

Technical Features

- › Hydraulic safety relief valve suitable for use as a safety device in Category IV Group 2 applications acc.to European Commission (EC) Pressure Equipment Directive (PED) 2014/68/EU
- › CE marked valves are supplied with "Declaration of Conformity", "Operating Instructions" and the list of residual risks
- › Always follow the operating instructions supplied with the valve!
- › Large flow range and pressure up to 350 bar
- › Low hysteresis, accurate pressure control and low pressure drop through CFD optimized flow paths
- › Hardened precision parts
- › Leak-free closing, suitable for fast cycling with long life
- › Adjustment option with allen head, adjustable hand knob or sealing (Lockwire holes)
- › In the standard version, the valve is zinc coated for 520 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 spring pre-set value and the valve closes again.

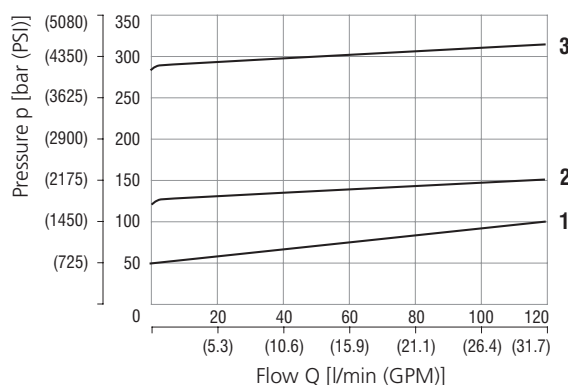
Technical Data

Valve size		M36x2
Max. flow	l/min (GPM)	120 (31.7)
Max. inlet pressure (port P)	bar (PSI)	350 (5080)
Max. outlet pressure (port T)	bar (PSI)	250 (3630)
Fluid temperature range (NBR)	°C (°F)	-30 ... +100 (-22 ... 212)
Fluid temperature range (FPM)	°C (°F)	-20 ... +120 (-4 ... 248)
Max. leakage of closed valve at the input pressure set on 80 % of cracking pressure	cm ³ /min	0.2
Kinematic viscosity range	mm ² /s (SUS)	10 ... 500 (49 ... 2450)
Weight	valve	kg (lbs)
	valve with body	kg (lbs)
		0.56 (1.22)
		3.05 (6.73)
	Datasheet	Type
General information	GI_0060	Products and operating conditions
Spare parts	SP_8010	

Characteristics measured at v = 32 mm²/s (156 SUS)

Relief pressure related to flow rate

	Pressure stage	Pressure range (PSI)
3	28	280 - 350
2	13	130 - 280
1	5	50 - 130



Valve adjusted by the manufacturer

- › The valve is adjusted for the specified cracking pressure at the relevant flow rate and they are fitted with tamper-indicating seal.
- › The pressure and flow rate values are indicated in the valve description [in bar, or liters per min respectively].
- › The seal bear the ARGO-HYTOS logo.

Unadjusted valve

- › The valve have no tamper-indicating seal.
- › No adjusted pressure and flow rate are indicated for unadjusted valve - VPP-R-16-xx-L-CE1017.
- › The adjusting screw is completely loosened. Pressure p = 0 bar
- › For the adjustment of the valve required pressure, proceed as follows:
 - Turn right = higher pressure
 - Turn left = lower pressure
- › Producer ARGO-HYTOS (CZ) takes no responsibility for the adjustment, securing and sealing the valve.

Residual risks

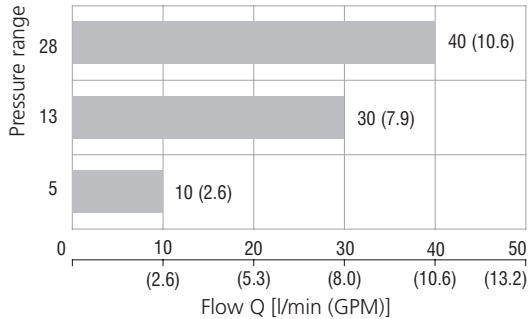
Residual risks are listed and preventive measures against the occurrence of residual risk are described in the document „Operating instructions for pressure relief valve VPP-R-16-xx-L-CE1017“ which is delivered with each valve.

