

### 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.

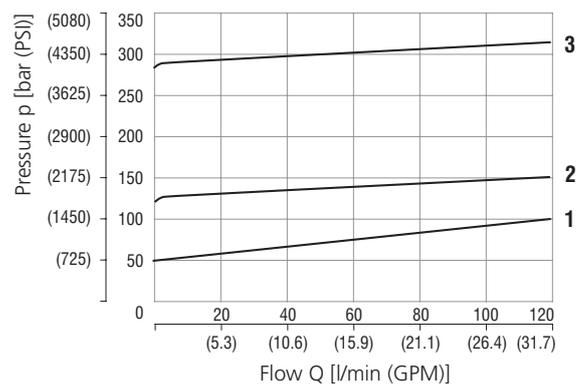
### Technical Data

Valve size		M36 x 2
Max. flow	l/min (GPM)	120 (31.7)
Max. inlet pressure (port P)	bar (PSI)	350 (5100)
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 <sup>3</sup> /min	0.2
Kinematic viscosity range	mm <sup>2</sup> /s (SUS)	10 ... 500 (49 ... 2450)
Weight	valve	0.56 (1.22)
	valve with body	3.05 (6.73)
General information		Datasheet Type
		HA 0060 Products and operating conditions
Spare parts		HA 8010

### Characteristics measured at v = 32 mm<sup>2</sup>/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

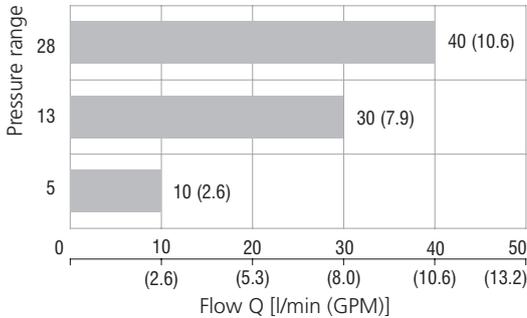
- › The valve have no tamper-indicating seal.
- › No adjusted pressure and flow rate are indicated for unadjusted valve - VPP-R-16-xx-L-CE1017.
- › The adjusting screw is completely loosened. Pressure p = 0 bar
- › For the adjustment of the valve required pressure, proceed as follows:
  - Turn right = 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.

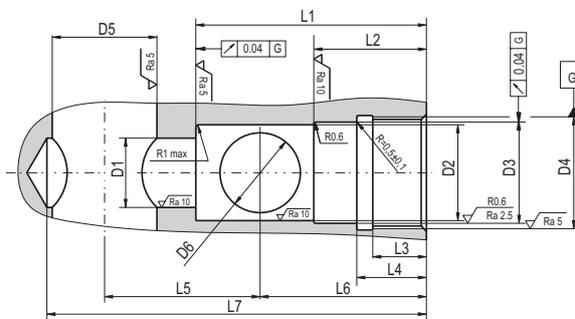
**Application area**

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\*

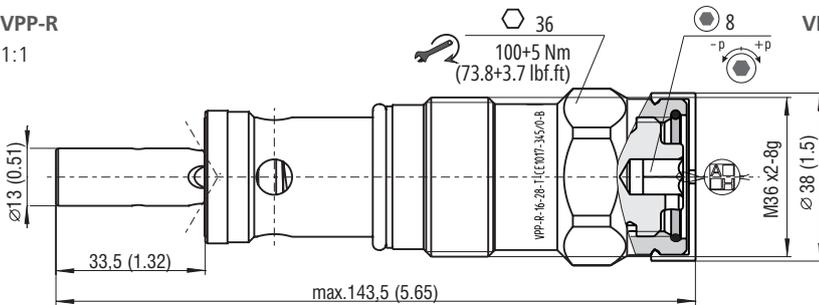
**Cavity dimensions in millimeters (inches)**



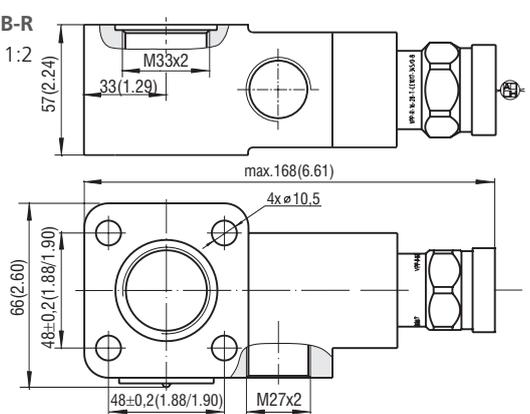
Dimensions in mm (in)			
∅ D1	20 H14 (0.79)	L1	66 (2.6 / 2.61)
∅ D2	30 H11 (1.18)	L2	31 (1.22 / 1.22)
∅ D3	32,6 H10 (1.28)	L3	18 (0.71 / 0.73)
∅ D4	M36x2-7H	L4	21 (0.83 / 0.85)
∅ D5	30 (1.18)	L5	46 (1.81)
∅ D6	25 max (0.98 max)	L6	44 (1.73 / 1.75)
		L7	105 (4.13)

**Dimensions in millimeters (inches)**

VPP-R  
1:1



VPPB-R  
1:2



**Ordering Code**

**VPP**  **-R-16-**  **- L -**  **- CE1017-**  **/**  **- B**

<b>Pressure relief valve</b> PED certified, direct acting	<b>M36 x 2</b>	<b>Surface treatment</b> zinc-coated (ZnNi), ISO 9227 (520 h)
<b>Design of screw-in cartridge valve</b> without a body with a body	<b>No designation</b> <b>B</b>	<b>Pressure setting at flow rate [l/min]*</b> Std. pressure setting made at flow 6 litres/min (example) <b>6</b>
<b>Valve size</b>	<b>120</b>	<b>Adjusted pressure [bar]*</b> (example)
<b>Range of adjustable pressure - pressure stage</b> 50 - 130 bar (730 - 1890 PSI) 130 - 280 bar (1890 - 4060 PSI) 280 - 350 bar (4060 - 5080 PSI)	<b>5</b> <b>13</b> <b>28</b>	<b>Certification PED</b> notified body number CE1017
<b>Adjustment option</b> allen head HEX 8 with protective cap and sealing (Lockwire holes)	<b>No designation</b> <b>V</b>	<b>Seals</b> NBR FPM (Viton)

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