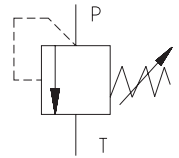


- Screw-in cartridge, modular and in-line design
- Six pressure ranges
- Four pressure adjustment options
- Subplates - see catalogue HA 0002



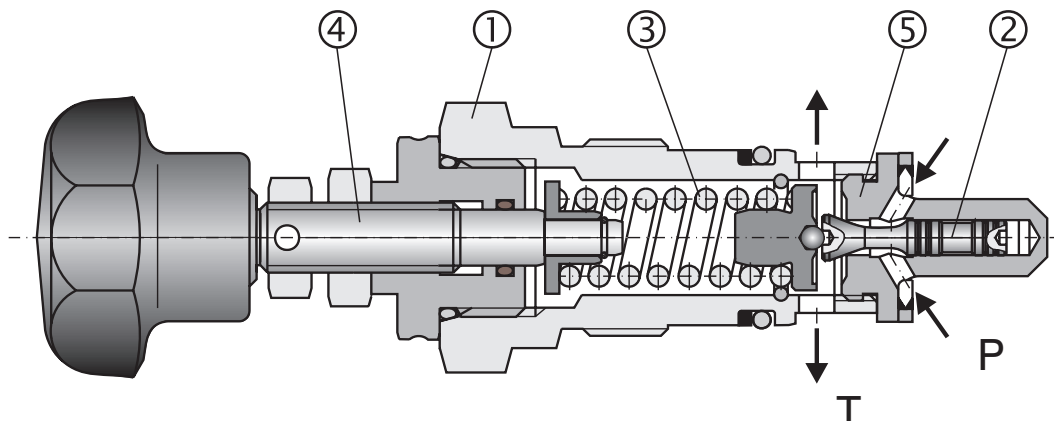
## Functional Description

Pressure relief valves VPP2-06 were designed for applications requiring a safety valve or a pressure regulating valve working over a wide range of pressures and flow rates.

The valve basically consists of the valve body (1), poppet with damping spool (2) and compression spring (3). Pressure is manually set by an adjustment screw (4). The spring pushes the poppet into the seat (5) holding the valve in its normally closed position. When the force, caused by the pressure acting on the exposed surface area of the poppet, exceeds the spring force, the valve opens and the flow passes from port P to port T.

To optimize the valve performance, five pressure ranges are available. Choosing the closest range is recommended. The design enables the valve to be used as a screw-in cartridge for manifold mounting, built into a threaded housing or in a subplate mounted housing. Both the threaded and the subplate mounted housings can be delivered either with metric or pipe threads.

The basic surface treatment of the valve body and the adjustment screw are zinc coated.



# Ordering Code

VPP2-06   /

**Direct Operated Relief Pressure Valves**

without designation

**Seals**  
NBR

**Nominal size**

2,5  
6,3  
10  
16  
25  
32

**Pressure range**  
up to 25 bar  
up to 63 bar  
up to 100 bar  
up to 160 bar  
up to 250 bar  
up to 320 bar

**Adjustment option**

- Hexagon set screw locknut 5 mm
- Adjustable handknob
- Non-lockable cylindrical handknob
- Lockable cylindrical handknob

S  
R  
O  
Z

V  
M  
G  
P

**Model**

- screw-in cartridge valve
- cartridge in threaded housing - with metric threads
- cartridge in threaded housing - with BSP threads
- cartridge in subplate mounted housing

