

## Pressure Reducing Valve type 582



### Product description

A pressure reducing valve reduces the outlet pressure to a specified value.

#### Function

Downstream pressure (at the outlet) works against the spring resistance and raises the diaphragm until equilibrium of forces is reached. The desired outlet pressure is regulated by means of the spring pretensioning. The inlet pressure is not directly related to the outlet pressure. The pressure at the outlet thus remains constant, despite fluctuations at the inlet.

The diaphragm is not influenced by pressure peaks, meaning sensitive measuring devices can be protected downstream. The set pressure can be increased or reduced by turning the spindle at the top. Inward-pointing arrows, which visualize the direction of flow and the pressure setting, handling easier. Pressure reducing valves are often used to protect downstream devices against overpressure.

#### Applications

- Water treatment
- Chemical process industry
- Semiconductor industry
- Solar industry

#### Benefits/features

##### Easy assembly

- Compact design allows installation even when space is limited
- Radially dismountable
- Integrated assembling aid enables direct assembly of the valve
- Significantly shorter installation length thanks to union connections

##### Easy operation

- No re-torquing required thanks to central housing nut
- Easily adjustable set pressure
- Constant and stable control behavior
- Leak-resistant in the event of temperature fluctuations
- Low maintenance
- Pressure setting possible even during operation

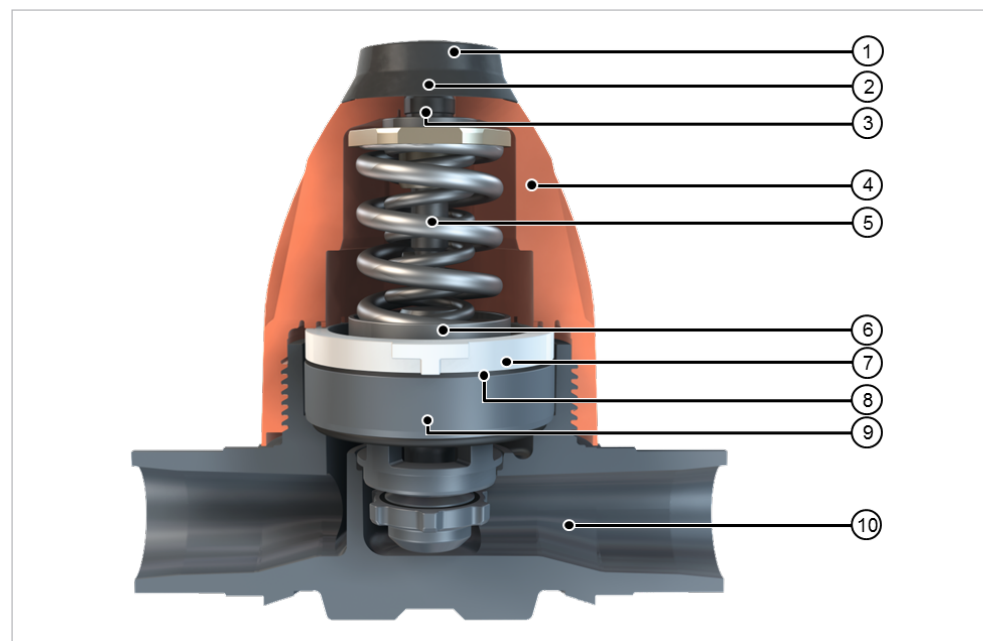
##### Flexible

- Manometer available as an option for neutral and aggressive media
- Various connection options available thanks to the spigot and union versions
- Low pressure spring set available
- Easy on spare parts thanks to the modular design

## Flow media

Neutral and aggressive media with a small amount of particles/solids. The chemical resistance depends on the selected valve material ([see online tool ChemRes PLUS](#)).

