                                  | 183                        | 285      | 354      | 445      | 513      | 586      |
|                                                 | H1 <sup>2</sup>                    | 216                        | 335      | 414      | 515      | 613      | 701      |
|                                                 | H2 <sup>3</sup>                    | 359                        | 496      | 614      | 642      | 755      | 830      |
| Compressed air connection in mm                 | S                                  | 6                          | 6        | 6        | 6        | 8        | 8        |
|                                                 | d <sub>o</sub>                     | 23                         | 37       | 46       | 60       | 74       | 92       |
| Coefficients of flow ISO 4126-1                 | K <sub>dr</sub> (F)                | 0,45                       | 0,45     | 0,45     | 0,45     | 0,45     | 0,45     |
|                                                 | K <sub>dr</sub> (D/G) <sup>1</sup> | 0,70                       | 0,70     | 0,70     | 0,70     | 0,70     | 0,70     |
| Coefficients of flow ASME Code Sec. VIII Div. 1 | K <sub>dr</sub> (F)                | 0,452                      | 0,452    | 0,452    | 0,452    | 0,452    | 0,452    |
|                                                 | K <sub>dr</sub> (D/G)              | 0,680                      | 0,680    | 0,680    | 0,680    | 0,680    | 0,680    |
| Weight                                          | kg                                 | 2,2                        | 7,0      | 13,0     | 24,5     | 41,3     | 64,0     |
|                                                 | kg <sup>2</sup>                    | 3,0                        | 8,0      | 15,0     | 29,0     | 50,0     | 76,0     |
|                                                 | kg <sup>3</sup>                    | 2,6                        | 7,5      | 13,5     | 25,0     | 42,0     | 65,0     |
| Range of adjustment                             | bar                                | 0,4 - 16                   | 0,4 - 16 | 0,4 - 16 | 0,4 - 10 | 0,4 - 8  | 0,4 - 8  |
| Range of adjustment ASME                        | psi                                | 15 - 232                   | 15 - 232 | 15 - 232 | 15 - 232 | 15 - 145 | 15 - 145 |

<sup>1</sup>Coefficient of flow for D/G valid for 6 bar or more, for smaller set pressures see values in capacity table.

<sup>2</sup>Values for version with pneumatic lifting device

<sup>3</sup>Values for version with lifting lever

## ■ MAIN DIMENSIONS, INSTALLATION DIMENSIONS



| Series | Valve version | Medium | Lifting device | Nominal diameter DN | Connection type |        | Connection type |        | Seal | Options | Set pressure | Quantity |
|--------|---------------|--------|----------------|---------------------|-----------------|--------|-----------------|--------|------|---------|--------------|----------|
|        |               |        |                |                     | Inlet           | Outlet | Inlet           | Outlet |      |         |              |          |
| 4000   | t             | GF     | P              | 25                  | KLSDIN          | KLSDIN | 25              | 40     | EPDM | P07     | 3,2          | 1        |
| 4000   | t             | GF     |                |                     |                 |        |                 |        |      |         |              |          |
| 4000   | t             | GF     |                |                     |                 |        |                 |        |      |         |              |          |
| 4000   | t             | GF     |                |                     |                 |        |                 |        |      |         |              |          |
| 4000   | t             | GF     |                |                     |                 |        |                 |        |      |         |              |          |

■ TECHNICAL FINISHES, VARIANTS, ACCESSORIES

|     |                                                                                                                  |                          |
|-----|------------------------------------------------------------------------------------------------------------------|--------------------------|
| S62 | Inductive proximity sensor, fitted, for indication of valve position, including connection cable 5m <sup>1</sup> | <input type="checkbox"/> |
| A05 | Sealing wire / sealing on the fastening elements                                                                 | <input type="checkbox"/> |
|     |                                                                                                                  | <input type="checkbox"/> |

<sup>1</sup>not available for version tGFL (with lifting lever)

■ PROPERTIES  
DEFINITION OF SURFACE QUALITY AND OPTIONS ACCORDING TO CHAPTER 1.1 TABLE V-301

|     |                                                                   |                          |                          |
|-----|-------------------------------------------------------------------|--------------------------|--------------------------|
| P01 | Oil- and grease-free production                                   | <input type="checkbox"/> | <input type="checkbox"/> |
| P05 | Quality of surfaces in contact with media in inlet<br>Ra <= 0,375 | <input type="checkbox"/> | <input type="checkbox"/> |
| P07 | Electropolished surfaces                                          | <input type="checkbox"/> | <input type="checkbox"/> |
| P09 | Surfaces mechanically and electropolished                         | <input type="checkbox"/> | <input type="checkbox"/> |

