# ART 682

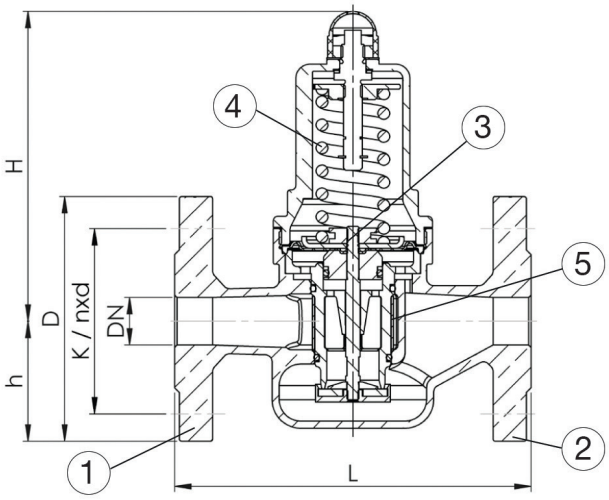
# Bronze / Gunmetal Pressure Reducing Valve

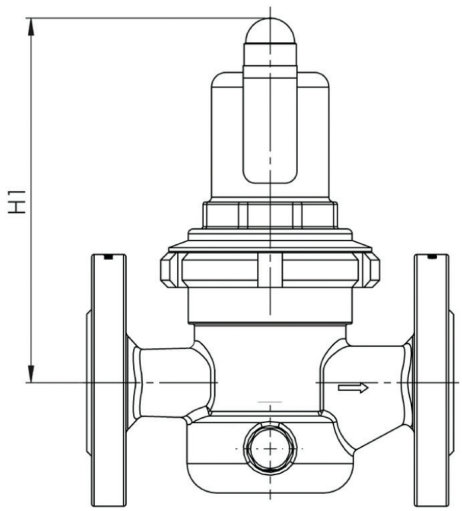
*Features*

- Flange connection (DIN EN 1092)
- Suitable for neutral and non-neutral liquids, air, gases, vapours and warm water
- WRAS Approved
- DIN DVGW guidelines, PED 2014/68/EU
- 24 Month Warranty
- Gauges available on request

*Typical Applications*

- Protection of domestic water supply systems
- Protection of commercial and industrial plants against an excess supply pressure
- Potable water supply according to DIN 1988
- Process water supply in industrial- and building technology
- Fire-fighting equipment and sprinkler systems
- Shipbuilding industry and offshore plants




| Connection | DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|
| Inlet pressure SP, HP up to | Bar | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 16 |
| Inlet pressure LP to | Bar | 25 | 25 | 25 | 25 | 25 | 25 | | | |
| Outlet pressure | Bar | 0.5-2 | 0.5-2 | 0.5-2 | 0.5-2 | 0.5-2 | 0.5-2 | 1-8 | 1-8 | 1-8 |
| | | 1-8 | 1-8 | 1-8 | 1-8 | 1-8 | 1-8 | | | 5-13 |
| | | 5-15 | 5-15 | 5-15 | 5-15 | 5-15 | 5-15 | | | |
| Installation dimensions in mm | D | 95 | 105 | 115 | 140 | 150 | 165 | 185 | 200 | 220 |
| | L | 130 | 150 | 160 | 180 | 200 | 230 | 290 | 310 | 350 |
| | H (H1) | 102 (128[1]) | 130 (150[1]) | 130 (150[1]) | 130 (150[1]) | 165 (185[1]) | 165 (185[1]) | 235 | 235 | 320 |
| | h | 46 | 50 | 55 | 68 | 73 | 80 | 89 | 96 | 112 |
| | K / nxd | 65 / 4xM12 | 75 / 4xM12 | 85 / 4xM12 | 100 / 4xM16 | 110 / 4xM16 | 125 / 4xM16 | 145 / 8xM16 | 160 / 8xM16 | 180 / 8xM16 |
| Weight | Kg | 2.8 (3.1[1]) | 4.2 (4.6[1]) | 4.7 (5.1[1]) | 5.9 (6.3[1]) | 8.6 (9.3[1]) | 10.5 (11.2[1]) | 20 | 22 | 40 |
| Coefficient of flow kvs[2] | $m^3/h$ | 3 | 5.8 | 6.7 | 7.6 | 12.5 | 15 | 40 | 50 | 80 |

