



# PRESSURE RELIEF VALVE VP-RT

- NG 6, 10
- Up to 350 Bar [3,045 PSI]
- Up to 100 l/min [26.4 GPM]
- Connecting dimensions to ISO 4401.
- For vertical stacking - sandwich plate design.
- Two pressure setting ranges.



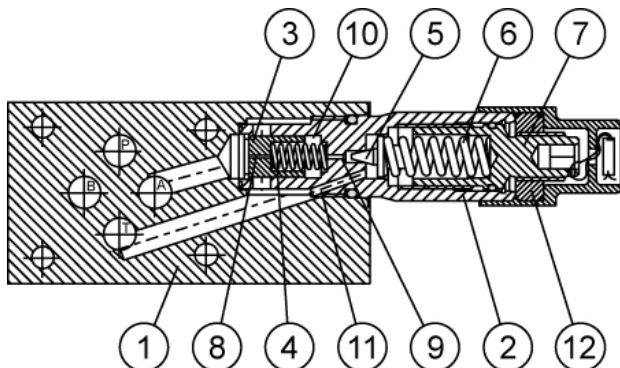
VP-RT-10, VP-RT-6

### Operation

These valves consist of a stack plate (1), pressure relief valve housing (2), main spool insert (3) with a spring (4), pilot poppet (5), spring (6) and pressure setting element (7). The P-line of this pressure relief valve is connected with the hydraulic system. The hydraulic medium pressure acts on the front side of the main spool insert (3). The bores (8,9) permit the introduction of pilot oil into the pressure chamber (10) and the application of pressure to the opposite side of the main spool insert.

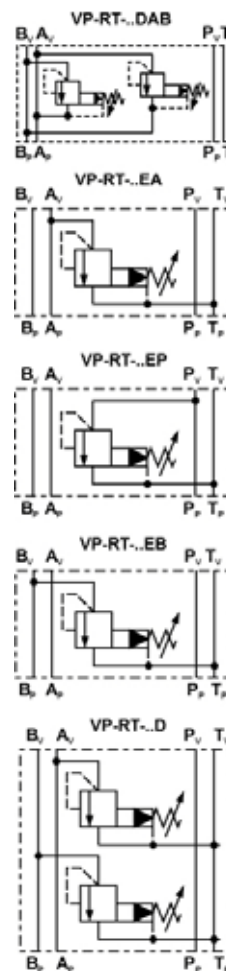
This pressure relief valve remains in closed position till the system pressure exceeds the valve set at the spring (6). A pressure rise in the system above the value set by the pressure setting element (7), provokes the movement of the pilot poppet (5) of the seat, freeing the pilot oil discharge through the bores (9) and (11). A pressure drop in the pressure chamber (10) rises the main spool insert (3), thus clearing the hydraulic medium flow in the direction from port P towards port T.

Loosening of the pressure setting element is prevented by a counter nut (12).



Pilot operated pressure relief valves type VP-RT of sandwich plate design, for vertical stacking, are used for maintaining and limiting the maximum pressure in a hydraulic system.

### Hydraulic symbol



### Features

Size		6	10
Flow rate	l/min [GPM]	50 [13.2]	100 [26.4]
Pressure setting range	Bar [PSI]	315 [4 568]	
Oil temperature range	°C [°F]	-20 to +70 [-4 to +158]	
Viscosity range	mm <sup>2</sup> /s [SUS]	15 to 380 [69.5 to + 1,760]	
Filtration	NAS 1638	8	
Mass	kg [lbs]	1,2 [2,64] - 1,7 [3,75] (D)	2,6 [5.73]

