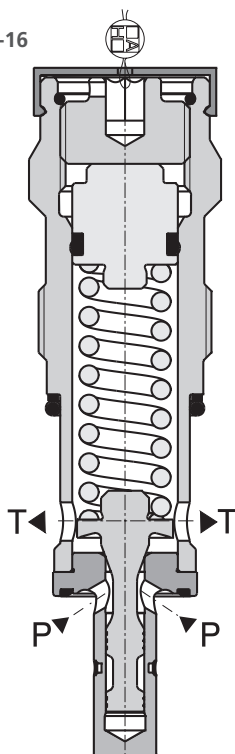


VPP-R-16

Technical Features

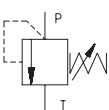
- › Pressure relief valve, direct-acting, intended for installation in a manifold
- › Wide pressure range up to 350 bar
- › Large flow range
- › Low hysteresis, accurate pressure control and low pressure drop
- › Hardened precision parts
- › Leak-free closing, suitable for fast cycling with long life
- › Adjustment option with sealable allen head and a protective cap
- › In the standard version, the valve is zinc coated for 240 h protection acc. to ISO 9227

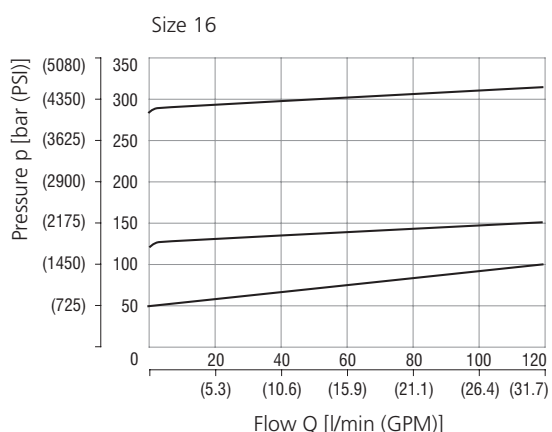
Functional Description

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 pre-spring pre-set value and the valve closes again.

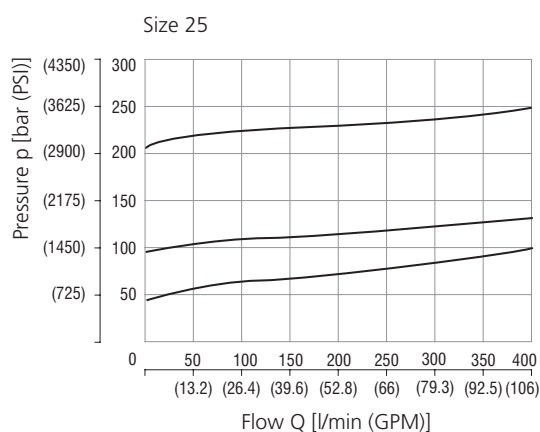
Technical Data

| 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 | 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 | |

Symbol

Characteristics measured at $v = 32 \text{ mm}^2/\text{s}$ (156 SUS)

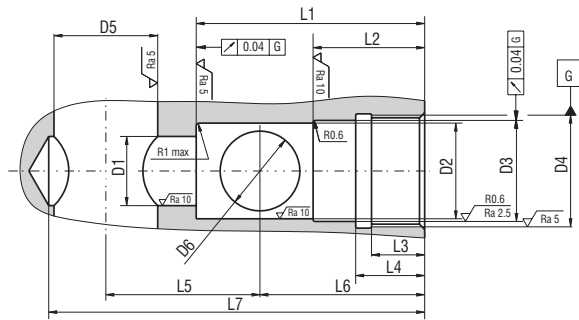
Relief pressure related to flow rate


| | 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) |



| | 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)

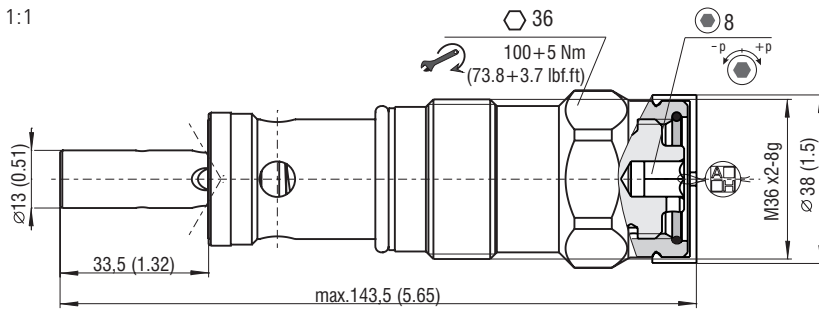


| Size | Ø D1 | Ø D2 | Ø D3 | Ø D4 | Ø D5 | Ø D6 | Dimensions in mm (in) |
|------|-----------------|------------------|------------------|------------------|-----------|------------------|-----------------------|
| 16 | 20 H14 (0.79) | 30 H11 (1.18) | 32.6 H10 (1.28) | M36x2-7H | 30 (1.18) | 25 (0.98) | |
| 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)

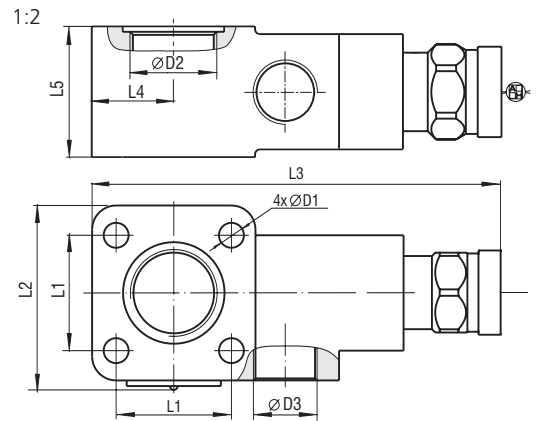
VPP-R-16

1:1



VPPB-R

1:2



| Size | Ø D1 | Ø D2 | Ø 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



Pressure relief valve, poppet type, direct acting

Design of valve
screw-in cartridge valve with a body

Valve size
size 16
size 25

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

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

Surface treatment
A zinc-coated (ZnCr-3), ISO 9227 (240 h)
B zinc-coated (ZnNi), ISO 9227 (520 h)

No designation
V

Seals
NBR
FPM (Viton)

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)