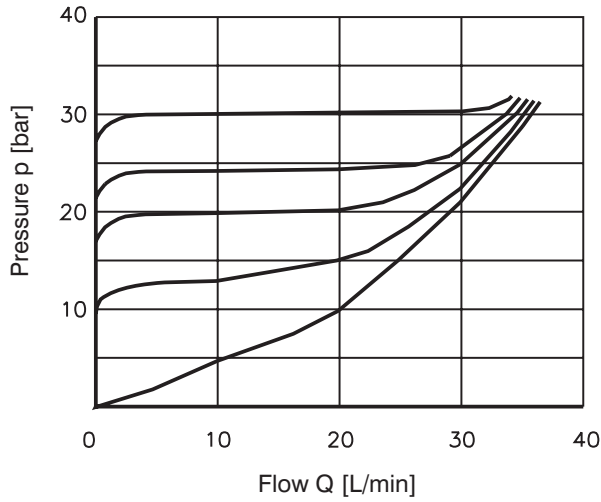
## Technical Data

Nominal size	mm	06
Maximal flow rate	L/min	50
Max. service pressure ports ( P, T, A, B )	bar	350
Working pressure related to flow	bar	see p-Q characteristics
Hydraulic fluid		Hydraulic oils of power classes (HL, HLP) to DIN 51 524
Fluid temperature range for standard sealing (NBR)	°C	-30 ... +100
Viscosity range	mm <sup>2</sup> /s	20 ... 400
Maximum degree of fluid contamination		Class 21/18/15 to ISO 4406 (1999)
Weight	kg	0,4 1,5
Mounting position		optional

