# ART 681 M & F
## Bronze / Gunmetal
## Pressure Reducing Valve

*Features*

- Standard threaded connections:
  - Male thread BSPT (ISO 7/1)
  - Female thread BSPP (ISO 228/1). Available DN15, DN20 & DN25.
- Suitable for neutral and non-neutral liquids, air, gases, vapours and warm water
- DIN EN 1567, ISO 3822, PED 2014/68/EU
- Marine approvals - GL, LR, EMEA, BV, ABS, RS
- ATEX approval available at extra cost
- 24 month warranty
- Test certificate to EN10204-3.1 available on request

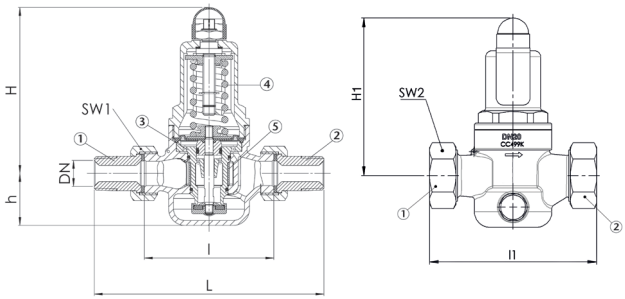
WRAS APPROVED PRODUCT

Available on bimstore.co

**Technical data**

Inlet pressure: Up to 40 Bar
Outlet pressure: 0.5 to 15 Bar
Working temp: EPDM or FKM Seal
-10°C to +95°C

See overleaf for additional information.




| Connection | DN | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" |
|---|---|---|---|---|---|---|---|
| Inlet pressure SP, HP up to | bar | 40 | 40 | 40 | 40 | 40 | 40 |
| 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 |
| | | 5 - 15 | 5 - 15 | 5 - 15 | 5 - 15 | 5 - 15 | 5 - 15 |
| Installation dimensions | L | 142 | 158 | 180 | 193 | 226 | 252 |
| in mm | l | 80 | 90 | 100 | 105 | 130 | 140 |
| | l1 | 85 | 95 | 105 | | | |
| | H (H1) | 102 (128[1]) | 102 (128[1]) | 130 (150[1]) | 130 (150[1]) | 165 (185[1]) | 165 (185[1]) |
| | h | 33 | 33 | 45 | 45 | 70 | 70 |
| | SW1 | 30 | 37 | 46 | 52 | 65 | 75 |
| | SW2 | 28 | 35 | 43 | 48 | 57 | 68 |
| Weight | kg | 1.2 (1.5[1]) | 1.3 (1.6[1]) | 2.4 (2.9[1]) | 2.6 (3.1[1]) | 5.5 (6.2[1]) | 6.0 (6.7[1]) |
| Coefficient of flow kvs | $m^3/h$ | 3 | 3.5 | 6.7 | 7.6 | 12.5 | 15 |

[1] for type 681mGFO-LP

| N. | 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 (316) |
| 4 | Spring | Spring steel with anti-rust protection 1.1200 (EN10270-1) |
| 5 | Strainer | Stainless Steel 316 |

**Typical Applications**

- Potable water supply
- Process water supply in industrial and building technology
- Fire-fighting equipment & sprinkler systems
- Shipbuilding industry and offshore plants
- Secondary areas in the food, pharmaceutical and cosmetics industries

**V1**. Dimensions in mm

# ART 681 M & F

## 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 insert SP/HP (order code: 681 Insert-DN..-seal) available as replacement part can be exchanged without removing the valve.

Complete valve insert LP (order code: 681 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 |
| | DN 40 and DN 50 | 0,75 mm |

## Medium

| | | |
|---|---|---|
| GF | gaseous and liquid | for water and distilled 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. |

## 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 | Inlet pressure: up to 40 bar | Outlet pressure: from 5 to 15 bar |
| LP | Low-pressure version | Inlet pressure: up to 25 bar | Outlet pressure: from 0,5 to 2 bar |