■ CERTIFICATES / APPROVALS

|       |                                                                                                                     |                          |     |                                                                                                                                         |                          |
|-------|---------------------------------------------------------------------------------------------------------------------|--------------------------|-----|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| C01   | Factory certificate acc. DIN EN 10204 2.2 (WKZ 2.2)                                                                 | <input type="checkbox"/> | C06 | ATEX evaluation acc. to 2014/34/EU                                                                                                      | <input type="checkbox"/> |
| C02   | Test certificate acc. DIN EN 10204 3.1 (WPZ 3.1)                                                                    | <input type="checkbox"/> | C07 | SIL evaluation relating to IEC 61508-2                                                                                                  | <input type="checkbox"/> |
| C03   | Material test certificate acc. DIN EN 10204 3.1 (MPZ 3.1)<br>(pressure retaining part)                              | <input type="checkbox"/> | C09 | Seat tightness test with helium, leak detection method<br>under vacuum incl. Factory Inspection Certificate 3.1<br>acc. to DIN EN 10204 | <input type="checkbox"/> |
| C04   | TÜV/DEKRA individual inspection<br>acc. EN 10204 3.2 (TÜV/DEKRA-APZ)                                                | <input type="checkbox"/> | C10 | Certificate of oil- and grease free production                                                                                          | <input type="checkbox"/> |
| C05-1 | Sealing material<br>Manufacturer certification (FDA, USP,...),<br>Please indicate description of certificate: ..... | <input type="checkbox"/> |     |                                                                                                                                         | <input type="checkbox"/> |

■ ADMISSIONS / ACCREDITATIONS

|     |                                                                                              |                          |     |                                                                                     |                          |
|-----|----------------------------------------------------------------------------------------------|--------------------------|-----|-------------------------------------------------------------------------------------|--------------------------|
| AA1 | EC Type examination acc. to Directive 2014/68/EU                                             | <input type="checkbox"/> | AK3 | American Bureau of Shipping (ABS) type approval                                     | <input type="checkbox"/> |
| AA2 | TÜV component test acc. to VdTÜV specification sheet<br>SV 100                               | <input type="checkbox"/> | AK4 | Bureau Veritas (BV) type approval                                                   | <input type="checkbox"/> |
| AA3 | Certification acc. to ASME Boiler and Pressure Vessel<br>Code, Sec. XIII (ASME) <sup>2</sup> | <input type="checkbox"/> | AK6 | Registro Italiano Navale (RINA) type approval                                       | <input type="checkbox"/> |
| AA4 | EAC - certificate/declaration with passport for the valve<br>and laser marking of the valve  | <input type="checkbox"/> | AL  | Individual inspection by notified body inspector –<br>(body to be indicated): ..... | <input type="checkbox"/> |
| AA5 | Manufacture License of Special Equipment People's<br>Republic of China (ML)                  | <input type="checkbox"/> |     |                                                                                     | <input type="checkbox"/> |
| AA7 | Registration according to Canadian Registration<br>Number (CRN) <sup>3</sup>                 | <input type="checkbox"/> |     |                                                                                     | <input type="checkbox"/> |

<sup>2</sup>ASME not for gases in combination with liquids | <sup>3</sup>CRN only in combination with ASME

■ ENQUIRY

Copy and send to: [order@goetze.de](mailto:order@goetze.de).

