

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 pre-tensioning. 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 by turning the spindle at the top of the valve in a clockwise direction. Turning it counterclockwise reduces the set pressure. 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

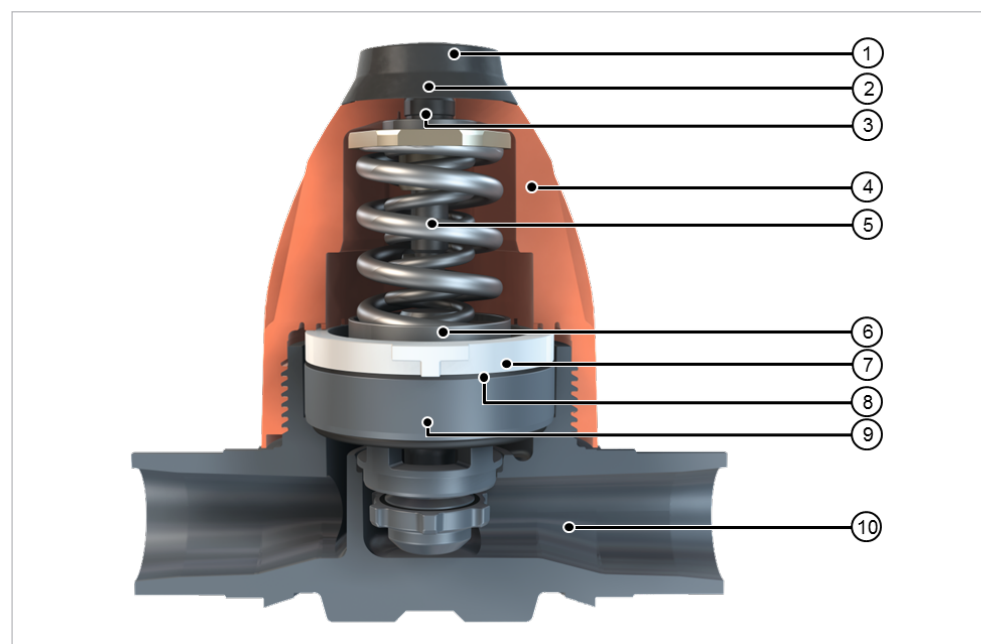
Flexible

- 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

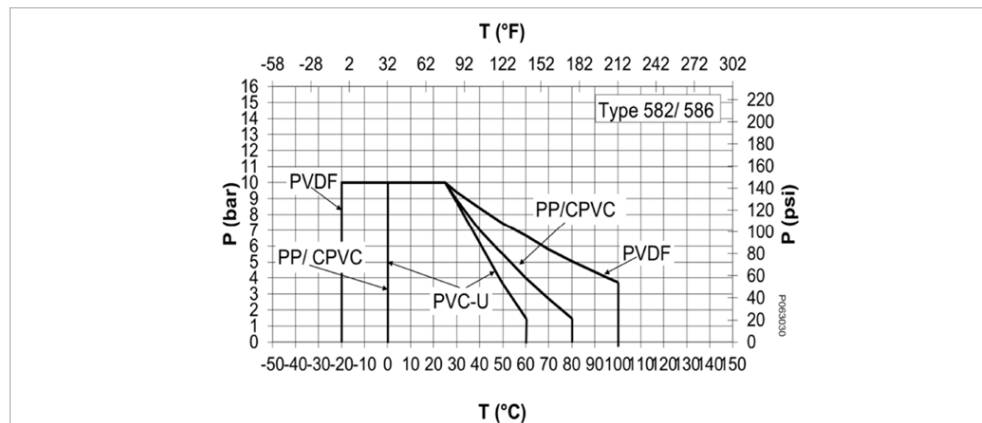
Specification

Dimensions	DN10–DN50 ($\frac{3}{8}$ " – 2")	
Materials	Parts that come into contact with medium (lower part, piston, internal housing)	PVC-U, PVC-C, PP, PVDF, PTFE
	Valve upper part	PP-GF (orange)
Gasket materials	EPDM, FKM	
Diaphragm	EPDM, PTFE	
Pressure level	PN10 @ +20°C (150 psi @ 68°F)	
Setting range	Standard	0.5 – 9.0 bar (7 – 130 psi)
	Optional	0.3 – 3 bar (4 – 44 psi)
Hysteresis	Difference between opening and closing pressure	Approx. 0.1 – 0.4 bar (1.5 – 5.8 psi)
Connections	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:	
	Various inserts from the GF range, e.g. transition to metal or PE	
Direction of flow	Always corresponds to the the direction of the arrow on the lower part	
Assembly	Threaded inserts are available for safe assembly	
Test standard	Testing for leak-tightness and function according to ISO 9393, ISO 12266	
Approvals	FDA	

Kv 100 values

DN (mm)	Inch (inch)	d (mm)	Kv 100 (l/min)	Kv 100 (l/h)	Cv 100 (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



