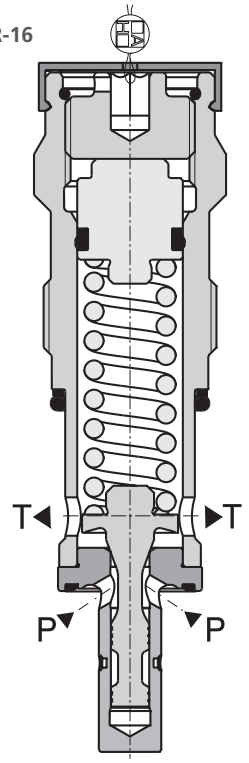
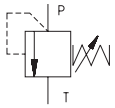
VPP-R-16(25)

M36x2 / M42x2 • Q_{max} 120 / 400 l/min (32 / 106 GPM) • p_{max} 350 bar (5100 PSI)

VPP-R-16



Symbol



Technical Features

- Pressure relief valve, direct-acting, intended for installation in a manifold
- Wide pressure range up to 350 bar
- Large flow range
- Low hysteresis, accurate pressure control and low pressure drop
- Hardened precision parts
- Leak-free closing, suitable for fast cycling with long life
- Adjustment option with sealable allen head and a protective cap
- In the standard version, the valve is zinc coated for 240 h (for size 25) and 520 h (for size 16) protection 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.

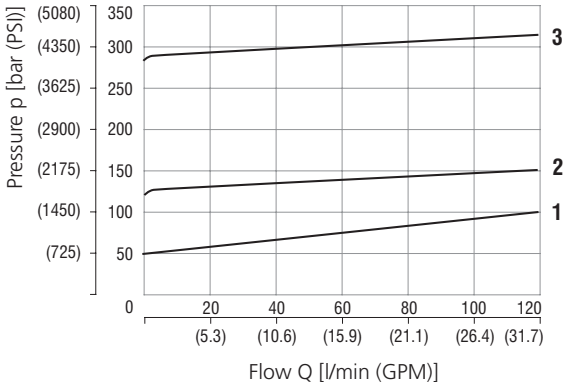
Technical Data

Valve size			Size 16	Size 25
Connection thread			M36x2	M42x2
Max. flow		l/min (GPM)	120 (31.7)	400 (106)
Max. inlet pressure (port P)		bar (PSI)	350 (5080)	
Max. outlet pressure (port T)		bar (PSI)	160 (2320)	
Fluid temperature range (NBR)		°C (°F)	-30 ... +100 (-22 ... 212)	
Fluid temperature range (FPM)		°C (°F)	-20 ... +120 (-4 ... 248)	
Kinematic viscosity range		mm^2/s (SUS)	10 ... 500 (49 ... 2450)	
Weight	valve	kg (lbs)	0.56 (1.23)	1.03 (2.27)
	valve with body		3.06 (6.75)	5.5 (12.1)
		Datasheet	Type	
General information		GI_0060	Products and operating conditions	
Spare parts		SP_8010		

Characteristics measured at ν = 32 mm^2/s (156 SUS)

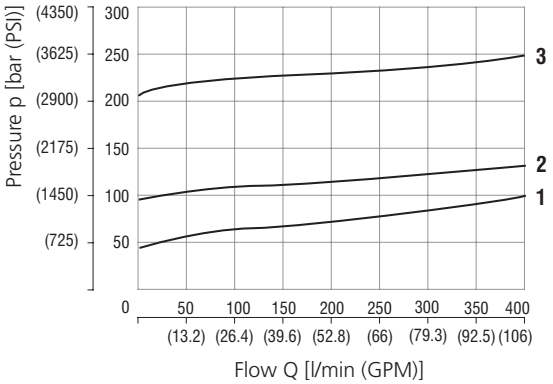
Relief pressure related to flow rate

Size 16



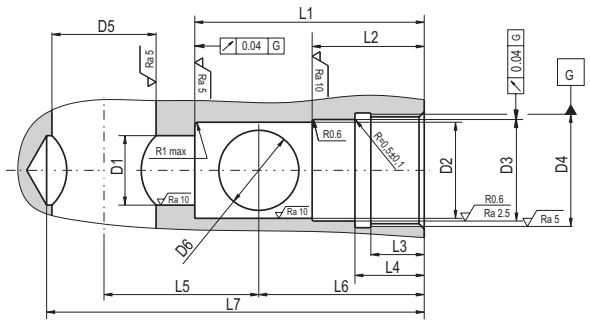
	Pressure stage	Pressure range bar (PSI)
3	28	280 - 350 (4060 - 5080 PSI)
2	13	130 - 280 (1890 - 4060 PSI)
1	5	50 - 130 (730 - 1890 PSI)