| Series Hygienic 4000: Blowing-off rates at 10% above set pressure |      |                        |        |      |                        |        |       |                        |         |       |
|-------------------------------------------------------------------|------|------------------------|--------|------|------------------------|--------|-------|------------------------|---------|-------|
| Nominal diameter DN                                               |      | 25                     |        |      | 40                     |        |       | 50                     |         |       |
|                                                                   |      | d <sub>0</sub> = 23 mm |        |      | d <sub>0</sub> = 37 mm |        |       | d <sub>0</sub> = 46 mm |         |       |
| Set pressure bar                                                  |      | I                      | II     | III  | I                      | II     | III   | I                      | II      | III   |
| Air I<br>Nm³/h                                                    | 0,4  | 207,3                  | 171,0  | 6,6  | 536,5                  | 442,4  | 17,2  | 829,2                  | 683,9   | 26,6  |
|                                                                   | 0,7  | 278,8                  | 223,7  | 8,5  | 721,4                  | 579,0  | 21,9  | 1115,0                 | 894,9   | 33,8  |
|                                                                   | 1,0  | 348,1                  | 277,1  | 9,9  | 900,8                  | 717,1  | 25,7  | 1392,3                 | 1108,5  | 39,7  |
|                                                                   | 1,5  | 473,0                  | 373,8  | 12,2 | 1224,1                 | 967,5  | 31,5  | 1892,1                 | 1495,4  | 48,8  |
|                                                                   | 2,0  | 593,9                  | 466,6  | 14,1 | 1536,9                 | 1207,5 | 36,5  | 2375,5                 | 1866,3  | 56,4  |
|                                                                   | 2,5  | 709,2                  | 554,5  | 15,8 | 1835,4                 | 1435,0 | 40,8  | 2836,9                 | 2218,1  | 63,0  |
|                                                                   | 3,0  | 828,5                  | 645,1  | 17,3 | 2144,0                 | 1669,5 | 44,7  | 3313,9                 | 2580,5  | 69,1  |
| Steam II<br>kg/h                                                  | 3,5  | 941,3                  | 730,4  | 18,7 | 2436,0                 | 1890,1 | 48,3  | 3765,2                 | 2921,4  | 74,6  |
|                                                                   | 4,0  | 1055,7                 | 816,6  | 20,0 | 2732,1                 | 2113,3 | 51,6  | 4222,8                 | 3266,5  | 79,8  |
| Water III<br>m³/h                                                 | 4,5  | 1168,3                 | 901,2  | 21,2 | 3023,4                 | 2332,3 | 54,8  | 4673,2                 | 3604,9  | 84,7  |
|                                                                   | 5,0  | 1281,8                 | 986,4  | 22,3 | 3317,2                 | 2552,7 | 57,8  | 5127,2                 | 3945,6  | 89,3  |
|                                                                   | 5,5  | 1394,3                 | 1070,6 | 23,4 | 3608,2                 | 2770,6 | 60,6  | 5577,1                 | 4282,3  | 93,6  |
|                                                                   | 6,0  | 1507,3                 | 1155,0 | 24,5 | 3900,9                 | 2989,1 | 63,3  | 6029,4                 | 4620,2  | 97,8  |
|                                                                   | 6,5  | 1616,4                 | 1236,5 | 25,5 | 4183,2                 | 3200,0 | 65,9  | 6465,7                 | 4946,1  | 101,8 |
|                                                                   | 7,0  | 1725,5                 | 1317,9 | 26,4 | 4465,5                 | 3410,7 | 68,4  | 6902,0                 | 5271,7  | 105,7 |
|                                                                   | 7,5  | 1834,6                 | 1399,2 | 27,3 | 4747,8                 | 3621,0 | 70,8  | 7338,4                 | 5596,8  | 109,4 |
|                                                                   | 8,0  | 1943,7                 | 1480,3 | 28,2 | 5030,0                 | 3831,0 | 73,1  | 7774,7                 | 5921,4  | 113,0 |
|                                                                   | 8,5  | 2052,8                 | 1561,4 | 29,1 | 5312,3                 | 4040,8 | 75,3  | 8211,1                 | 6245,7  | 116,4 |
|                                                                   | 9,0  | 2161,8                 | 1642,5 | 30,0 | 5594,6                 | 4250,5 | 77,5  | 8647,4                 | 6569,9  | 119,8 |
|                                                                   | 9,5  | 2270,9                 | 1723,6 | 30,8 | 5876,9                 | 4460,4 | 79,7  | 9083,7                 | 6894,3  | 123,1 |
|                                                                   | 10,0 | 2380,0                 | 1804,6 | 31,6 | 6159,2                 | 4670,1 | 81,7  | 9520,1                 | 7218,4  | 126,3 |
|                                                                   | 11,0 | 2598,2                 | 1966,8 | 33,1 | 6723,8                 | 5089,8 | 85,7  | 10392,7                | 7867,1  | 132,5 |
|                                                                   | 12,0 | 2816,4                 | 2128,6 | 34,6 | 7288,4                 | 5508,7 | 89,5  | 11265,4                | 8514,5  | 138,4 |
|                                                                   | 13,0 | 3034,5                 | 2290,2 | 36,0 | 7853,0                 | 5926,9 | 93,2  | 12138,1                | 9160,9  | 144,0 |
|                                                                   | 14,0 | 3252,7                 | 2452,5 | 37,4 | 8417,6                 | 6346,9 | 96,7  | 13010,7                | 9810,2  | 149,5 |
|                                                                   | 15,0 | 3470,9                 | 2614,8 | 38,7 | 8982,2                 | 6766,8 | 100,1 | 13883,4                | 10459,2 | 154,7 |
|                                                                   | 16,0 | 3689,0                 | 2776,4 | 40,0 | 9546,8                 | 7185,0 | 103,4 | 14756,1                | 11105,6 | 159,8 |