## Technical data



- 1 Protective cap
- 2 Central housing nut
- 3 Spindle
- 4 Upper part
- 5 Spring(s)
- 6 Pressure piece
- 7 Retaining ring
- 8 Diaphragm
- 9 Cartridge with piston
- 10 Lower part

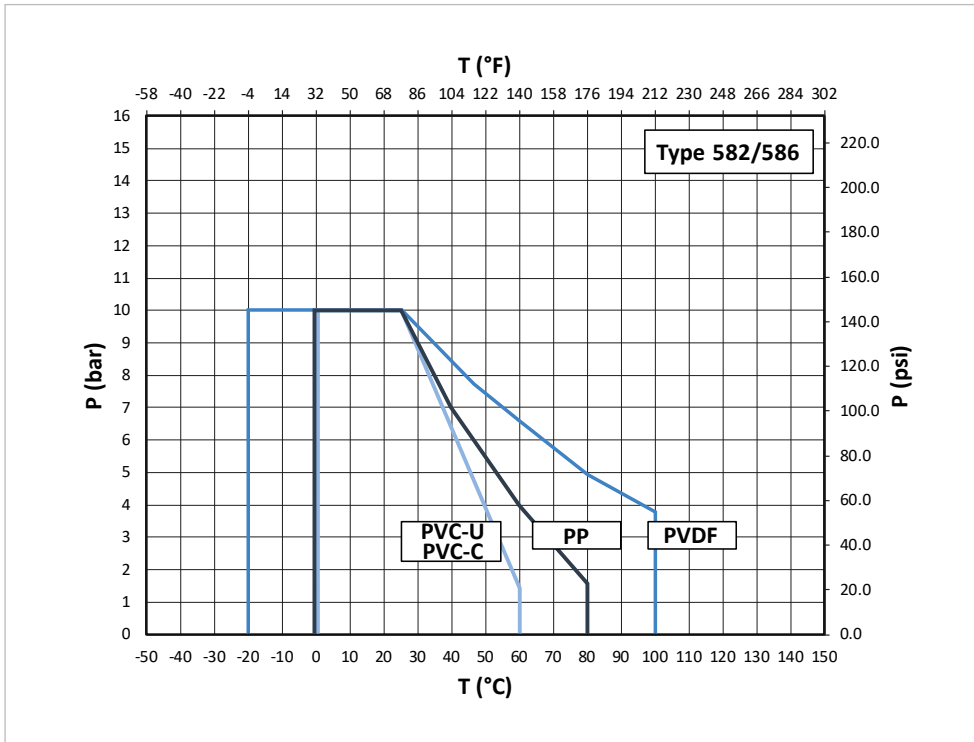
### Specification

|                          |  |                                   |
|--------------------------|--|-----------------------------------|
| <b>Dimensions</b>        | d16/DN10 – d63/DN50, 3/8" – 2"   |                                   |
| <b>Materials</b>         | Parts in contact with medium   | PVC-U, PVC-C, PP-H, PVDF, PVDF-HP |
|                          | Valve upper part   | PP-GF (orange)                    |
| <b>Gasket materials</b>  | EPDM, FKM  |                                   |
| <b>Diaphragm</b>         | EPDM/PTFE  |                                   |
| <b>Pressure level</b>    | PN10 @ +20°C (150 psi @ 68°F)  |                                   |
| <b>Setting range</b>     | Standard   | 0.5 – 9.0 bar (7 – 130 psi)       |
|                          | Optional   | 0.3 – 3 bar (4 – 44 psi)          |
| <b>Hysteresis</b>        | Difference between opening and closing pressure:<br>approx. 0.1 – 0.4 bar (1.5 – 5.8 psi)    |                                   |
| <b>Connections</b>       | Lower part with cementing or fusion spigots  |                                   |
|                          | Lower part with true union type connection to match all standard GF unions and inserts       |                                   |
|                          | Available upon request:<br>Various inserts from the GF range, e.g. transition to metal or PE |                                   |
| <b>Direction of flow</b> | Always corresponds to the the direction of the arrow on the lower part                       |                                   |
| <b>Assembly</b>          | Threaded inserts are available for safe assembly   |                                   |
| <b>Test standard</b>     | Testing for leak-tightness and function according to ISO 9393, ISO 12266                     |                                   |
| <b>Approvals</b>         | FDA  |                                   |