[1] for type 682mGFO-LP
[2] The kvs value was determined according to DIN EN 60534-2-3. Instructions on how to determine size and capacity are to be found under section 2.

| No. | Part Name | Materials |
|---|---|---|
| 1 | Inlet Body | Bronze / Gunmetal CC499K |
| 2 | Outlet Body | Bronze / Gunmetal CC499K |
| 3 | Internal Parts | Bronze / Gunmetal CC499K<br>Stainless Steel 1.4404 |
| 4 | Spring | Spring steel with anti-rust protection 1.1200 |
| 5 | Strainer | Stainless Steel 1.4404 |

## Technical Data

| | |
|---|---|
| Inlet Pressure: | Up to 40 Bar |
| Outlet Pressure: | 0.5 to 15 Bar |
| Working Temperature: | -20°C to +120°C* |
| *See additonal info on pg.2 | |

Dimensions in mm

# ART 682

## Valve version

| | | |
|---|---|---|
| m | with diaphragm | High-quality, heat-resistant moulded elastomere, fabric-reinforced diaphragm.<br>Pressure adjustment by means of non-rising spindle.<br>Valve insert with balanced single seat valve completely made of stainless steel. |
| Complete valve cartridge SP/HP (order code: 482 Insert-DN..-seal) available as replacement part can be exchanged without removing the valve. | | |
| Complete valve cartridge LP (order code: 482 LP Insert-DN..-seal) available as replacement part can be exchanged without removing the valve. | | |
| Built-in dirt trap made of stainless steel. | | |
| Mesh size: | DN 15 to DN 32 0,60 mm<br>DN 40 and DN 80 0,75 mm | |

## Medium

| | | |
|---|---|---|
| GF | gaseous and liquid | for water, neutral and non-sticking liquids, compressed air and neutral gases; optionally with FPM elastomere seals for non-neutral media i.e. oils, fuels, oil-laden compressed air etc. Not suitable with steam. |

## Type of lifting mechanism

| | |
|---|---|
| O | without lifting device |

## Outlet pressure ranges

| | | | |
|---|---|---|---|
| SP | Standard version | Inlet pressure: up to 40 bar | Outlet pressure: from 1 to 8 bar |
| HP | High-pressure version<br>(not for DN65 and DN80) | Inlet pressure: up to 40 bar | Outlet pressure: from 5 to 15 bar |
| LP | Low-pressure version<br>(not for DN65, DN80 and DN100) | Inlet pressure: up to 25 bar | Outlet pressure: from 0,5 to 2 bar |

## Seal Options

| Option | Materials | Type | Working Temp. |
|---|---|---|---|
| EPDM | Ethylene propylene diene | Elastomere moulded diaphragm and seals<br>approvals according to drinking water directive | –20°C to +120°C (up to 8 bar outlet pressure)<br>-20°C to +95°C (from 8 bar outlet pressure) |
| FKM | Fluorocarbon | Elastomere moulded diaphragm and seals | –10°C to +120°C (up to 8 bar outlet pressure)<br>-10°C to +95°C (from 8 bar outlet pressure) |