| Series Hygienic 4000: Blowing-off rates at 10% above set pressure |      |                        |         |       |                        |         |       |                        |         |       |
|-------------------------------------------------------------------|------|------------------------|---------|-------|------------------------|---------|-------|------------------------|---------|-------|
| Nominal diameter DN                                               |      | 65                     |         |       | 80                     |         |       | 100                    |         |       |
|                                                                   |      | d <sub>0</sub> = 60 mm |         |       | d <sub>0</sub> = 74 mm |         |       | d <sub>0</sub> = 92 mm |         |       |
| Set pressure bar                                                  |      | I                      | II      | III   | I                      | II      | III   | I                      | II      | III   |
| Air I<br>Nm³/h                                                    | 0,4  | 1410,8                 | 1163,5  | 45,2  | 2146,0                 | 1769,8  | 68,8  | 3316,9                 | 2735,4  | 106,4 |
|                                                                   | 0,7  | 1897,0                 | 1522,5  | 57,5  | 2885,6                 | 2315,9  | 87,5  | 4460,1                 | 3579,5  | 135,2 |
|                                                                   | 1,0  | 2368,8                 | 1885,8  | 67,6  | 3603,2                 | 2868,6  | 102,8 | 5569,2                 | 4433,8  | 158,9 |
|                                                                   | 1,5  | 3219,1                 | 2544,1  | 82,9  | 4896,6                 | 3869,9  | 126,2 | 7568,4                 | 5981,5  | 195,0 |
|                                                                   | 2,0  | 4041,5                 | 3175,2  | 95,9  | 6147,5                 | 4829,9  | 145,8 | 9501,9                 | 7465,3  | 225,4 |
|                                                                   | 2,5  | 5089,6                 | 3979,3  | 107,3 | 7341,6                 | 5740,1  | 163,2 | 11347,6                | 8872,2  | 252,2 |
|                                                                   | 3,0  | 5638,0                 | 4390,2  | 117,5 | 8576,0                 | 6678,0  | 178,8 | 13255,5                | 10321,8 | 276,4 |
| Steam II<br>kg/h                                                  | 3,5  | 6405,9                 | 4970,3  | 127,0 | 9744,1                 | 7560,4  | 193,2 | 15061,0                | 11685,8 | 298,6 |
|                                                                   | 4,0  | 7184,4                 | 5557,3  | 135,8 | 10928,3                | 8453,3  | 206,6 | 16891,3                | 13065,9 | 319,3 |
| Water III<br>m³/h                                                 | 4,5  | 7950,6                 | 6133,1  | 144,1 | 12093,7                | 9329,1  | 219,1 | 18692,6                | 14419,5 | 338,7 |
|                                                                   | 5,0  | 8723,1                 | 6712,7  | 151,9 | 13268,8                | 10210,8 | 231,0 | 20508,9                | 15782,4 | 357,1 |
|                                                                   | 5,5  | 9488,4                 | 7285,6  | 159,3 | 14432,9                | 11082,2 | 242,3 | 22308,2                | 17129,3 | 374,5 |
|                                                                   | 6,0  | 10257,9                | 7860,4  | 166,4 | 15603,4                | 11956,5 | 253,1 | 24117,5                | 18480,6 | 391,2 |
|                                                                   | 6,5  | 11000,3                | 8414,9  | 173,2 | 16732,6                | 12800,0 | 263,5 | 25862,8                | 19784,3 | 407,2 |
|                                                                   | 7,0  | 11742,6                | 8968,9  | 179,8 | 17861,8                | 13642,7 | 273,4 | 27608,2                | 21086,9 | 422,6 |
|                                                                   | 7,5  | 12485,0                | 9522,0  | 186,1 | 18991,0                | 14484,1 | 283,0 | 29353,5                | 22387,3 | 437,5 |
|                                                                   | 8,0  | 13227,3                | 10074,2 | 192,2 | 20120,2                | 15323,9 | 292,3 | 31098,9                | 23685,5 | 451,9 |
|                                                                   | 8,5  | 13969,7                | 10626,0 | 198,1 |                        |         |       |                        |         |       |
|                                                                   | 9,0  | 14712,0                | 11177,4 | 203,9 |                        |         |       |                        |         |       |
|                                                                   | 9,5  | 15454,3                | 11729,5 | 209,5 |                        |         |       |                        |         |       |
|                                                                   | 10,0 | 16196,7                | 12280,8 | 214,9 |                        |         |       |                        |         |       |