### Kv 100 values

| DN (mm) | Inch (inch) | d (mm) | Kv 100 (l/min) | Kv 100 (l/h) | Cv 100 (US gpm) |
|---------|-------------|--------|----------------|--------------|-----------------|
| 10      | 3/8         | 16     | 45             | 2'700        | 3.1             |
| 15      | 1/2         | 20     | 48             | 2'850        | 3.3             |
| 20      | 3/4         | 25     | 112            | 6'700        | 7.8             |
| 25      | 1           | 32     | 129            | 7'730        | 9.0             |
| 32      | 1 1/4       | 40     | 254            | 15'240       | 17.7            |
| 40      | 1 1/2       | 50     | 293            | 17'590       | 20.4            |
| 50      | 2           | 63     | 319            | 19'170       | 22.2            |

## Pressure-temperature diagrams

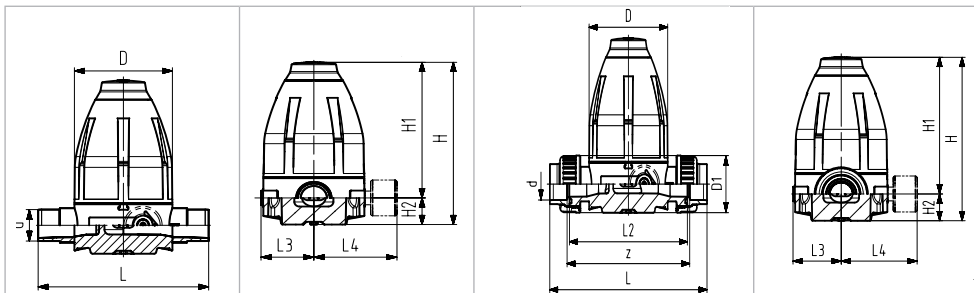


T Temperature (°C, °F)  
P Permissible pressure (bar, psi)

The pressure-temperature diagrams are based on a lifetime of 25 years and water or similar media.

## Dimensions

### Type 582 with threaded connections, cementable and fusionable spigots



### All materials

| d (mm)  | DN (mm) | Inch (inch)   | D (mm) | H (mm) | H1 (mm) | H2 (mm) |
|---------|---------|---------------|--------|--------|---------|---------|
| 16   20 | 10   15 | 3/8   1/2     | 79     | 132    | 111     | 21      |
| 25   32 | 20   25 | 3/4   1       | 100    | 177    | 148     | 29      |
| 40   50 | 32   40 | 1 1/4   1 1/2 | 147    | 251    | 207     | 44      |
| 63      | 50      | 2             | 147    | 251    | 207     | 44      |