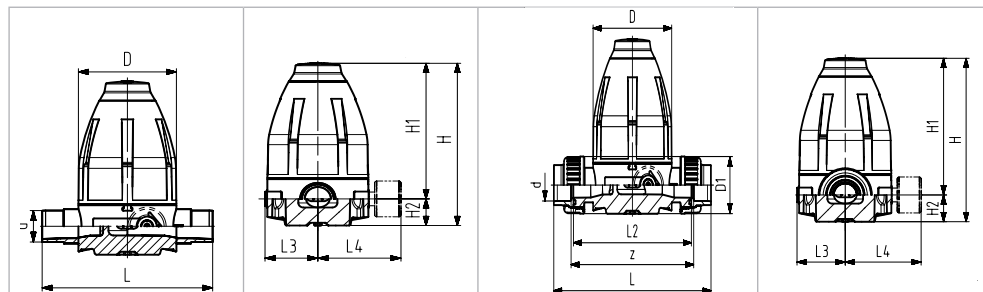
T Temperature (°C, °F)

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

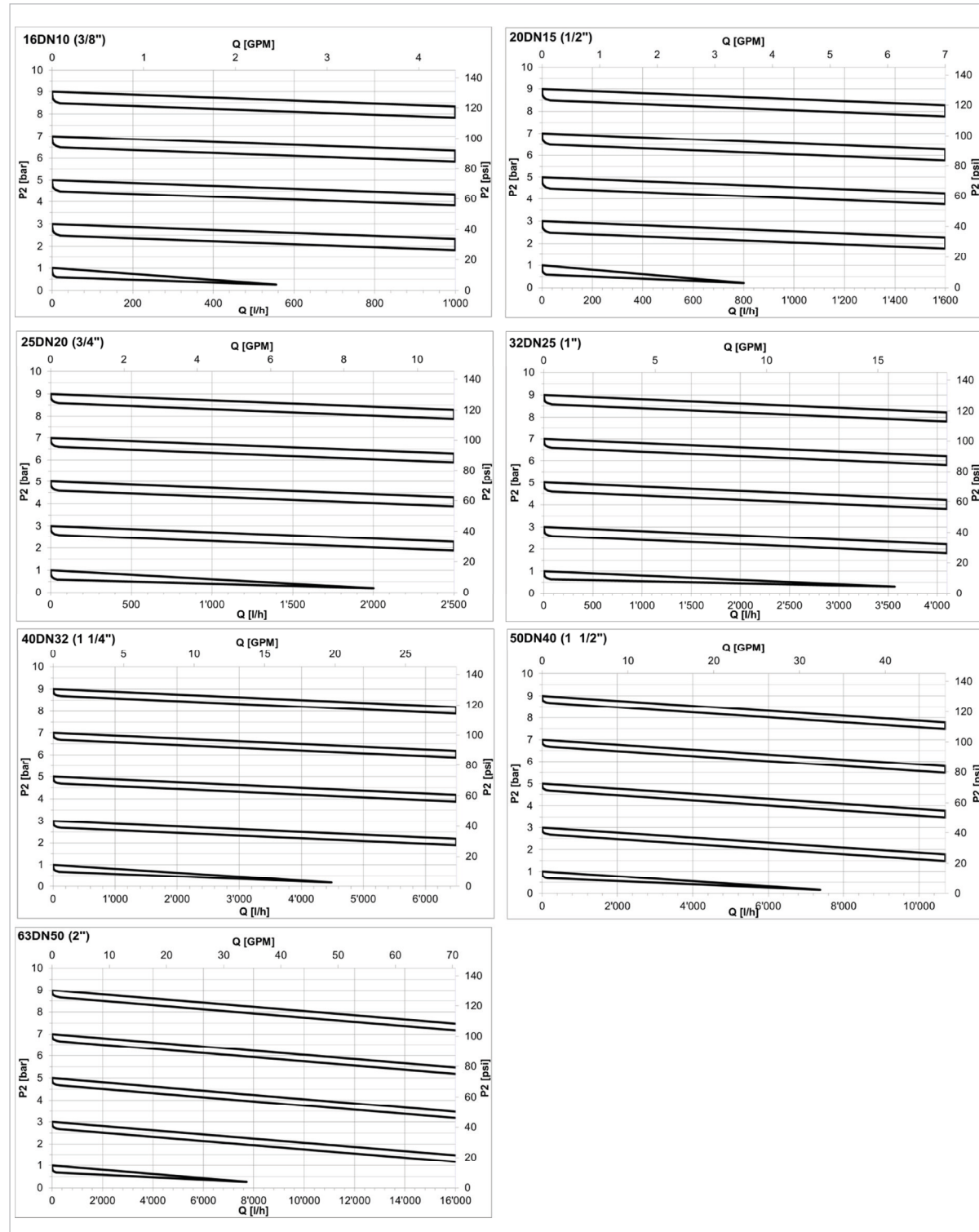
d (mm)	DN (mm)	Inch (inch)	L ¹⁾ PVC/PP (mm)	L ¹⁾ PVDF (mm)	L2 (mm)	L3 (mm)	L4 (mm)	z PVC/PP (mm)	z PVDF (mm)
16 20	10 15	3/8 1/2	134	150	120	42	77	126	130
25 32	20 25	3/4 1	174	190	150	53	88	156	160
40 50	32 40	1 1/4 1 1/2	224	240	205	76	111	211	215
63	50	2	244	260	205	76	111	211	215

¹⁾ 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.



■ Mobile apps and online tools to support configuration and calculation at www.gfps.com/tools



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