Application area

The diagram shows the area of the valve application meets the requirement of Directive 2014/68/EU and Standard ISO 4126-1 on maximal short-time overshooting of system pressure 10 % above the set cracking pressure when the valve opens.

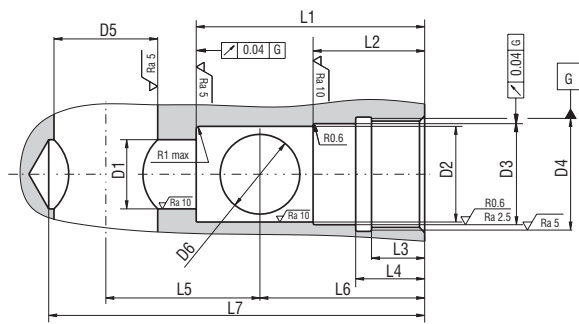
The dynamics of the valves depends on the kinematic viscosity of working fluid.

Measurement conditions: oil Renolin VG 32, T = 40 °C (104 °F), V = 0.5 l (0.132 gallon US)



Operating region characteristics from certification of VPP-R-16*CE1017*

Cavity dimensions in millimeters (inches)

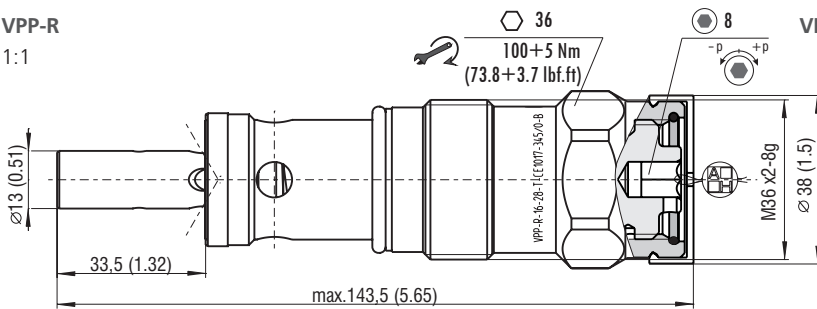


Dimensions in mm (in)			
∅ D1	20 H14 (0.79)	L1	66 (2.6 / 2.61)
∅ D2	30 H11 (1.18)	L2	31 (1.22 / 1.22)
∅ D3	32,6 H10 (1.28)	L3	18 (0.71 / 0.73)
∅ D4	M36x2-7H	L4	21 (0.83 / 0.85)
∅ D5	30 (1.18)	L5	46 (1.81)
∅ D6	25 max (0.98 max)	L6	44 (1.73 / 1.75)
		L7	105 (4.13)

Dimensions in millimeters (inches)

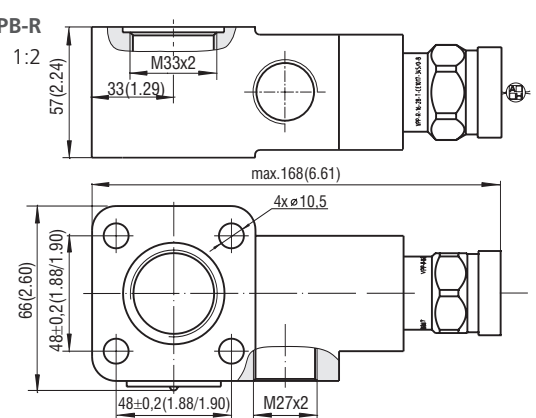
VPP-R

1:1



VPP-B

1:2



Ordering Code

VPP [] -R-16- [] - L - [] - CE1017- [] - []

Pressure relief valve
PED certified,
direct acting

M36x2

Design of valve
screw-in cartridge valve
with a body

B

Valve size

Range of adjustable pressure - pressure stage

50 - 130 bar (730 - 1890 PSI)

130 - 280 bar (1890 - 4060 PSI)

280 - 350 bar (4060 - 5080 PSI)

5

13

28

No designation
V

Surface treatment
B zinc-coated (ZnNi), ISO 9227 (520 h)

Preset cracking pressure at defined flow
120/5.8 (example) 120 bar / 5.8 l/min

Certification PED
notified body number CE1017

Seals
NBR
FPM (Viton)

Adjustment option
allen head HEX 8 with protective cap and sealing (Lockwire holes)

If not preset valves are ordered, pressure and flow rate information is not shown.