

# Pressure Regulating Valves

## Compact, Easy to Adjust, Flexible

### Pressure Reducing Type 582

### Pressure Retaining Type 586



GF pressure regulating valves are engineered for precise control in your application. Our retaining and reducing valves offer superior performance with minimal space requirements. The modular design provides configuration flexibility and the easily replaceable cartridges facilitate maintenance and reduce required spare part inventory.

## Features

### Valve Function and Design

**582:** The pressure reducing valve reduces the line pressure to a set value on the valve outlet. The outlet pressure is in no direct relation to the inlet pressure. Independent of raising or falling inlet pressure, the outlet pressure stays constant.

**586:** The pressure retaining valve maintains the line pressure to a set value on the valve inlet. The inlet pressure is in direct relation to the flow. Independent of pressure fluctuations, the system pressure stays largely constant.

### Standards

Tightness according to ISO 9393  
Leak rate according to EN 12266

### Materials

PVC  
CPVC  
PROGEF® Standard PP  
SYGEF® Standard PVDF  
SYGEF® Plus PVDF-HP

### Valve Housing

GFPP (orange)

### Diaphragm

PTFE/EPDM

### Seals

EPDM, FPM

### Connections

- Socket union
- Socket fusion spigot
- IR/butt fusion spigot
- Socket fusion union
- IR/butt fusion union
- Flanged
- True union connection to match all standard GF unions and inserts
- Available on request: Various inserts from the GF range, e.g. transition to metal or PE

### Mounting

Stainless steel threaded inserts for secure mounting

### Flow Direction

Always according to arrow molded on valve body

## Benefits

### Easy Installation

- Compact design enables installation even where space is limited
- Threaded bonnet eliminates need for body bolts
- Integrated assembling aid enables direct assembly of the valves to mounting sets
- Significantly shorter lay length with union connections

### Easy Operation

- No re-torquing needed due to threaded bonnet design
- Easily adjusted set pressure with non-rising spindle
- Constant and low vibrating control behavior
- Tightness resistant to temperature cycling
- Low maintenance
- Adjusting set pressure possible during operation

### Flexible

- Pressure gauge options for neutral and aggressive media
- Connection options available with true union, spigot, or flanged versions
- Low pressure spring set available (4–44 psi)
- Spare part flexibility due to modular design: one part might fit more than one valve

## Market Segments

- Water Treatment
- Chemical Process Industry
- Microelectronics
- Solar Industry

## Media

Media with a low concentration of particulates is recommended.

Mind the chemical resistance of the selected valve material.

→ Please refer to Georg Fischer Piping System Chemical Resistance List

## Pressure Rating

150 psi @ 68°F (PN 10 @ +20°C)

## Set Range

Standard: 7–130 psi (0.5–9.0 bar)

Optional: 4–44 psi (0.3–3 bar)

## Hysteresis

Difference between opening and closing pressure:

Approx. 1.5–5.8 psi (0.1–0.4 bar)

## Dimensions

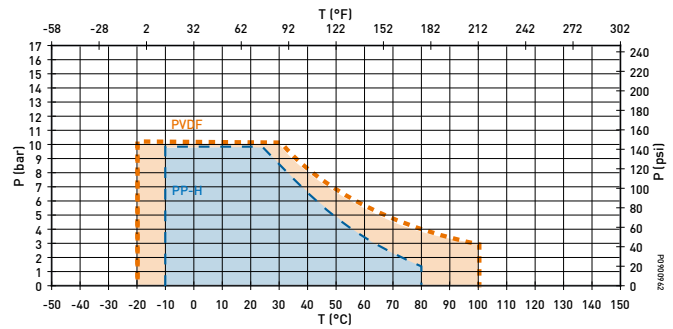
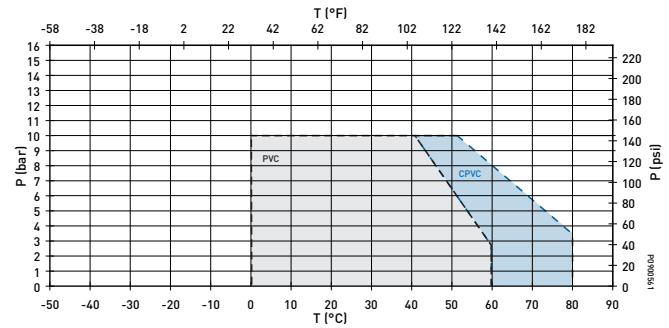
3/8"–2"

d16–d63

## Technical

### Pressure/Temperature Diagrams

The following pressure/temperature diagrams are based on a lifetime of 25 years with water or similar media.