Series Hygienic 4000: Blowing-off rates at 10% above set pressure

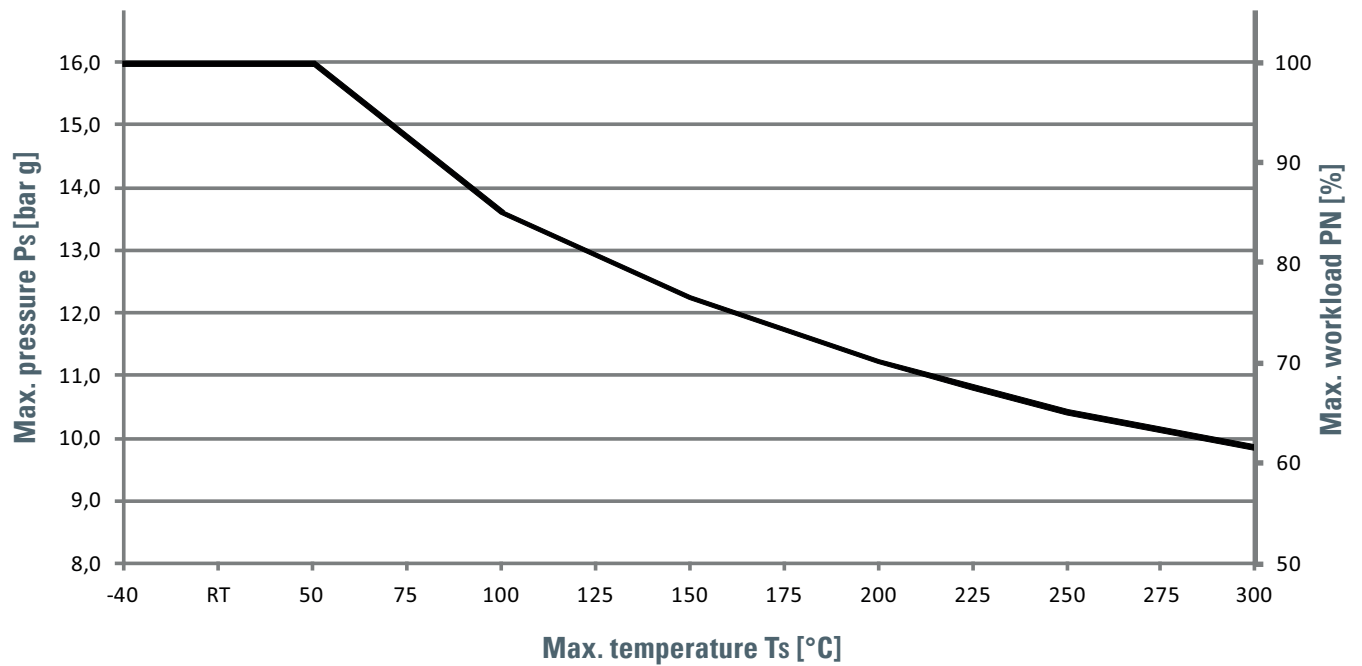
| Nominal diameter DN |     | 25                                   |        |       | 40                                   |         |       | 50                                   |         |       |
|---------------------|-----|--------------------------------------|--------|-------|--------------------------------------|---------|-------|--------------------------------------|---------|-------|
|                     |     | d <sub>0</sub> = 0,9055 inch (23 mm) |        |       | d <sub>0</sub> = 1,4566 inch (37 mm) |         |       | d <sub>0</sub> = 1,8110 inch (46 mm) |         |       |
| Set pressure psi(g) |     | I                                    | II     | III   | I                                    | II      | III   | I                                    | II      | III   |
| Air I<br>SCFM       | 15  | 262,7                                | 737,5  | 46,9  | 679,7                                | 1908,5  | 121,3 | 1050,6                               | 2949,9  | 187,5 |
|                     | 30  | 383,1                                | 1075,8 | 63,5  | 991,5                                | 2783,9  | 164,2 | 1532,6                               | 4303,0  | 253,8 |
|                     | 40  | 471,5                                | 1323,8 | 73,3  | 1220,2                               | 3425,9  | 189,6 | 1886,0                               | 5295,3  | 293,1 |
|                     | 50  | 559,8                                | 1571,9 | 81,9  | 1448,8                               | 4067,9  | 212,0 | 2239,4                               | 6287,6  | 327,7 |
|                     | 60  | 648,2                                | 1820,0 | 89,7  | 1677,5                               | 4709,9  | 232,2 | 2592,8                               | 7279,9  | 359,0 |
|                     | 70  | 736,6                                | 2068,1 | 96,9  | 1906,1                               | 5351,9  | 250,8 | 2946,2                               | 8272,2  | 387,7 |
|                     | 80  | 824,9                                | 2316,1 | 103,6 | 2134,8                               | 5993,9  | 268,2 | 3299,7                               | 9264,6  | 414,5 |
|                     | 90  | 913,3                                | 2564,2 | 109,9 | 2363,5                               | 6635,9  | 284,4 | 3653,1                               | 10256,9 | 439,6 |
|                     | 100 | 1001,6                               | 2812,3 | 115,9 | 2592,1                               | 7277,9  | 299,8 | 4006,5                               | 11249,2 | 463,4 |