**Fixed setting at a required outlet pressure against surcharge.**

## Seat-Seal/Diaphragm Options

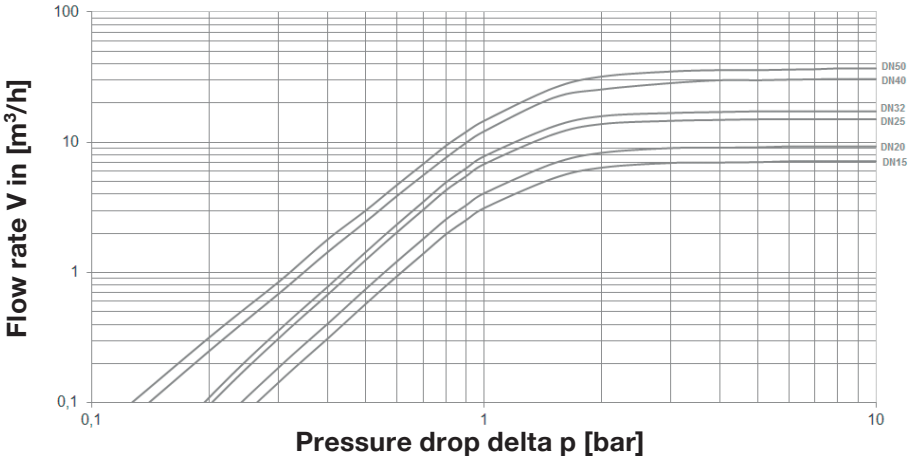
| Option | Materials | Type | Working Temp. |
|---|---|---|---|
| EPDM | Ethylene propylene diene | Elastomere moulded diaphragm and seals approvals according to drinking water directive | –10°C to +95°C |
| Against surcharge | | | |
| FKM | Fluorocarbon | Elastomere moulded diaphragm and seals | –10°C to +95°C |

# ART 681 M & F

## Capacity Charts

### Dimensioning by pressure loss on the outlet pressure side

### Flow chart water




**V1**. Dimensions in mm

# ART 681 M & F

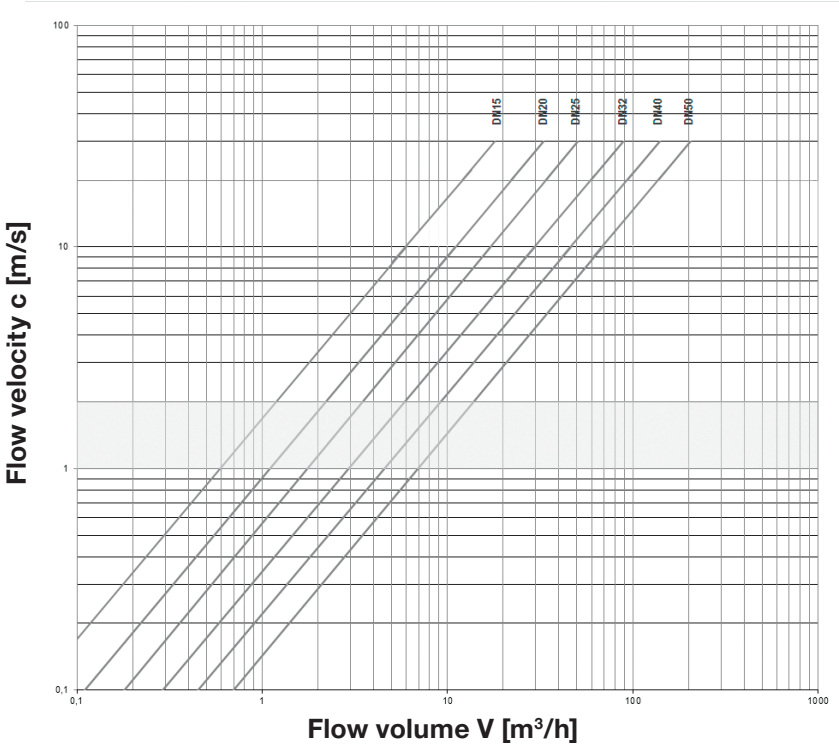
## Dimensioning by flow velocity

**For Liquids:**
With help of the chart you can determine the nominal diameter (DN) for a given flow volume V ($m^3/h$). The ideal flow velocity is between 1m/s – 2m/s.

**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.

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

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




**V1**. Dimensions in mm