Pressure Retaining Valve Type 586

Product description

The pressure retaining valve, also called an overflow valve, ensures that the pressure at the valve inlet is held constant.

Function

The pressure retaining valve maintains the line pressure to a set value at the valve inlet. The inlet pressure stays largely constant regardless of pressure fluctuations. The inlet pressure is directly related to the flow.

Applications

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

Benefits/features

Easy assembly

- Compact design enables 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; nominal pressure can be set easily
- Constant and stable control behavior
- Leak-resistant in the event of temperature fluctuations
- Low maintenance
- Pressure setting possible even during operation

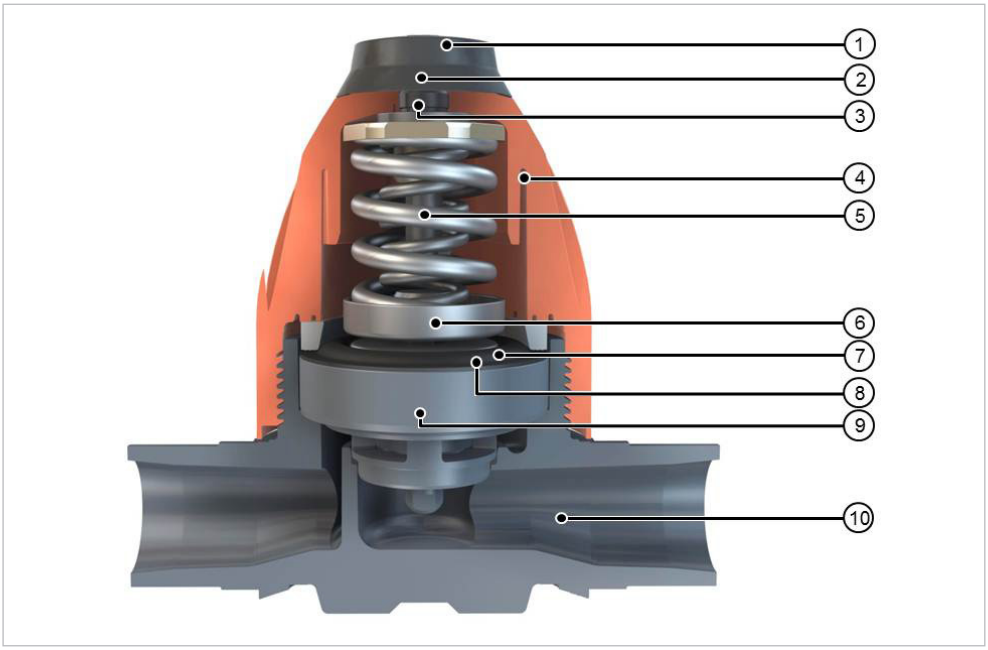
Flexible

- 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 quantity 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

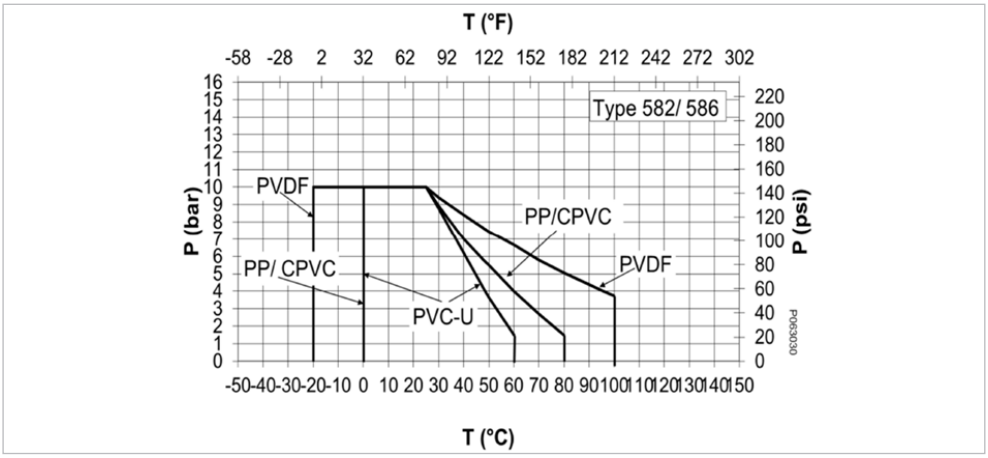
Specification		
Dimensions	d16/DN10 – d63/DN50, ⅜" – 2"	
Materials	Parts that comes into contact with medium (lower part, piston, internal housing)	PVC-U, PVC-C, PP, PVDF
	Valve upper part	PP-GF (orange)
Gasket materials	EPDM, FKM	
Diaphragm	EPDM/PTFE	
Pressure level	PN10 @ +20°C (150 psi @ 68°F)	
Setting 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	Body 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, for example, transition from metal to 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	