|                     | 110 | 1090,0                               | 3060,4 | 121,5 | 2820,8                               | 7919,9  | 314,5 | 4359,9                               | 12241,5 | 486,0 |
| Steam II<br>PPH     | 120 | 1178,3                               | 3308,4 | 126,9 | 3049,4                               | 8561,9  | 328,4 | 4713,3                               | 13233,8 | 507,6 |
|                     | 130 | 1266,7                               | 3556,5 | 132,1 | 3278,1                               | 9203,9  | 341,8 | 5066,8                               | 14226,1 | 528,4 |
|                     | 140 | 1355,0                               | 3804,6 | 137,1 | 3506,7                               | 9845,9  | 354,7 | 5420,2                               | 15218,4 | 548,3 |
|                     | 150 | 1443,4                               | 4052,7 | 141,9 | 3735,4                               | 10487,9 | 367,2 | 5773,6                               | 16210,7 | 567,6 |
|                     | 160 | 1531,8                               | 4300,8 | 146,5 | 3964,0                               | 11129,9 | 379,2 | 6127,0                               | 17203,0 | 586,2 |
|                     | 170 | 1620,1                               | 4548,8 | 151,1 | 4192,7                               | 11771,9 | 390,9 | 6480,4                               | 18195,3 | 604,2 |
|                     | 180 | 1708,5                               | 4796,9 | 155,4 | 4421,3                               | 12413,9 | 402,2 | 6833,9                               | 19187,6 | 621,7 |
|                     | 190 | 1796,8                               | 5045,0 | 159,7 | 4650,0                               | 13055,9 | 413,3 | 7187,3                               | 20180,0 | 638,8 |
|                     | 200 | 1885,2                               | 5293,1 | 163,8 | 4878,7                               | 13697,9 | 424,0 | 7540,7                               | 21172,3 | 655,4 |
|                     | 210 | 1973,5                               | 5541,1 | 167,9 | 5107,3                               | 14339,9 | 434,5 | 7894,1                               | 22164,6 | 671,5 |
| Water III<br>GPM    | 220 | 2061,9                               | 5789,2 | 171,8 | 5336,0                               | 14981,9 | 444,7 | 8247,5                               | 23156,9 | 687,4 |
|                     | 230 | 2150,2                               | 6037,3 | 175,7 | 5564,6                               | 15623,9 | 454,7 | 8601,0                               | 24149,2 | 702,8 |
|                     | 232 | 2167,9                               | 6086,9 | 176,5 | 5610,3                               | 15752,3 | 456,7 | 8671,6                               | 24347,7 | 705,8 |