Size 25



	Pressure stage	Pressure range bar (PSI)
3	20	200 - 350 (2900 - 5080 PSI)
2	10	100 - 200 (1450 - 2900 PSI)
1	5	50 - 100 (730 - 1450 PSI)

Cavity dimensions in millimeters (inches)

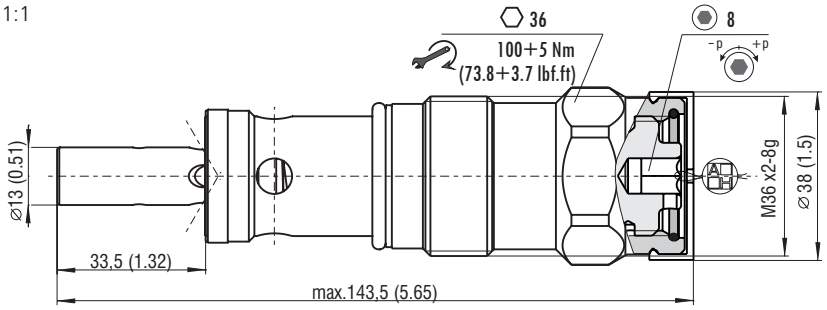


Size	∅ D1	∅ D2	∅ D3	∅ D4	∅ D5	∅ D6	Dimensions in mm (in)
16	20 H14 (0.79)	30 H11 (1.18)	32.6 H10 (1.28)	M36x2-7H	30 (1.18)	25 (0.98)	
25	26 H14 (1.02)	36 H11 (1.42)	38 H10 (1.50)	M42x2-7H	34 (1.34)	31 (1.22)	
Size	L1	L2	L3	L4	L5	L6	L7
16	66 (2.6 / 2.61)	31 (1.22 / 1.22)	18 (0.71 / 0.73)	21 (0.83 / 0.85)	46 (1.81)	44 (1.73 / 1.75)	105 (4.13)
25	86 (3.4)	44 (1.73)	20 (0.79)	26 (1.02)	58 (2.29)	62 (2.44)	135 (5.32)

Dimensions in millimeters (inches)

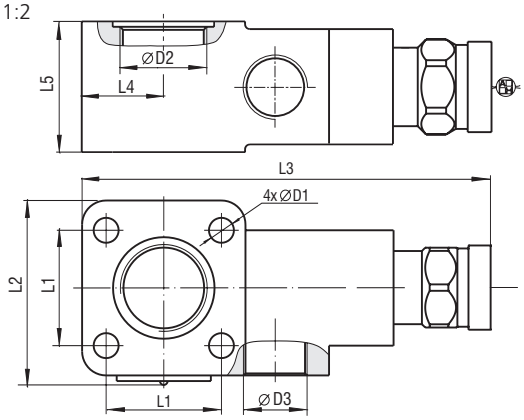
VPP-R-16

1:1



VPPB-R

1:2



Size	∅ D1	∅ D2	∅ D3	L1	L2	L3	L4	L5
16	10.5 (0.41)	M33x2	M27x2	48 (1.89)	66 (2.60)	168 (6.61)	33 (1.30)	57 (2.24)
25	13 (0.51)	M42x2	M33x2	60 (2.36)	85 (3.35)	218 (8.58)	42.5 (1.67)	68 (2.68)

Ordering Code

VPP [ ] **-R-** [ ] - [ ] - [ ] - [ ] - [ ]

Pressure relief valve, poppet type, direct acting

Design of valve
screw-in cartridge valve — **no designation**
with a body — **B**

Valve size
size 16 — **16**
size 25 — **25**

Range of adjustable pressure - pressure stage size 16
50 - 130 bar (730 - 1890 PSI) — **5**
130 - 280 bar (1890 - 4060 PSI) — **13**
280 - 350 bar (4060 - 5080 PSI) — **28**

Range of adjustable pressure - pressure stage size 25
50 - 100 bar (730 - 1450 PSI) — **5**
100 - 200 bar (1450 - 2900 PSI) — **10**
200 - 350 bar (2900 - 5080 PSI) — **20**

Adjustment option
S allen key (hex. 8), without protective cap
T allen key (hex. 8), with protective cap
L allen key (hex. 8), with protective cap, sealable (lockwire holes)

Seals
No designation NBR
V FPM (Viton)

Surface treatment
A zinc-coated (ZnCr-3), ISO 9227 (240 h) (only for size 25)
B zinc-coated (ZnNi), ISO 9227 (520 h) (only for size 16)