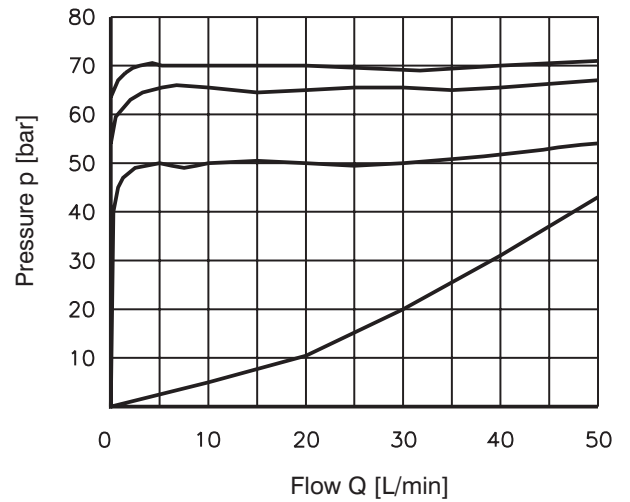
# p-Q Characteristics

Measured at  $v = 32 \text{ mm}^2/\text{s}$

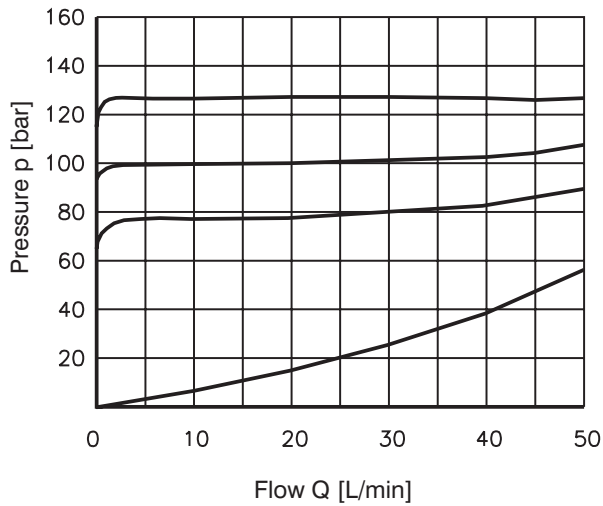
**Pressure range 2,5**



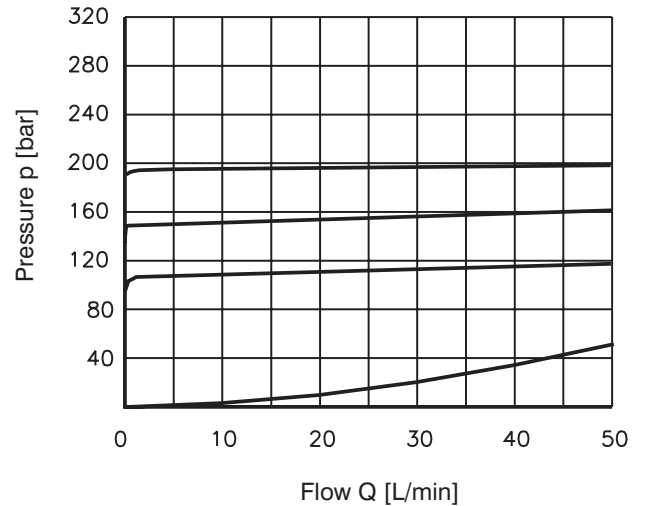
**Pressure range 6,3**



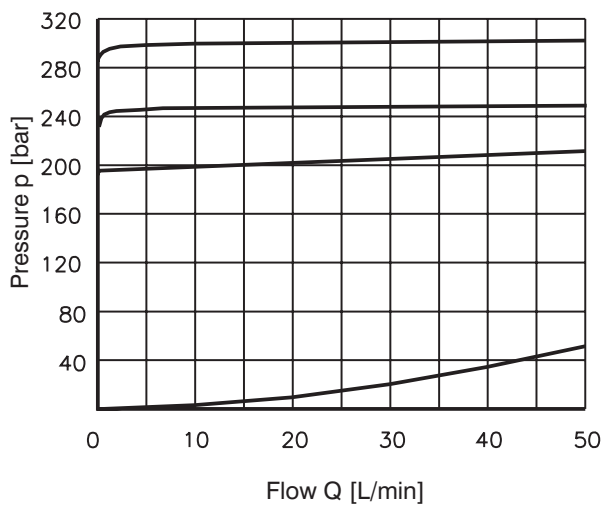
**Pressure range 10**



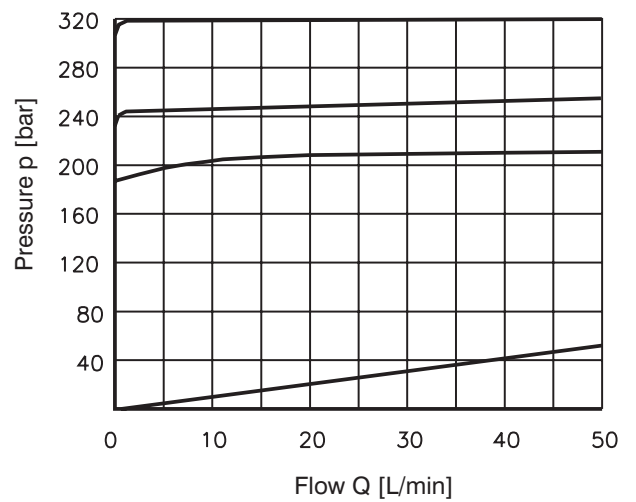
**Pressure range 16**



**Pressure range 25**



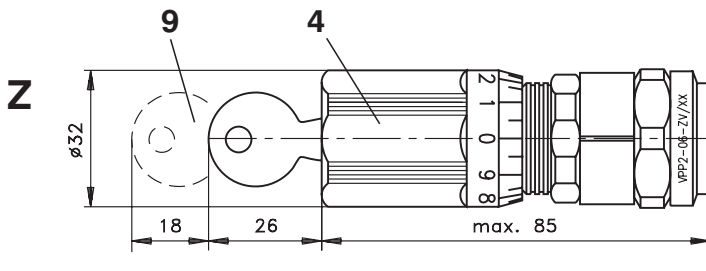
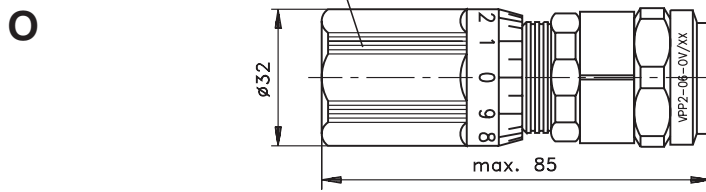
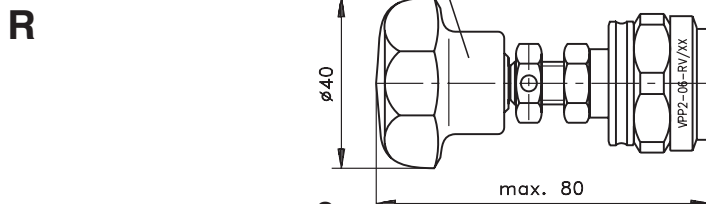
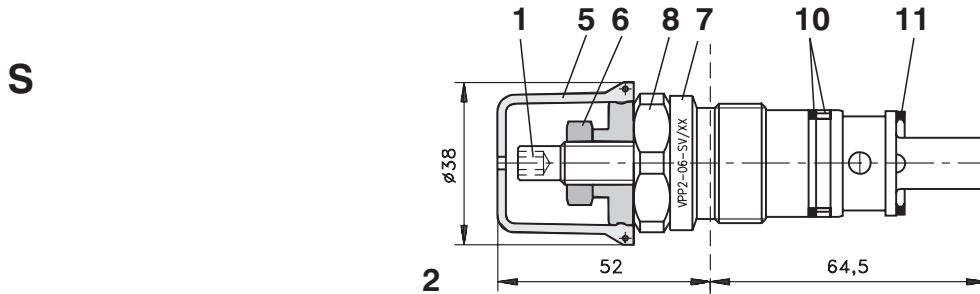
**Pressure range 32**



# Valve Dimensions

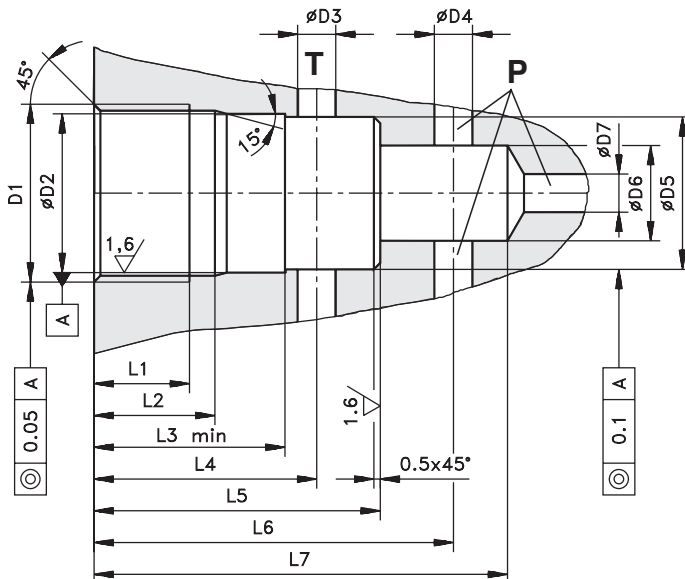
Dimensions in millimeters

## Cartridge valve - model "V"



- 1 Screw adjustment model "S" (inside HEX 5)
  - 2 Adjustable handknob model "R"
  - 3 Non-lockable cylindrical handknob model "O"
  - 4 Lockable cylindrical handknob model "Z"
- With all adjustment mechanisms:**  
 rotation = pressure decrease  
 rotation = pressure increase
- 5 Protective cap
  - 6 Locknut (HEX 16)
  - 7 Valve model code engraved
  - 8 Wrench flats HEX 32, tightening torque 80 Nm
  - 9 Distance to remove the key
  - 10 Seal: Back-up ring M8-116  
 O-ring 20 x 2.65 NBR70  
 supplied with valve
  - 11 Seal: D 17.4 x 24 x 1.5-NSA  
 supplied with delivery

