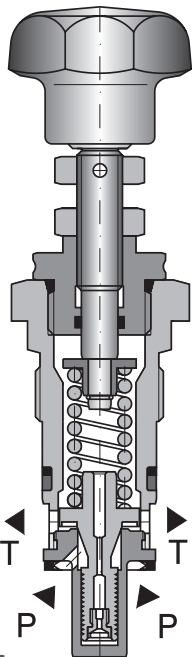


Pressure Relief Valve, Poppet Type, Direct Acting

**VPP1-06(10)**

M28x1.5 / M35x1.5 • Q<sub>max</sub> 50 l/min (13 GPM) / 120 l/min (32 GPM) • p<sub>max</sub> 320 bar (4600 PSI)



Size 06



Size 10

**Technical Features**

- › Excellent stability throughout flow range with rapid response to dynamic pressure changes
- › Low hysteresis, accurate pressure control and low pressure drop
- › Wide pressure range up to 320 bar
- › Hardened precision parts
- › Sharp-edged steel seats for dirt-tolerant performance
- › Low volume leaks, suitable for fast cycling with long life
- › Adjustable by allen key or hand screw
- › In the standard version, the valve surface is black oxide coated and the valve housing is phosphated. Alternatively, they are zinc-coated with corrosion protection of 240 h or 520 h in NSS acc. to ISO 9227

**Functional Description**

A poppet type, direct acting hydraulic relief valve in the form of a screw-in cartridge intended for use as a pressure limiting device for common hydraulic circuit protection. The spring acts on the poppet and presses it onto the valve seat. If the hydraulic pressure is below the pre-set value, the valve is closed. If the hydraulic force exceeds the pre-set value the valve opens and flow passes to the tank port until the system pressure falls below the spring pre-set value and the valve closes again.



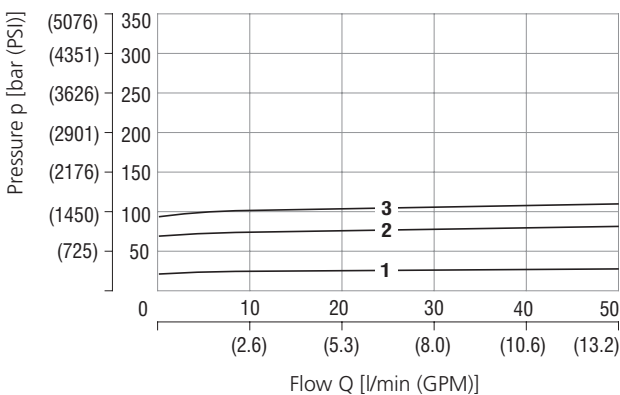
**Technical Data**

Valve size		size 06	size 10
Valve size / Cartridge cavity		M28x1.5 / QP2	M35x1.5 / QT2
Max. flow	l/min (GPM)	50 (13.2)	120 (31.7)
Max. operating pressure	bar (PSI)	320 (4640)	
Fluid temperature range (NBR)	°C (°F)	-30...+100 (-22 ...212)	
Fluid temperature range (FPM)	°C (°F)	-20...+120 (-4...248)	
Weight	kg (lbs)	0.4 (0.88)	0.5 (1.10)
	Datasheet	Type	
General information	GI_0060	Products and operating conditions	
Valve bodies	In-line mounted	SB-QP2*	SB-QT2*
Cavity details	SMT_0019	SMT-QP2*	SMT-QT2*
Spare parts	SP_8010		

**Characteristics** measured at v = 32 mm<sup>2</sup>/s (156 SUS)

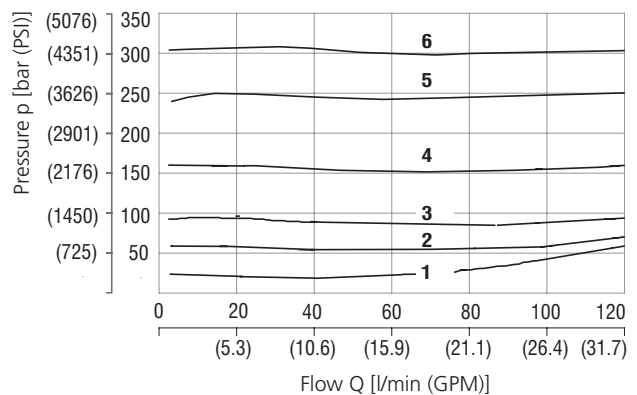
**Relief pressure related to flow rate**