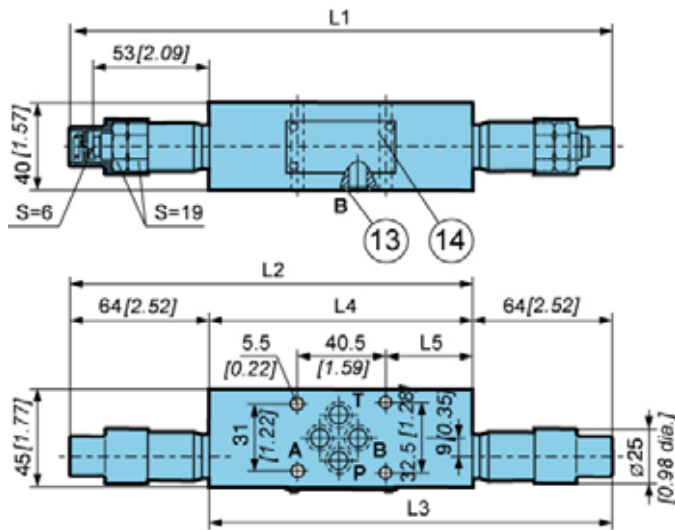
Direct operated valves

Pilot operated valves



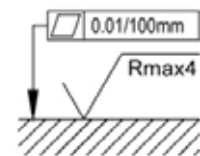
**Dimensions**

**VP-RT-6**



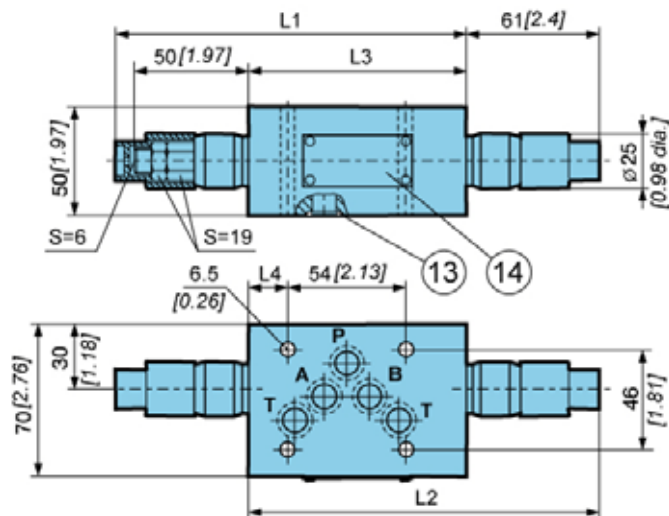
- 13. O-ring, Size 6: 9,25x1,78  
Size 10: 12x2.
- 14. Nameplate

The value set on the pressure setting element is protected by means of a lead stamp Ø11 [0.43 dia.] and a wire Ø1,1 [0.04 dia.].



Required quality of the mating surface

**VP-RT-10**

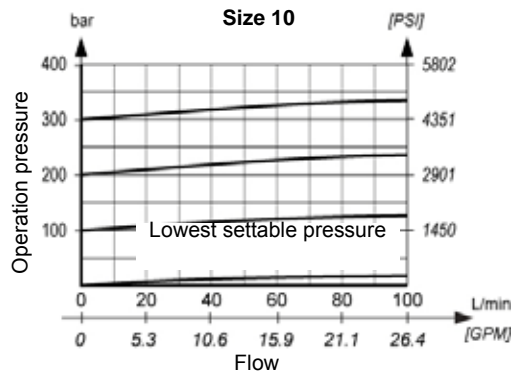
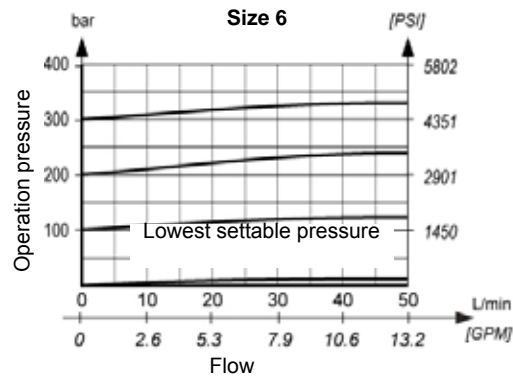
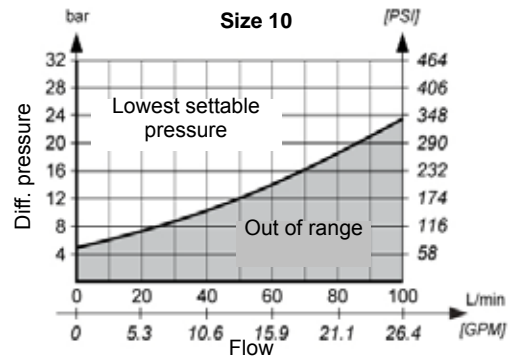
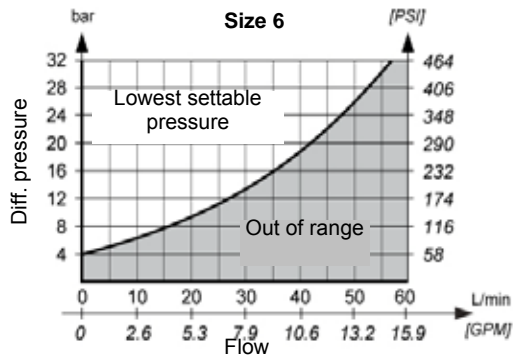


Size	L1	L2	L3	L4	L5
VP-RT-6-EA	-	154 [6.06]	-	-	9 [0.35]
VP-RT-6-EB	-	-	154 [6.06]	90 [3.54]	40,5 [1.59]
VP-RT-6-EP	-	-	-	-	-
VP-RT-6-D	249 [9.80]	-	-	121 [4.76]	40 [1.57]
VP-RT-6-DAB	245 [9.64]	-	-	116,5 [4.59]	38 [1.50]
VP-RT-10-EP	156 [6.14]	-	95,5 [3.76]	28,5 [1.12]	-
VP-RT-10-EA	161 [6.34]	-	-	-	-
VP-RT-10-EB	-	161 [6.34]	100,5 [3.96]	18 [0.71]	-



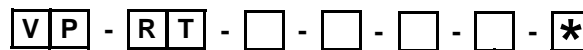
**ΔP-Q Performance curves**

Measured at 50°C [122°F] and viscosity of 32 mm<sup>2</sup>/s [148 SUS].



Direct operated valves

**Model code**



<b>Size</b>	
Size 6	6
Size 10	10

<b>Relief function from → to</b>	
A → T	EA
B → T	EB
P → T	EP
A → T and B → T (only for size 6)	D
A → B and B → A (only for size 6)	DBA

<b>Pressure setting range[PSI]</b>	
100 [1 450]	100
315 [4 568]	315

<b>Seal type</b>	
NBR seals for mineral oil HL, HLP to DIN 51524	No designation
FPM seals for HETG, HEES, HEPG to VDMA 24568 and ISO 15380	E

Special requirements to be briefly specified

Pilot operated valves