

Load lowering and relief

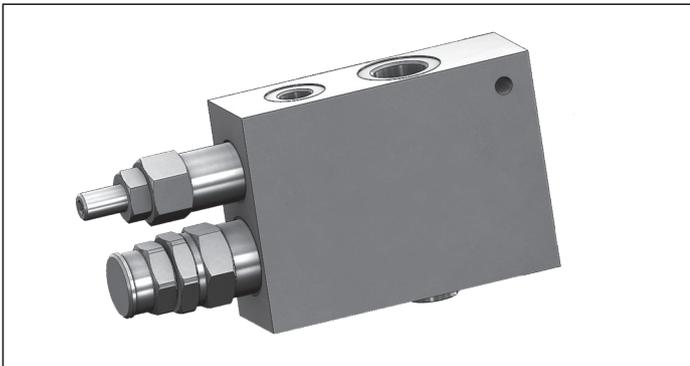
VRBC90-VS30

05.49.75 - X - Y - Z

RE 18310-30

Edition: 03.2016

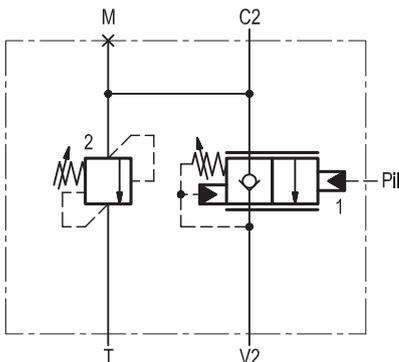
Replaces: 07.2012



Description

When pressure at V2 rises above the check spring bias pressure, the check seat is pushed open and upstream flow is allowed from V2 to C2. Reverse flow (C2 - V2) is locked, in a leak free mode, by valve (1). Downstream flow (C2 - V2) is possible when Pil pressure rises above the bias pressure of the valve (1) spring. The back-pressure at V2 is directly additive to the spring and tends to close the control plunger: it restricts the flow area and it increases the pressure drop through valve (1). If Pil pressure is limited and kept constant, also back-pressure at V2 will remain constant, and downstream flow (C2 - V2) will stay constant, controlled only by the Main Control Valve opening (V2 to T), independently from the load (C2 pressure). The result is easier and better control during lowering. The leak free pressure relief valve (2) senses C2 pressure and opens under overload or shock conditions.

Note: port identified with M are not protected with calibrated orifice but in direct connection with pressure channels.

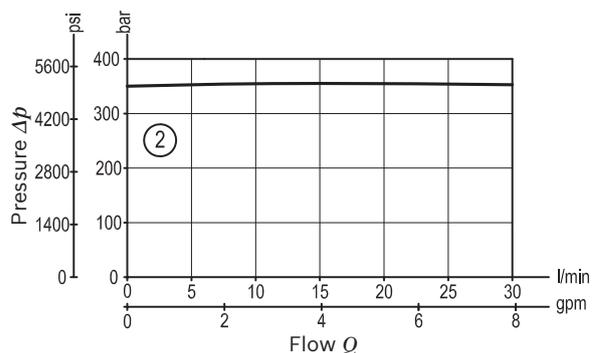
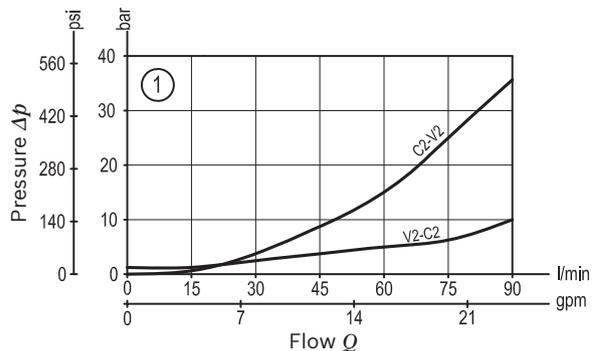


Technical data

| | |
|--|---|
| Operating pressure | up to 210 bar (3000 psi) |
| Max. flow | 90 l/min. (24 gpm) |
| Weight | 1.2 kg (2.6 lbs) |
| Manifold material | Anodized aluminium |
| Note: aluminium bodies are often strong enough for operating pressures exceeding 210 bar (3000 psi), depending from the fatigue life expected in the specific application. If in doubt, consult our Service Network. | |
| Fluid | Mineral oil (HL, HLP) according DIN 51524 |
| Fluid temperature range | -30 °C to 100 (-22 to 212 °F) |
| Viscosity range | 10 to 500 mm ² /s (cSt) |
| Recommended degree of fluid contamination | Class 19/17/14 according to ISO 4406 |
| Other technical data | see data sheet 18350-50 |
| Relief setting: | at least 1.3 times the highest expected load. |

Note: for applications outside these parameters, please consult us.