### All materials if not labeled

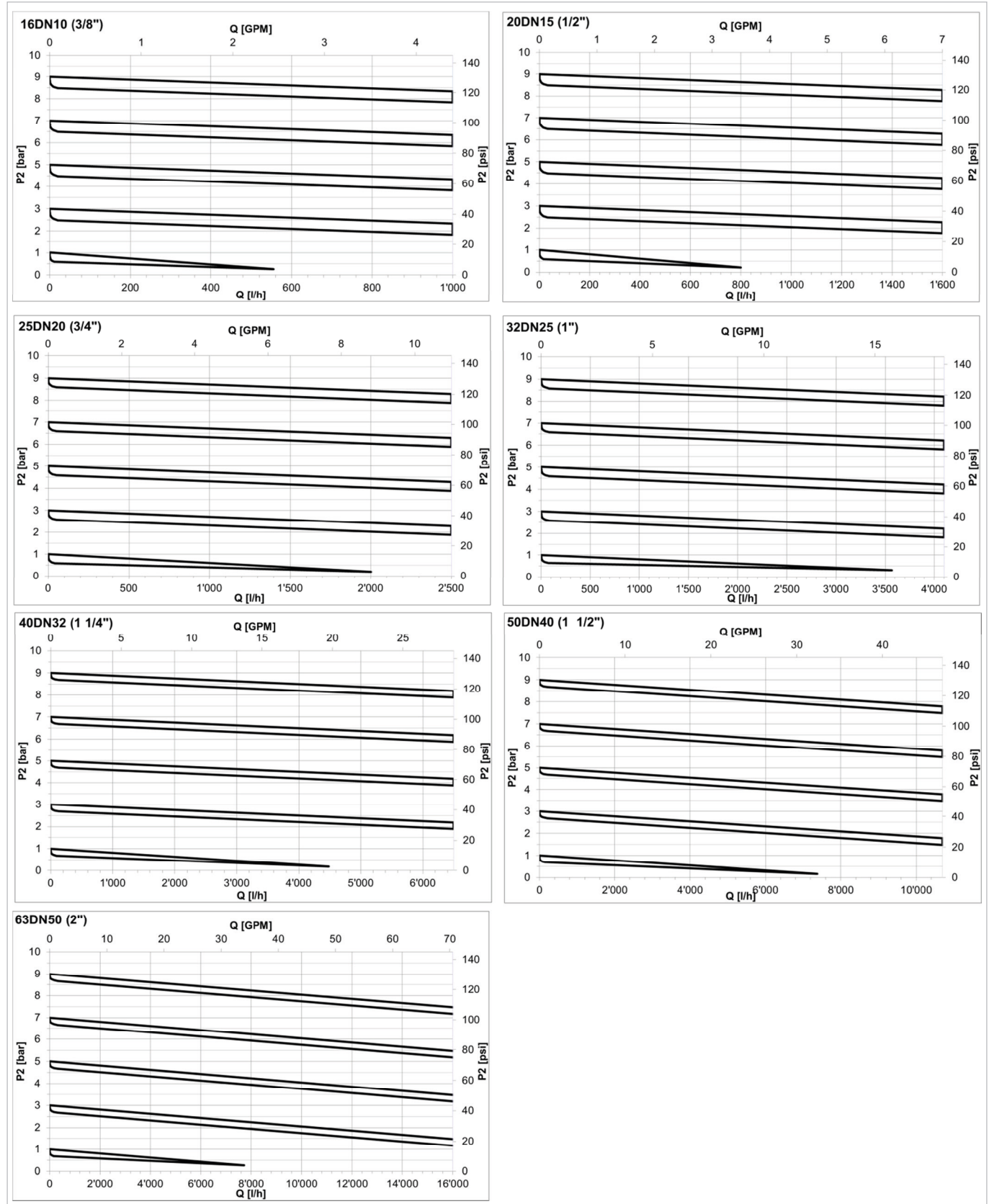
| d (mm)  | DN (mm) | Inch (inch)   | L <sup>1)</sup> PVC/PP (mm) | L <sup>1)</sup> PVDF (mm) | L2 (mm) | L3 (mm) | L4 (mm) | z PVC/PP (mm) | z PVDF (mm) |
|---------|---------|---------------|-----------------------------|---------------------------|---------|---------|---------|---------------|-------------|
| 16   20 | 10   15 | 3/8   1/2     | 134                         | 150                       | 120     | 42      | 77      | 126           | 130         |
| 25   32 | 20   25 | 3/4   1       | 174                         | 190                       | 150     | 53      | 88      | 156           | 160         |
| 40   50 | 32   40 | 1 1/4   1 1/2 | 224                         | 240                       | 205     | 76      | 111     | 211           | 215         |
| 63      | 50      | 2             | 244                         | 260                       | 205     | 76      | 111     | 211           | 215         |

<sup>1)</sup> L only for spigot version

## Characteristics type 582

The characteristic curves below are valid for the set range 0.5 – 9.0 bar (7 – 130 psi) and show the secondary or outlet pressure P2 over the flow Q in l/h.