## Cavity

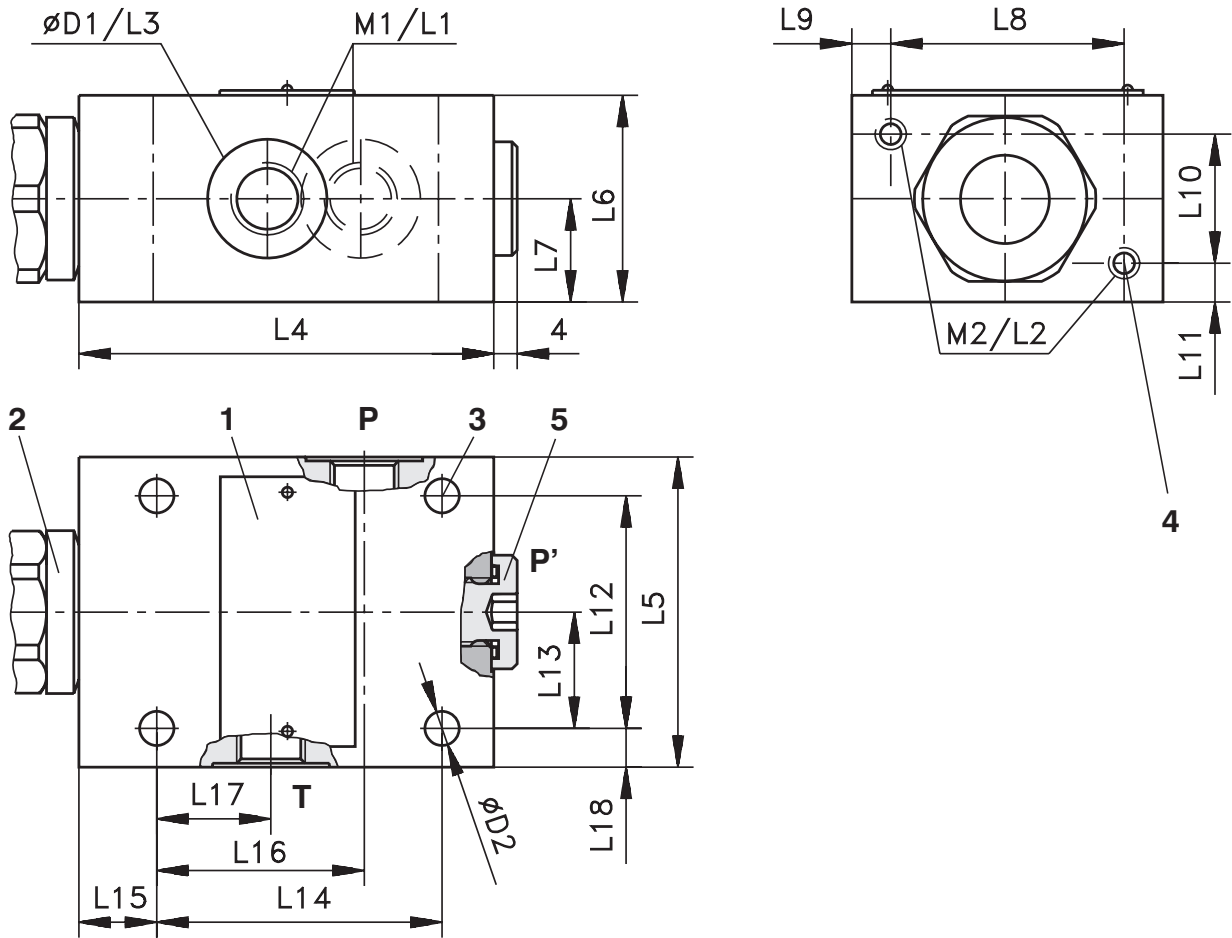


	D1	D2	D3	D4	D5	D6	D7	L1	L2	L3	L4	L5	L6	L7
<b>Size 06</b>	M28x1.5	25 H9	6	6	24.9	15	6	15	19	32	35	45	56.5±5.5	65