P = Permissible pressure in bar, psi  
T = Temperature in °C, °F

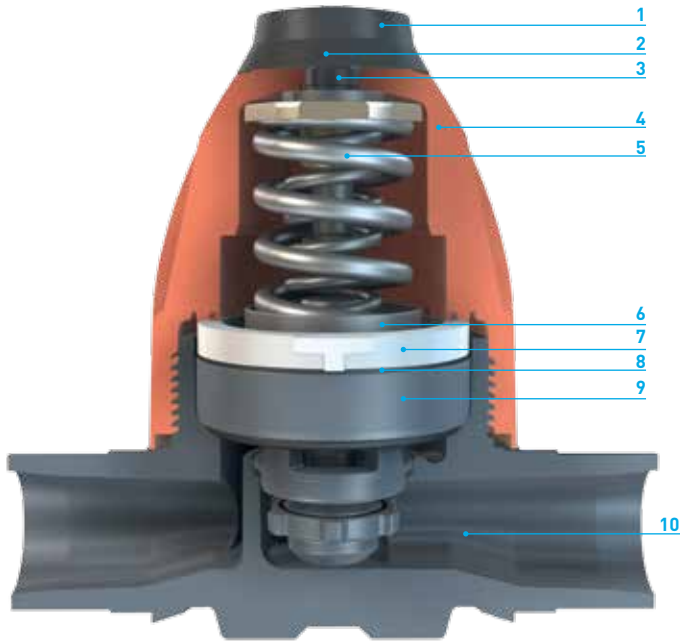
## Cv Values

inch	d [mm]	Cv100 [gpm]	
		Type 582	Type 586
3/8	16	3.1	3.5
1/2	20	3.3	3.6
3/4	25	7.7	7.9
1	32	8.9	8.6
1 1/4	40	17.5	18.1
1 1/2	50	20.2	19.7
2	63	22.0	20.2

Cv100 @ delta p = 1 psi

# Dimensions

## Components

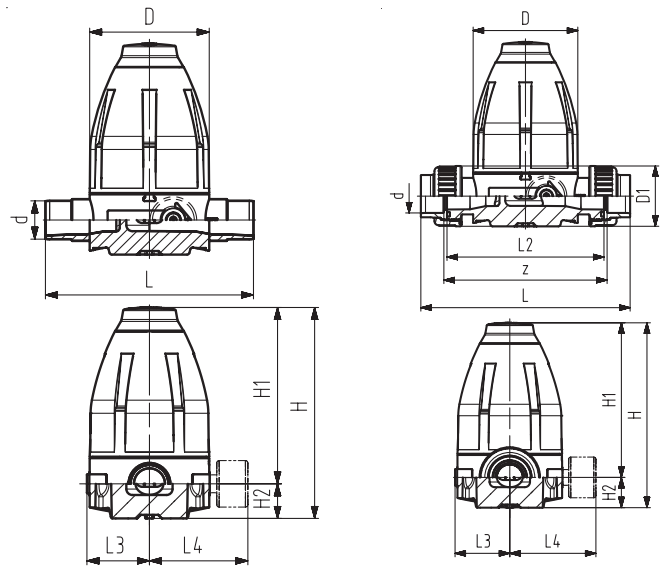


Number	Description
1	Protecting Cap
2	Lock Nut
3	Spindle
4	Housing
5	Spring
6	Spring Retainer
7	Retainer Ring
8	Diaphragm
9	Cartridge with Piston
10	Body

## Dimensions

### All Materials

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



### All Materials if not indicated

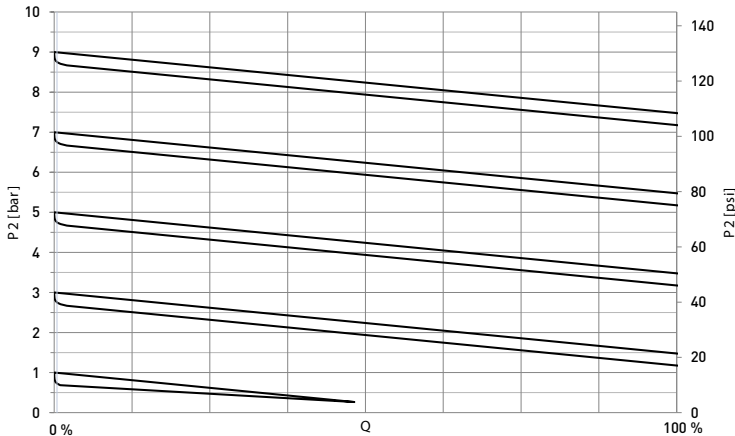
d (mm)	(inch)	L*	L*	L2	L3	L4	z	z
		PVC/PP	PVDF				PVC/PP	PVDF
16	3/8	134	150	120	42	77	126	130
20	1/2	134	150	120	42	77	126	130
25	3/4	174	190	150	53	88	156	160
32	1	174	190	150	53	88	156	160
40	1 1/4	224	240	205	76	111	211	215
50	1 1/2	224	240	205	76	111	211	215
63	2	244	260	205	76	111	211	215