Series Hygienic 4000: Blowing-off rates at 10% above set pressure

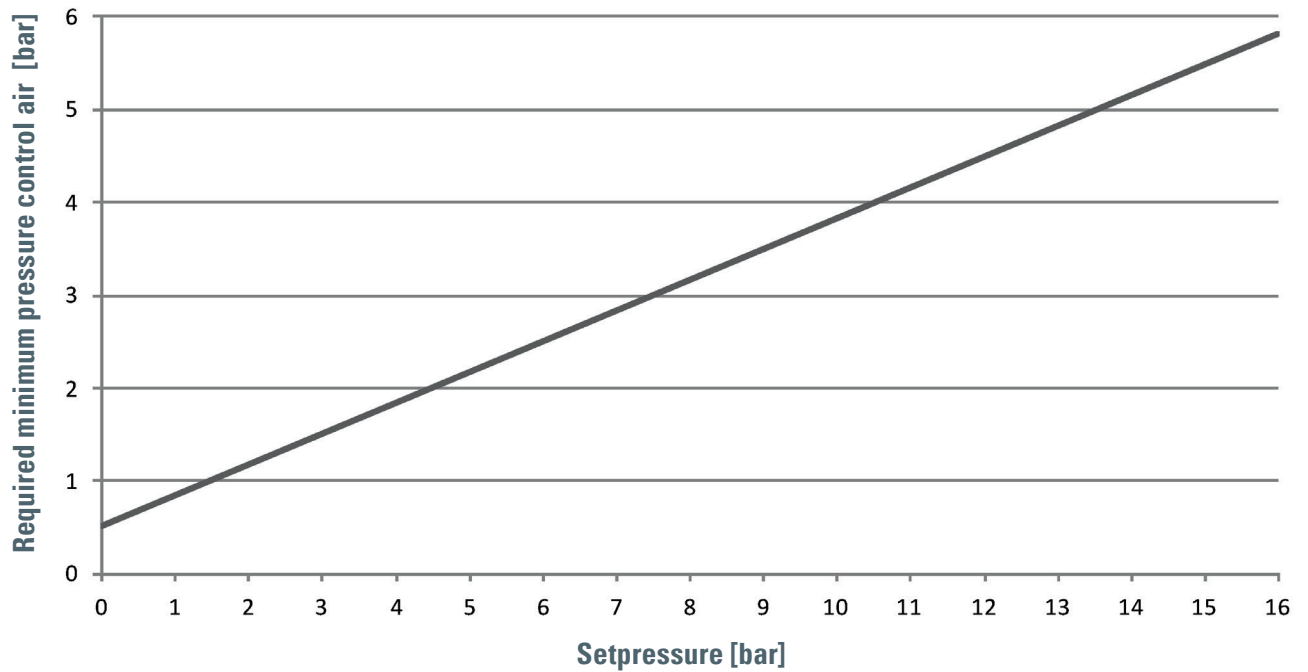
| Nominal diameter DN |     | 65                                   |         |        | 80                                   |         |        | 100                                  |         |        |
|---------------------|-----|--------------------------------------|---------|--------|--------------------------------------|---------|--------|--------------------------------------|---------|--------|
|                     |     | d <sub>0</sub> = 2,3622 inch (60 mm) |         |        | d <sub>0</sub> = 2,9133 inch (74 mm) |         |        | d <sub>0</sub> = 3,6220 inch (92 mm) |         |        |
| Set pressure psi(g) |     | I                                    | II      | III    | I                                    | II      | III    | I                                    | II      | III    |
| Air I<br>SCFM       | 15  | 1787,4                               | 5018,7  | 318,9  | 2718,9                               | 7634,0  | 485,1  | 4202,5                               | 11799,5 | 749,8  |
|                     | 30  | 2607,4                               | 7320,8  | 431,8  | 3966,1                               | 11135,8 | 656,9  | 6130,2                               | 17212,1 | 1015,3 |
|                     | 40  | 3208,7                               | 9009,1  | 498,6  | 4880,7                               | 13703,8 | 758,5  | 7543,9                               | 21181,3 | 1172,4 |
|                     | 50  | 3809,9                               | 10697,3 | 557,5  | 5795,3                               | 16271,8 | 848,0  | 8957,6                               | 25150,5 | 1310,7 |
|                     | 60  | 4411,2                               | 12385,5 | 610,7  | 6710,0                               | 18839,8 | 928,9  | 10371,3                              | 29119,8 | 1435,8 |
|                     | 70  | 5012,5                               | 14073,8 | 659,6  | 7624,6                               | 21407,8 | 1003,4 | 11785,0                              | 33089,0 | 1550,9 |
|                     | 80  | 5613,8                               | 15762,0 | 705,2  | 8539,2                               | 23975,8 | 1072,7 | 13198,6                              | 37058,2 | 1658,0 |
|                     | 90  | 6215,1                               | 17450,2 | 748,0  | 9453,8                               | 26543,8 | 1137,7 | 14612,3                              | 41027,5 | 1758,5 |
|                     | 100 | 6816,4                               | 19138,5 | 788,4  | 10368,4                              | 29111,8 | 1199,3 | 16026,0                              | 44996,7 | 1853,7 |
|                     | 110 | 7417,6                               | 20826,7 | 826,9  | 11283,0                              | 31679,8 | 1257,8 | 17439,7                              | 48965,9 | 1944,1 |
| Steam II<br>PPH     | 120 | 8018,9                               | 22515,0 | 863,7  | 12197,7                              | 34247,8 | 1313,7 | 18853,4                              | 52935,2 | 2030,6 |
|                     | 130 | 8620,2                               | 24203,2 | 898,9  | 13112,3                              | 36815,8 | 1367,4 | 20267,0                              | 56904,4 | 2113,5 |
|                     | 140 | 9221,5                               | 25891,4 | 932,9  | 14026,9                              | 39383,8 | 1419,0 | 21680,7                              | 60873,6 | 2193,3 |
|                     | 150 | 9822,8                               | 27579,7 | 965,6  | 14941,5                              | 41951,8 | 1468,8 | 23094,4                              | 64842,9 | 2270,2 |
|                     | 160 | 10424,0                              | 29267,9 | 997,3  |                                      |         |        |                                      |         |        |
|                     | 170 | 11025,3                              | 30956,2 | 1028,0 |                                      |         |        |                                      |         |        |
|                     | 180 | 11626,6                              | 32644,4 | 1057,8 |                                      |         |        |                                      |         |        |
|                     | 190 | 12227,9                              | 34332,6 | 1086,8 |                                      |         |        |                                      |         |        |
|                     | 200 | 12829,2                              | 36020,9 | 1115,0 |                                      |         |        |                                      |         |        |
|                     | 210 | 13430,5                              | 37709,1 | 1142,5 |                                      |         |        |                                      |         |        |
| Water III<br>GPM    | 220 | 14031,7                              | 39397,3 | 1169,4 |                                      |         |        |                                      |         |        |
|                     | 230 | 14633,0                              | 41085,6 | 1195,7 |                                      |         |        |                                      |         |        |
|                     | 232 | 14753,3                              | 41423,2 | 1200,9 |                                      |         |        |                                      |         |        |

