# → Series Hygienic 400.5

## Hygienic 400.5

Overflow / Pressure control valve made of stainless steel, angle type
–External adjustment–



## SUITABLE FOR

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

## EXAMPLES OF USE

For the protection of:
- Pumps against overloading in closed circuits for neutral / non-neutral liquids

For the control 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
- 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
- Adjustable and settable during operation
- Possible to carry-out CIP/SIP by lifting the disc from the seat
- Gap-free installation of seals
- Surface roughness standard Ra<0,8 um
- Option: mechanically polished and/or electro-polished

## MATERIAL

## SPECIFICATION

| Special connections DN 20 – DN 32 | –40°C to + 200°C | 0,4 – 16 bar |
|---|---|---|

## APPROVALS

**European Pressure Equipment Directive**

**DGUV Test**

**Requirements**
PED 97/23/EC

**Additional hygienic requirements**
EG No. 852/2004
DIN EN 1672-2
9. GPSGV
GS-NG 2 and 5

## MATERIALS

| Component | Material | DIN EN | ASME |
|---|---|---|---|
| Body | Stainless steel | 1.4435 | 316 L |
| Inner parts, wetted | Stainless steel | 1.4435 | 316 L |
| Upper section, other inner parts | Stainless steel | 1.4404 | 316 L |
| Spring | Stainless steel | 1.4310 | 302 |
| Bellows | Stainless steel | 1.4571 | 316 Ti |

## VALVE VERSION

| | | |
|---|---|---|
| **b** | Standard with bellows | for neutral and non-neutral media and/or counter pressure up to 4 bar.<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 stainless steel bellows

**Valves can be delivered unset within a pressure range or set and sealed at the factory.**
Can be adjusted by hand wheel under operating conditions without medium escaping into the environment.

## 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

| | |
|---|---|
| **K** | Standard with twist-type lifting mechanism |

## AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

| **Nominal diameter** | | **20** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Connection type** | | **Clamp connection** | | | | | | **Threaded ferrule connection** | | |
| | | **DIN 11864-3 / DIN 11853-3** | | | **DIN 32676** | | | **DIN 11864-1 / DIN 11853-1** | | **DIN 11851** | |
| **Inlet** | | DN 20 | DN 25 | DN 32 | DN 20 | DN 25 | DN 32 | DN 20 | DN 25 | DN 20 | DN 25 |
| **Outlet** | **DN 25** | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| | **DN 32** | ■ | ■ | ■ | ■ | ■ | ■ | | | | |

## TYPE OF CONNECTION INLET / OUTLET Special connections

| | | | | |
|---|---|---|---|---|
| **A / A** | Standard | Aseptic collar clamp connection /<br>Aseptic collar clamp connection | DIN 11864-3 / DIN 11864-3<br>DIN 11853-3 / DIN 11853-3 | Pipe Standard<br>DIN 11850 |
| **KLSDIN / KLSDIN** | On request | Clamp connection / Clamp connection | DIN 32676 / DIN 32676 | Pipe Standard<br>DIN 11850 |
| **Against surcharge** | | | | |
| **N / N** | | Aseptic-Threaded ferrule connection A/<br>Aseptic-Threaded ferrule connection A | DIN 11864-1 / DIN 11864-1<br>DIN 11853-1 / DIN 11853-1 | Pipe Standard<br>DIN 11850 |
| **GSDIN / GSDIN** | | Threaded ferrule connection /<br>Threaded ferrule connection | DIN 11851 / DIN 11851 | Pipe Standard<br>DIN 11850 |
| **Further connection types available on request** | | | | |

## SEALS

| | | | | |
|---|---|---|---|---|
| **FKM** | Fluorcarbon | Elastomere moulded seal | FDA, USP, 3-A, ADI-free | –20°C to +200°C |
| **EPDM** | Ethylene propylene diene | Elastomere moulded seal | FDA | –40°C to +170°C |