Flow values

DN (mm)	Inch (inch)	d (mm)	Kv100 (l/min)	Kv100 (l/h)	Cv100 (gpm)
10	3/8	16	50	3'020	3.5
15	½	20	53	3'150	3.6
20	¾	25	114	6'840	7.9
25	1	32	125	7'500	8.6
32	1 ¼	40	263	15'760	18.1
40	1 ½	50	286	17'140	19.7
50	2	63	293	17'610	20.2

Kv100 at delta p = 1 bar
Cv100 at delta p = 1 psi

Pressure-temperature diagrams

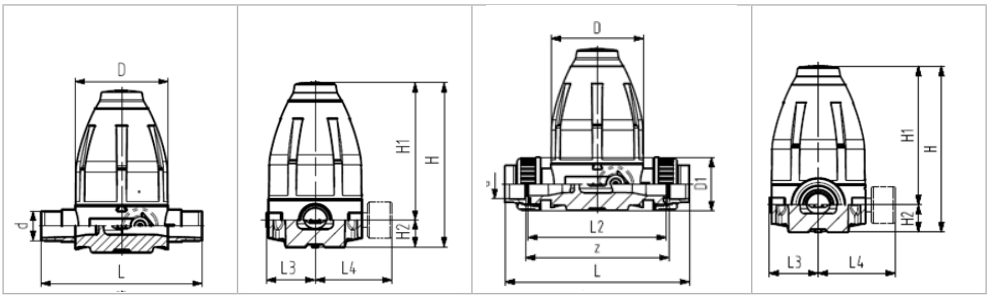


T Temperature (°C, °F)
P Permissible pressure (bar, psi)

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

Dimensions

Type 586 with threaded connections, cementable and fusionable spigots



A ll materials

d (mm)		DN (mm)		Inch (inch)		D (mm)	H (mm)	H1 (mm)	H2 (mm)
16	20	10	15	⅜	½	79	132	111	21
25	32	20	25	¾	1	100	177	148	29
40	50	32	40	1 ¼	1 ½	147	251	207	44
63		50		2		147	251	207	44