## Pressure-/ temperature rating

PN 16 | Material: 1.4404 / 1.4435

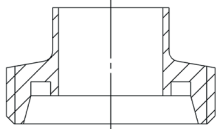
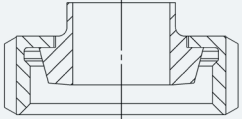
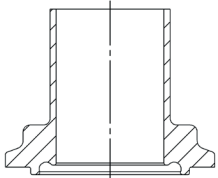
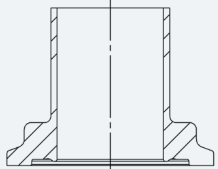
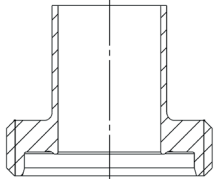
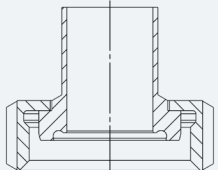
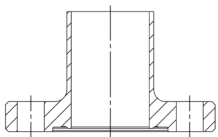
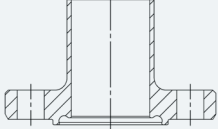
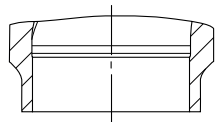


## Control air pneumatic lifting device (max. 6 bar)





# HYGIENIC AND ASEPTIC CONNECTIONS

| Connection type                      | Drawing                                                                             | Description                                                                                                                                     | Standard                                              | Pipe standard                                                                                                                                         | 400 | 400.5 | 4000 | 4020 | 4040 | 4060 |
|--------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------|------|------|------|------|
| KLSDIN<br>KLSISO<br>KLSASME<br>KLSIX |    | Clamp connection<br>Clamp connection<br>Clamp connection<br>Clamp connection                                                                    | DIN 32676-A<br>DIN 32676-B<br>DIN 32676-C<br>ISO 2852 | Pipe standard DIN 11850-2 / 11866-A<br>Pipe standard DIN EN ISO 1127 / DIN 11866-B<br>Pipe standard BS 4825-1 / DIN 11866-C<br>Pipe standard ISO 2037 |     |       | X    |      | X    | X    |
| GS1                                  |    | Threaded ferrule connection                                                                                                                     | DIN 11851-SC                                          | Pipe standard DIN 11850-2 / 11866-A                                                                                                                   |     |       | X    |      | X    | X    |
| KS1                                  |    | Taper nipple with groove cap nut                                                                                                                | DIN 11851-SD                                          | Pipe standard DIN 11850-2 / 11866-A                                                                                                                   |     |       | X    |      | X    | X    |
| A-NKS1<br>A-NKS2<br>A-NKS3           |    | Aseptic groove clamp connection<br>Aseptic groove clamp connection<br>Aseptic groove clamp connection                                           | DIN 11864-3-NKS<br>DIN 11864-3-NKS<br>DIN 11864-3-NKS | Pipe standard DIN 11850-2 / DIN 11866-A<br>Pipe standard DIN EN ISO 1127 / DIN 11866-B<br>Pipe standard BS 4825-1 / DIN 11866-C                       |     |       | X    |      | X    | X    |
| A-BKS1<br>A-BKS2<br>A-BKS3           |   | Aseptic collar clamp connection<br>Aseptic collar clamp connection<br>Aseptic collar clamp connection                                           | DIN 11864-3-BKS<br>DIN 11864-3-BKS<br>DIN 11864-3-BKS | Pipe standard DIN 11850-2 / DIN 11866-A<br>Pipe standard DIN EN ISO 1127 / DIN 11866-B<br>Pipe standard BS 4825-1 / DIN 11866-C                       |     |       | X    |      | X    | X    |
| A-GS1<br>A-GS2<br>A-GS3              |  | Aseptic threaded ferrule connection<br>Aseptic threaded ferrule connection<br>Aseptic threaded ferrule connection                               | DIN 11864-1-GS<br>DIN 11864-1-GS<br>DIN 11864-1-GS    | Pipe standard DIN 11850-2 / DIN 11866-A<br>Pipe standard DIN EN ISO 1127 / DIN 11866-B<br>Pipe standard BS 4825-1 / DIN 11866-C                       |     |       | X    |      | X    | X    |
| A-KS1<br>A-KS2<br>A-KS3              |  | Aseptic collar connection with groove cap nut<br>Aseptic collar connection with groove cap nut<br>Aseptic collar connection with groove cap nut | DIN 11864-1-BS<br>DIN 11864-1-BS<br>DIN 11864-1-BS    | Pipe standard DIN 11850-2 / DIN 11866-A<br>Pipe standard DIN EN ISO 1127 / DIN 11866-B<br>Pipe standard BS 4825-1 / DIN 11866-C                       |     |       | X    |      | X    | X    |
| A-BF1<br>A-BF2<br>A-BF3              |  | Aseptic flanged connection<br>Aseptic flanged connection<br>Aseptic flanged connection                                                          | DIN 11864-2-BF<br>DIN 11864-2-BF<br>DIN 11864-2-BF    | Pipe standard DIN 11850-2 / DIN 11866-A<br>Pipe standard DIN EN ISO 1127 / DIN 11866-B<br>Pipe standard BS 4825-1 / DIN 11866-C                       |     |       | X    |      | X    | X    |
| A-NF1<br>A-NF2<br>A-NF3              |  | Aseptic grooved flanged connection<br>Aseptic grooved flanged connection<br>Aseptic grooved flanged connection                                  | DIN 11864-2-NF<br>DIN 11864-2-NF<br>DIN 11864-2-NF    | Pipe standard DIN 11850-2 / DIN 11866-A<br>Pipe standard DIN EN ISO 1127 / DIN 11866-B<br>Pipe standard BS 4825-1 / DIN 11866-C                       |     |       | X    |      | X    | X    |
| SE4<br>SE5<br>SE6                    |  | Butt weld<br>Butt weld<br>Butt weld                                                                                                             |                                                       | Pipe standard DIN 11850-2 / DIN 11866-A<br>Pipe standard DIN EN ISO 1127 / DIN 11866-B<br>Pipe standard BS 4825-1 / DIN 11866-C                       |     |       |      |      | X    | X    |
| VC                                   |  | Container flange at valve inlet                                                                                                                 |                                                       |                                                                                                                                                       |     |       |      |      | X    |      |

Other connection types such as flange connection according to DIN EN 1092 / ASME B16.5, APV plain / grooved flanges, NA Connect, SMS threaded / tapered connection pieces are available on request.