

## Pressure relief pilot operated poppet type and anti-cavitation valve - External drain Special cavity, FB

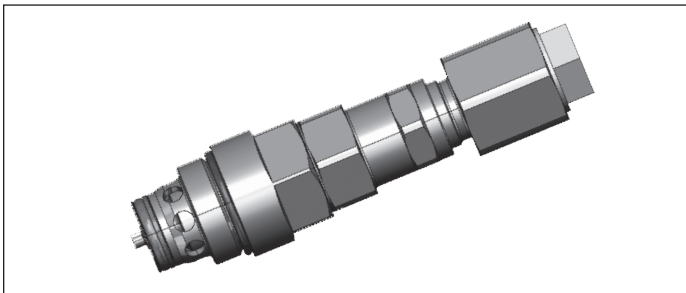
VMR1-16

VMR1.EFB

**RE 18319-16**

Edition: 07.2023

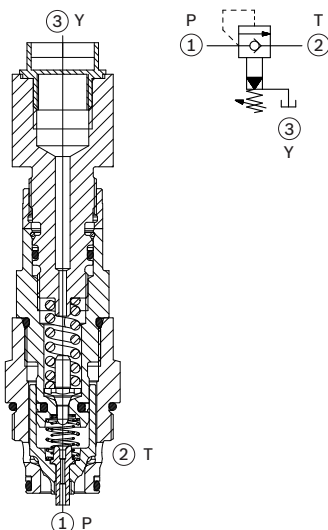
Replaces: 07.2020



### Description

Flow is blocked from 1 to 2 until pressure increases to meet the selected valve setting, lifting the conical, pilot-stage poppet from its seat. This action exhausts oil above the main-stage poppet (low-leakage, seat type), allowing it to shift and provide relief flow through 2 to tank.

The anti-cavitation function makes up for lacking oil volumes caused, for example, by leakage when pressure valves respond or in the case of leading loads. If the pressure at main port 1 is lower than the one at main port 2, the spool will be lifted out of its seat. Hydraulic fluid flows from main port 2 to main port 1. The spring chamber is drained to tank at port 3 allowing a consistent relief setting independent of back-pressure at port 2.



### Technical data

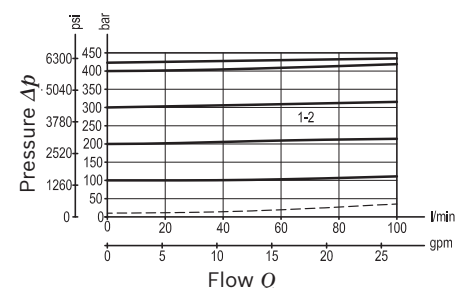
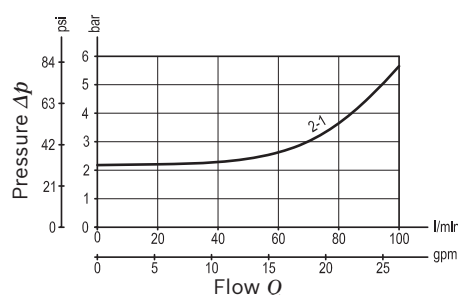
Max. operating pressure port 1 (P)	420 bar (6000 psi)
Max. pressure admitted port 2 (T)	50 bar (725 psi)
Max counter pressure port 3 Y (added to the pressure adjustment at a ratio of 1:1)	420 bar (6000 psi)
Max. flow	100 l/min (63 gpm)
Max. internal leakage <sup>1)</sup>	15 drops/min.
Fluid temperature range	-20 to 120 °C (-4 to 248 °F) (Viton)
Installation torque <sup>2)</sup>	90 Nm (66,4 ft-lbs)
Weight	0.26 kg (0.57 lbs)
Special cavity	FB (see data sheet 18325-75)
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit (Viton) <sup>3)</sup>	Code: RG16R2040520100 material no: R931002593
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 380 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 9) / ISO 4406 20/18/15
Installation position	No restrictions
MTTFD	150 years see RE 18350-51
Other Technical Data	See data sheet 18350-50
Without surface protection	In case of need of surface protection, please consult factory.

1) At 80% of pressure setting.

2) Torque value valid for installation in cast iron and steel manifolds. In case of different body materials, please consult factory.

3) Only external seals for 10 valves.

### Characteristic curve



**Ordering code**

<b>VMR1.EFB.VG</b>	<b>*</b>
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Pressure relief pilot operated poppet type and anti-cavitation valve - External drain

SPRINGS		
	Maximum set pressure bar (psi)	Pressure increase bar/turn (psi/turn)
<b>000</b>	420 (6090)	272 (3945)

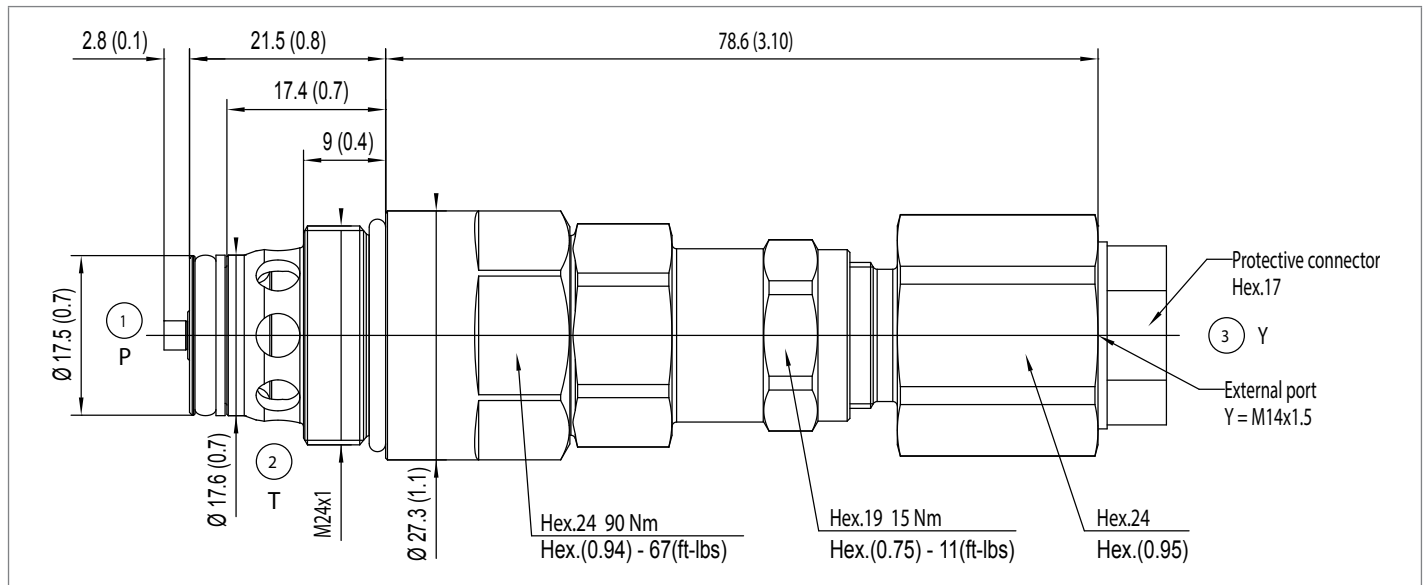
\* Valves are delivered set at pressure setting <25 bar and with adjustment device not tighten. Fine setting to be done by customer. For case of request of factory set valve, please consult factory.

**Preferred types**

Type	Material number
VMR1.EFB.VG.000	R930078025

Type	Material number

**Dimensions**



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