## OPTIONS

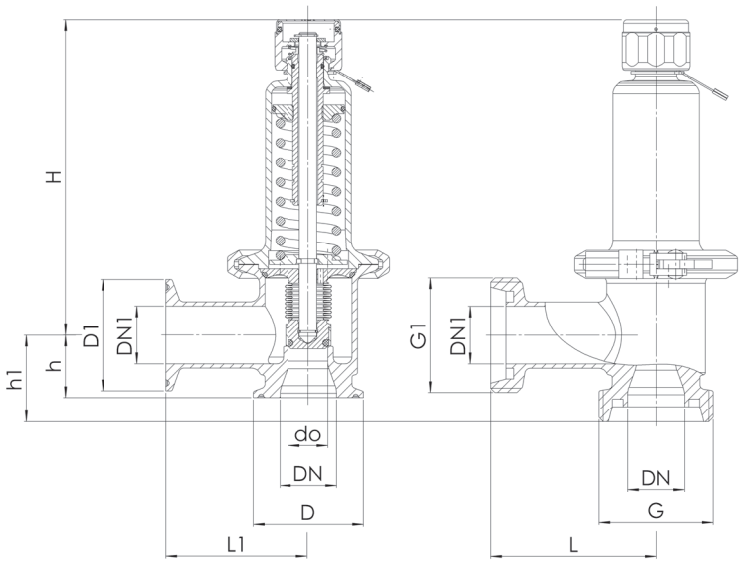
| | |
|---|---|
| Surface mechanically polished | **MP** |
| Surface mechanically polished and electro-polished | **MEP** |
| Special versions on request. | |

## NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

**Series Hygienic 400.5: Connection, installation dimensions, ranges of adjustment**

| Nominal diameter | DN | 20 | | | | |
|---|---|---|---|---|---|---|
| Connection | | Aseptic collar clamp connection **DIN 11864-3 / DIN 11853-1** Clamp connection **DIN 32676** | | | Aseptic-Threaded ferrule connection A **DIN 11864-1 / DIN 11853-1** Threaded ferrule connection **DIN 11851** | |
| Inlet | DN | 20 | 25 | 32 | 20 | 25 |
| | G | - | - | - | 20 (Rd 44 x 1/6") | 25 (Rd 52 x 1/6") |
| Outlet | DN1 | 25, 32 | 25, 32 | 32 | 25 | 25 |
| | G1 | - | - | - | 25 (Rd 52 x 1/6") | 25 (Rd 52 x 1/6") |
| Installation dimensions in mm | L | - | - | - | 75 | 75 |
| | L1 | 65 | 65 | 65 | - | - |
| | H | 145 | 145 | 145 | 145 | 145 |
| | h | 29 | 29 | 29 | - | - |
| | h1 | - | - | - | 40 | 40 |
| | D | 34 | 50,5 | 50,5 | - | - |
| | D1 | 50,5 | 50,5 | 50,5 | - | - |
| | do | 18 | 18 | 18 | 18 | 18 |
| Weight | кг | 1,3 | 1,3 | 1,3 | 1,4 | 1,4 |
| Set pressure | bar | 0,4-16 | 0,4-16 | 0,4-16 | 0,4-16 | 0,4-16 |
| Range of adjustment | bar | 0,4 - 1,5<br>1,5 - 4,5<br>4,5 - 7<br>7 - 10<br>10 - 14<br>14 - 16 | 0,4 - 1,5<br>1,5 - 4,5<br>4,5 - 7<br>7 - 10<br>10 - 14<br>14 - 16 | 0,4 - 1,5<br>1,5 - 4,5<br>4,5 - 7<br>7 - 10<br>10 - 14<br>14 - 16 | 0,4 - 1,5<br>1,5 - 4,5<br>4,5 - 7<br>7 - 10<br>10 - 14<br>14 - 16 | 0,4 - 1,5<br>1,5 - 4,5<br>4,5 - 7<br>7 - 10<br>10 - 14<br>14 - 16 |