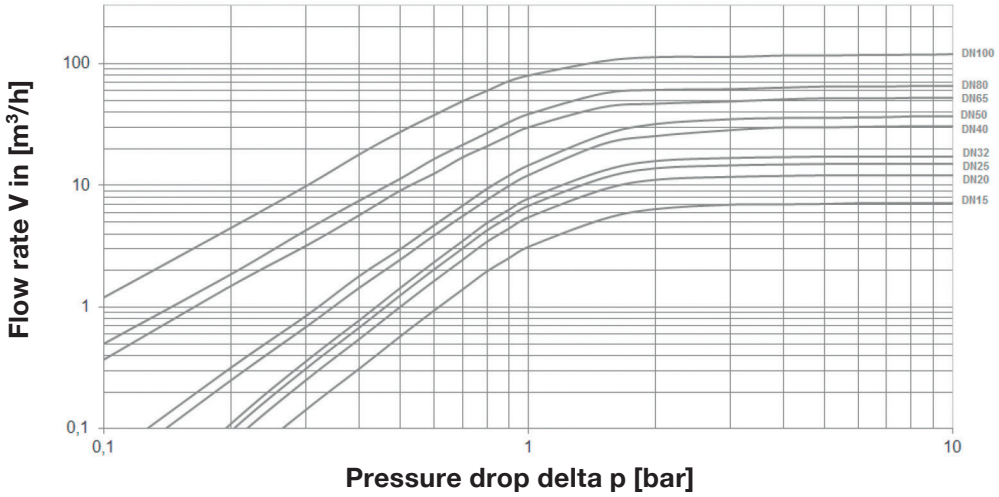
Dimensions in mm

## Capacity charts

### ART 682

Dimensioning by pressure loss on the outlet pressure side

**Flow chart water**



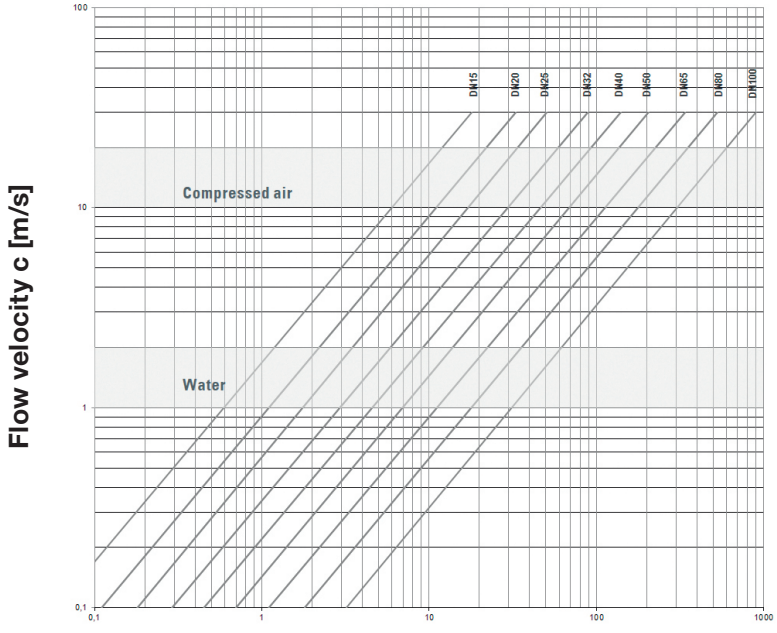

**Dimensioning by flow velocity**

**For Liquids:**
With help of the chart you can determine the nominal diameter (DN) for a given flow volume V ($m^3/h$). According to DVGW-guidelines (DIN 1988) a flow velocity of 2 m/s in domestic water supply systems should not be exceeded.

**For compressed air and other gaseous media:**
The usual flow velocity for compressed air is 10 - 20 m/s. For gaseous media the flow volume V should always be shown in actual cubic meters/hour.
If the flow volume is given in standard cubic meters, these should be converted into actual cubic meters before using the diagram.

$$V\,(m^3/h) = \frac{V_{Norm}\,(Nm^3/h)}{p_{absolut}\,(bar)} = \frac{V_{Norm}}{p\ddot{u}+1}$$

Actual cubic meters are based on the prevailing pressure of the medium on the outlet side of the pressure reducer.




Dimensions in mm
This data sheet is designed as a guide and should not be regarded as wholly accurate in every detail. We reserve the right to amend the specification of any product without notice.