\* L for spigot version only

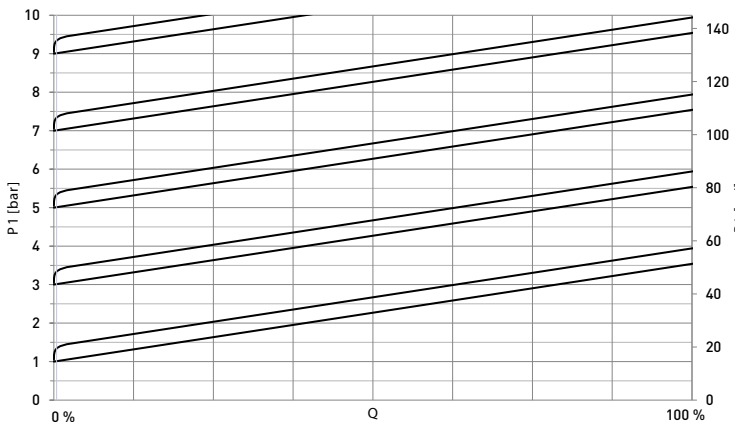
# Specifications

## Characteristic Curves

The curves below are valid for the set range 7–130 psi (0.5–9.0 bar) 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. These curves are valid for water at +20°C for a flow velocity of 2 m/s. Special version set range 4–44 psi (0.3–3 bar) available on request.



Hysteresis curve  
Pressure reducing valve type 582  
100% corresponds to a flow velocity of 2 m/s (6.6 ft/s)



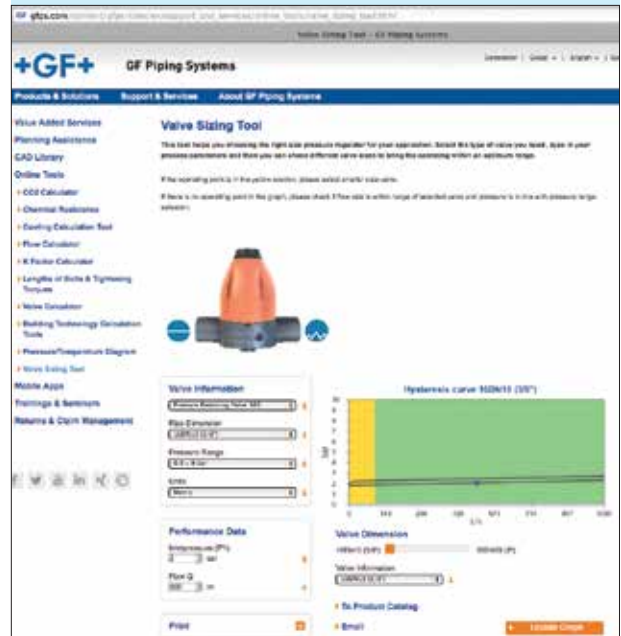
Hysteresis curve  
Pressure retaining valve type 586  
100% corresponds to a flow velocity of 2 m/s (6.6 ft/s)

## Type 582 and 586

Size	100%
d16 (3/8")	1000 l/h 4.4 gpm
d20 (1/2")	1600 l/h 7.0 gpm
d25 (3/4")	2500 l/h 11.0 gpm
d32 (1")	4000 l/h 17.6 gpm
d40 (1 1/4")	6000 l/h 26.4 gpm
d50 (1 1/2")	10000 l/h 44.0 gpm
d63 (2")	16000 l/h 70.4 gpm

On the left, you see the schematic diagrams of the hysteresis curve. The table above shows the maximum values at 100% in the diagram.

For further assistance sizing a PRV, please visit our online valve sizing tool at [www.gfpiping.com](http://www.gfpiping.com).



## GF Piping Systems

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