Parameter is the set pressure pE at Q = 0 l/h. The curves are valid for water at +20 °C and a flow velocity of 2 m/s. A special version set range 0.3 – 3 bar (4 – 44 psi) is available on request.



## Ordering Information

### Accessories

#### Manometer

| Code      | Description                            | Material | O-ring         | Pressure range |
|-----------|--|----------|----------------|----------------|
| 198806963 | Manometer for type 582/586             | Brass    | EPDM & FKM     | 0-4 bar        |
| 198806962 | Manometer for type 582/586             | SS       | EPDM & FKM     | 0-4 bar        |
| 198806651 | Manometer for type 582/586             | Brass    | EPDM & FKM     | 0-10 bar       |
| 198806652 | Manometer for type 582/586             | SS       | EPDM & FKM     | 0-10 bar       |
| 198806655 | Manometer for type 582/586 High Purity | Brass    | FKM white (HP) | 0-10 bar       |
| 198808656 | Manometer for type 582/586 High Purity | SS       | FKM white (HP) | 0-10 bar       |



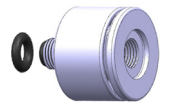
#### Manometer with manometer adapter

| Code      | Description   | Material | O-ring         | Pressure range |
|-----------|---|----------|----------------|----------------|
| 700278342 | Manometer & adapter for type 582/586                | Brass    | EPDM & FKM     | 0-4 bar        |
| 700278343 | Manometer & adapter for type 582/586                | SS       | EPDM & FKM     | 0-4 bar        |
| 700278340 | Manometer & adapter for type 582/586                | Brass    | EPDM & FKM     | 0-10 bar       |
| 700278341 | Manometer & adapter for type 582/586                | SS       | EPDM & FKM     | 0-10 bar       |
| 700278920 | Manometer with adapter for type 582/586 High Purity | Brass    | FKM white (HP) | 0-10 bar       |
| 700278601 | Manometer with adapter for type 582/586 High Purity | SS       | FKM white (HP) | 0-10 bar       |



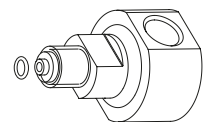
#### Manometer adapter with medium separation

| Code      | Description                              | Material | O-ring     |
|-----------|--|----------|------------|
| 198806650 | Manometer adapter with medium separation | PVDF     | EPDM & FKM |
| 198806654 | Manometer adapter with medium separation | PVDF-HP  | FKM        |



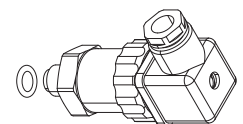
#### Angled manometer adapter without medium separation

| Code      | Description                              | Material | O-ring |
|-----------|--|----------|--------|
| 700224463 | Angled manometer adapter w/o medium sep. | PVC-U    | EPDM   |
| 700224464 | Angled manometer adapter w/o medium sep. | PVC-U    | FKM    |
| 700224465 | Angled manometer adapter w/o medium sep. | PP-H     | EPDM   |
| 700224466 | Angled manometer adapter w/o medium sep. | PP-H     | FKM    |
| 700224467 | Angled manometer adapter w/o medium sep. | PVDF     | FKM    |



#### Pressure switch

| Code      | Description              | Material | O-ring     |
|-----------|--------------------------|----------|------------|
| 198806658 | Pressure switch 1-10 bar | SS       | EPDM & FKM |



#### Tools

| Code      | Description            |
|-----------|------------------------|
| 198806451 | Hook Wrench DN10/15    |
| 198806452 | Hook Wrench DN20/25    |
| 198806453 | Hook Wrench DN32/40/50 |



■ Mobile apps and online tools to support configuration and calculation at [www.gfps.com/tools](http://www.gfps.com/tools)



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