Size 06



	Pressure range
3	10
2	6.3
1	2.5

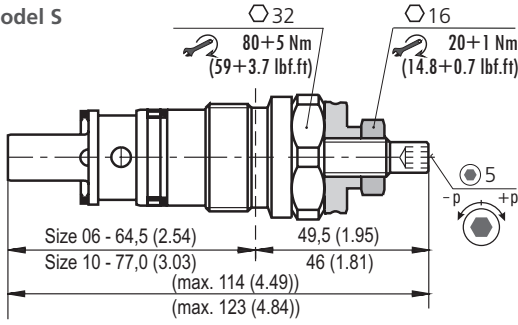
Size 10



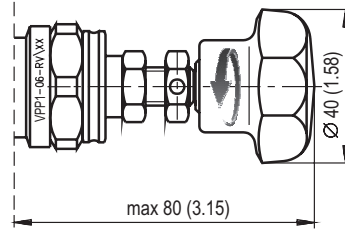
	Pressure range
6	32
5	25
4	16
3	10
2	6.3
1	2.5

Dimensions in millimeters (inches)

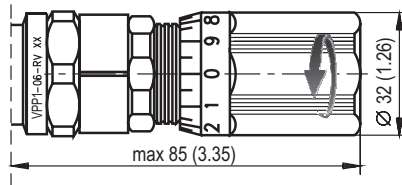
Model S



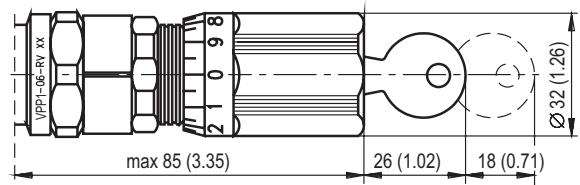
Model RP



Model O

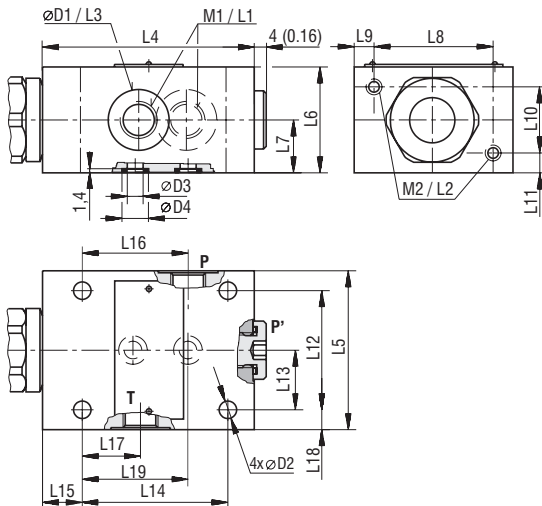


Model Z



Dimensions in millimeters (inches)

Cartridge in threaded housing - models „M“, „G“ and „P“



Model	06-xM/x	06-xG/x	06-xP/x	10-xM/x	10-xG/x	10-xP/x
M1	M14x1.5	G1/4	G1/4	M22x1.5	G1/2	G1/4
M2	M6			M8		
ØD1	25(0.98)			34(1.34)		
ØD2	6.6(0.26)			9(0.35)		
ØD3			6(0.24)			10(0.39)
ØD4			10.8(0.43)			15.6(0.61)
L1	12(0.47)			16(0.63)		
L2	10(0.39)			20(0.79)		
L3	0.5(0.02)			0.5(0.02)		
L4	80(3.15)			100(3.94)		
L5	60(2.36)			80(3.15)		
L6	40(1.57)			60(2.36)		
L7	20(0.79)			30(1.18)		
L8	45(1.77)			60(2.36)		
L9	7.5(0.30)			10(0.39)		
L10	25(0.98)			40(1.57)		
L11	7.5(0.30)			10(0.39)		
L12	45(1.77)			60(2.36)		
L13	22.5(0.89)			30(1.18)		
L14	55(2.17)			70(2.76)		
L15	15(0.59)			20(0.79)		
L16	40(1.57)			49(1.93)		
L17	20(0.79)			21(0.83)		
L18	7.5(0.30)			10(0.39)		
L19			40(1.57)			45(1.77)

Port P' (as input can be used P or P') thread M1/L1

Ordering Code

VPP1- [ ] - [ ] / [ ] - [ ]

Pressure relief valve, poppet type, direct acting M28x1.5 / M35x1.5

Nominal size

size 06 06\*  
size 10 10

\* VPP1-06 only available for pressure range 2.5; 6.3 and 10

Adjustment option

allen key (hex. 5), without protective cap  
hand screw, plastic  
non-lockable cylindrical hand screw  
lockable cylindrical hand screw

S  
RP  
O  
Z

Model

screw-in cartridge V  
cartridge in threaded housing - with metric threads M  
cartridge in threaded housing - with BSP threads G  
cartridge in subplate mounted housing P

Surface treatment (cartridge valve only)

No designation black oxide coating  
A zinc-coated (ZnCr-3), ISO 9227 (240 h)  
B zinc-coated (ZnNi), ISO 9227 (520 h)

No designation V

Seals

NBR  
FPM (Viton)

Pressure range

2.5 up to 25 bar (360 PSI)  
6.3 up to 63 bar (910 PSI)  
10 up to 100 bar (1450 PSI)  
16 up to 160 bar (2320 PSI)  
25 up to 250 bar (3630 PSI)  
32 up to 320 bar (4600 PSI)