# Valve Dimensions

Dimensions in millimeters

## Cartridge in threaded housing - models „M“ and „G“



- 1 Name plate
- 2 Adjustment mechanism - see page 4
- 3 4 mounting through - holes
- 4 2 threaded holes
- 5 Port P' (either P or P' can be used as input port), thread M1 / L1

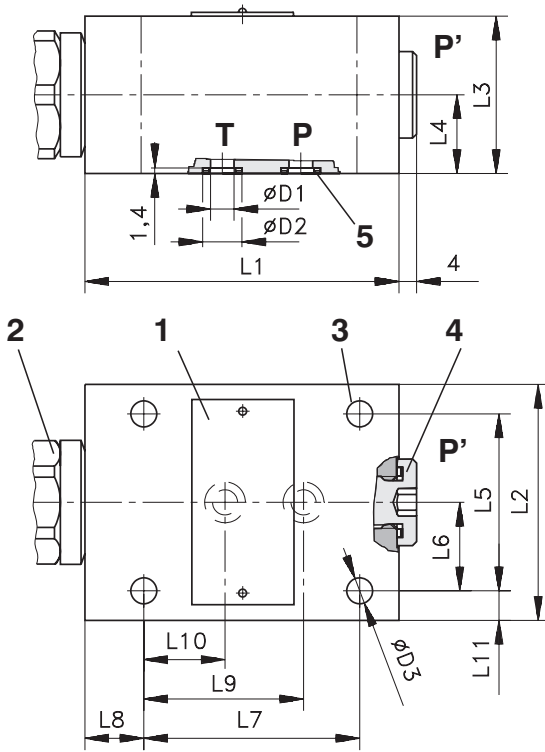
Model	M1	M2	D1	D2	L1	L2	L3	L4	L5	L6	L7
VPP2-06-xM/x	M14x1.5	M6	25	6.6	12	10	0.5	80	60	40	20
VPP2-06-xG/x	G1/4										

Model	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	L18
VPP2-06-xM/x	45	7.5	25	7.5	45	22.5	55	15	40	20	7.5
VPP2-06-xG/x											

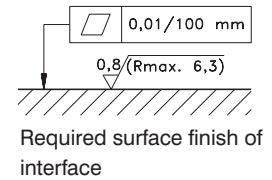
# Valve Dimensions

Dimensions in millimeters

## Cartridge in subplate mounted housing - model „P“



- 1 Name plate
- 2 Adjustment mechanism - see page 4
- 3 4 mounting through - holes
- 4 Port P' (e.g. for pressure measuring), thread M14 x 1.5 deep 12 mm
- 5 Square ring:  
DKAR 00011 [7.65x1.68 (2 pcs.)]



**Note:** Subplates - see catalog HA 0002

Model	D1	D2	D3	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11
VPP2-06-xP/x	6	10.8	6.6	80	60	40	20	45	22.5	55	15	40	20	7.5

## Spare Parts

**Accessories** (delivered with subplate model „P“)

Bolt kit	Square ring
M6x50 DIN 912-10.9 (4 pcs.) Tightening torque 6.6 ft-lbs (8.9 Nm)	DKAR 00011 7.65 x 1.68 (2 pcs.)

**Seak kit for cartridge valve**

Type	Dimensions, quantity			Ordering number
	O-ring	Back-up ring	U-Seal	
Standard NBR	8 x 1.8 (1 pc.)	19.43 x 23.79 x 1.14 (1 pc.)	17.4 x 24 x 1.5 (1 pc.)	551-0093
	20 x 2.65 (1 pc.)	-	-	
	20 x 2 (1 pc.)	-	-	

## Caution!

- The packing foil is recyclable.
- The protective plate can be returned to manufacturer.
- Tightening torque of the screws is 8.9 Nm.
- The technical information regarding the product presented in this catalogue is for descriptive purposes only. It should not be construed in any case as a guaranteed representation of the product properties in the sense of the law.

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