All materials if not labeled

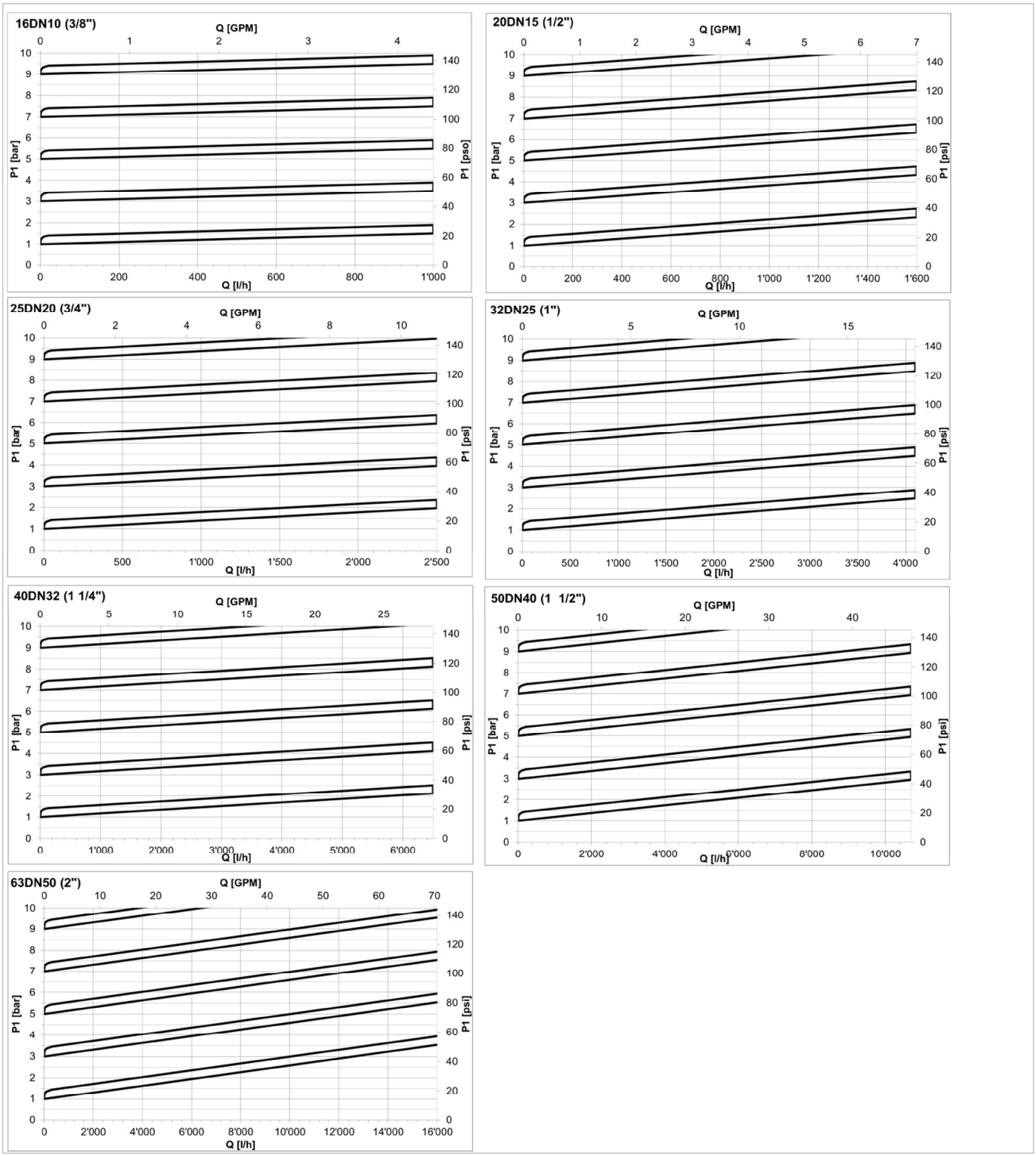
d (mm)		DN (mm)		Inch (inch)		L[1)] PVC/PP	L[1)] PVDF	l2 (mm)	l3 (mm)	L4 (mm)	z PVC/PP	z PVDF
16	20	10	15	⅜	½	134	150	120	42	77	126	130
25	32	20	25	¾	1	174	190	150	53	88	156	160
40	50	32	40	1 ¼	1 ½	224	240	205	76	111	211	215
63		50		2		244	260	205	76	111	211	215

[1)] L only for spigot version

Characteristics Type 586

The characteristic curves below are valid for the set range 0.5 – 9.0 bar (7 – 130 psi) and show the inlet pressure P1 over the flow Q in l/h.

Parameter is the set pressure pE at Q = 0 l/h. There 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

07/2023-A

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