Characteristic curve



Ordering code

| | | | |
|-----------------|----------|----------|----------|
| 05.49.75 | X | Y | Z |
|-----------------|----------|----------|----------|

Load lowering and relief

Adjustments

00 Inner hex. socket screw protected by locking nut

Port sizes

V2 - C2

Pil - T - M

03

G 1/2

G 1/4

SPRINGS

| | | Adj. pressure range bar (psi) | Pres. increase bar/turn (psi/turn) | Std. setting bar (psi) |
|-----------|---------|-------------------------------|------------------------------------|------------------------|
| 35 | Valve 1 | 10-40 (145-580) | 8 (116) | 30 (435) "cracking" |
| | Valve 2 | 100-350 (1450-5000) | 85 (1233) | 350 (5000) "5 l/min" |

Tamper resistant cap ordering code 11.04.33.001
Mat. no. R930005387
for Valve 1



Tamper resistant cap ordering code 11.04.23.003
Mat. no. R930000754
for Valve 2

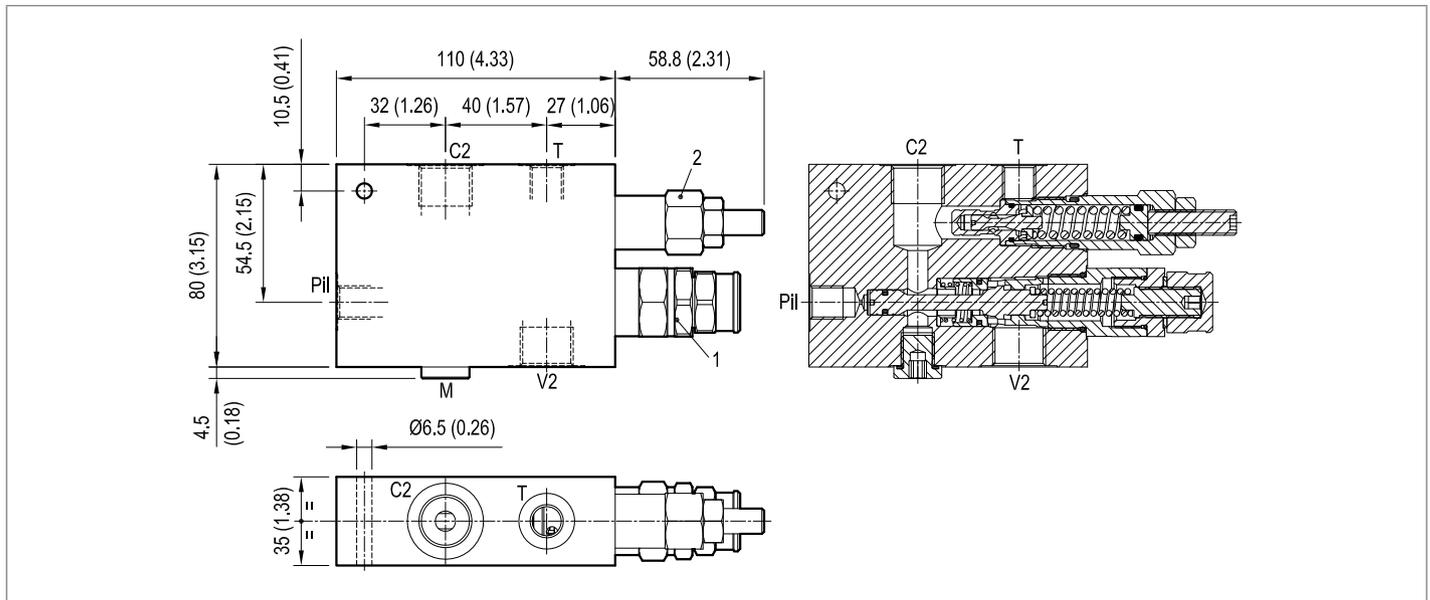


Preferred types

| Type | Material number |
|-----------------|-----------------|
| 054975000335000 | R930002982 |

| Type | Material number |
|------|-----------------|
| | |

Dimensions



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