## MAIN DIMENSIONS, INSTALLATION DIMENSIONS




## INDIVIDUAL SELECTION / VALVE CONFIGURATION

| Series | Valve version | Medium | Lifting device | Nominal diameter DN | Connection type | | Connection size | | Seal | Options | Set pressure | Quantity |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Inlet | Outlet | Inlet | Outlet | | | | |
| 400.5 | b | GF | K | 20 | *A* | *A* | *25* | *25* | *FKM* | *MEP* | *1,5–4,5* | *2* |
| 400.5 | b | GF | K | 20 | *GSDIN* | *GSDIN* | *25* | *25* | *EPDM* | *–* | *3,5* | *1* |
| 400.5 | b | GF | K | 20 | | | | | | | | |
| 400.5 | b | GF | K | 20 | | | | | | | | |
| 400.5 | b | GF | K | 20 | | | | | | | | |

In this table you can configure a valve according to your individual requirements (similar to the *example* shown, which should be deleted before you enter your own data). Please complete the table by hand using the abbreviations in this datasheet and then fax it to: +49(0)7141.4889488
Please do not forget to add your personal data so that our sales team can contact you.

Name

First Name

Company

Telephone

E-Mail


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## CAPACITY TABLE

**Series Hygienic 400.5: Kv values at 1 bar overpressure**

| Nominal diameter DN | 20 | | | | | |
|---|---|---|---|---|---|---|
| | Air [Nm³/h] | | | | | |
| Pressure range bar | 0,4 - 1,5 | 1,5 - 4,5 | 4,5 - 7 | 7 - 10 | 10 - 14 | 14 - 16 |
| Set pressure bar | | | | | | |
| 0,4 | 215 | | | | | |
| 1,0 | 278 | | | | | |
| 1,5 | 318 | 330 | | | | |
| 3,0 | | 455 | | | | |
| 4,5 | | 596 | 398 | | | |
| 5,7 | | | 428 | | | |
| 7,0 | | | 482 | 424 | | |
| 8,5 | | | | 435 | | |
| 10,0 | | | | 444 | 442 | |
| 12,0 | | | | | 531 | |
| 14,0 | | | | | 619 | 415 |
| 15,0 | | | | | | 433 |
| 16,0 | | | | | | 510 |

**Kv values at 1 bar overpressure**

| Nominal diameter DN | 20 | | | | | |
|---|---|---|---|---|---|---|
| | Water [m³/h] | | | | | |
| Pressure range bar | 0,4 - 1,5 | 1,5 - 4,5 | 4,5 - 7 | 7 - 10 | 10 - 14 | 14 - 16 |
| Set pressure bar | | | | | | |
| 0,4 | 7 | | | | | |
| 1,0 | 7,5 | | | | | |
| 1,5 | 8,1 | 6,7 | | | | |
| 3,0 | | 8,2 | | | | |
| 4,5 | | 9,9 | 7,0 | | | |
| 5,7 | | | 8,1 | | | |
| 7,0 | | | 9 | 7,5 | | |
| 8,5 | | | | 8,5 | | |
| 10,0 | | | | 9,1 | 6,9 | |
| 12,0 | | | | | 7,4 | |
| 14,0 | | | | | 8,8 | 4,9 |
| 15,0 | | | | | | 6,0 |
| 16,0 | | | | | | 6,3 |

**Kv values at 1 bar overpressure**

| Nominal diameter DN | 20 | | | | | |
|---|---|---|---|---|---|---|
| | Steam [kg/h] | | | | | |
| Pressure range bar | 0,4 - 1,5 | 1,5 - 4,5 | 4,5 - 7 | 7 - 10 | 10 - 14 | 14 - 16 |
| Set pressure bar | | | | | | |
| 0,4 | 163 | | | | | |
| 1,0 | 224 | | | | | |
| 1,5 | 250 | 195 | | | | |
| 3,0 | | 360 | | | | |
| 4,5 | | 466 | 306 | | | |
| 5,7 | | | 331 | | | |
| 7,0 | | | 374 | 325 | | |
| 8,5 | | | | 336 | | |
| 10,0 | | | | 340 | 336 | |
| 12,0 | | | | | 408 | |
| 14,0 | | | | | 466 | 317 |
| 15,0 | | | | | | 337 |
| 16,0 | | | | | | 380 |