

# Pressure relief pilot operated poppet type and anti-cavitation valve Special cavity, FK

VMR3-32-FK

VMR3-FK

**RE 18318-44**

Edition: 07.2023

Replaces: 04.2022

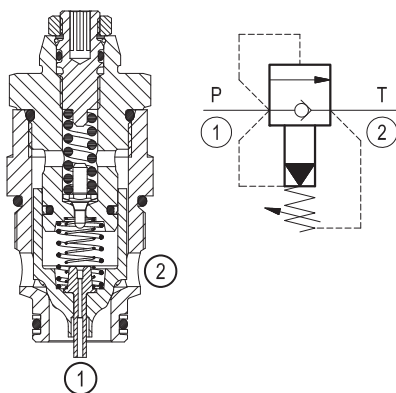


Technical data	
Max. operating pressure port 1 (P)	420 bar (6000 psi)
Max. pressure admitted port 2 (T)	50 bar (725 psi)
Max. flow	400 l/min (106 gpm)
Max. internal leakage <sup>1)</sup>	75 drops/min.
Fluid temperature range	-20 to 120 °C (-4 to 248 °F) (Viton)
Installation torque <sup>2)</sup>	150 Nm (111 ft-lbs)
Weight	0.37 kg (0.82 lbs)
MTTFD	150 years see RE 18350-51
Special cavity	FK (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: RG32R2040540100 material no: R930077563
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
Other Technical Data	See data sheet 18350-50
Without surface protection	In case of need of surface protection, please consult factory.

## 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. Pressure at 2 is additive to the relief setting of the valve.

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.

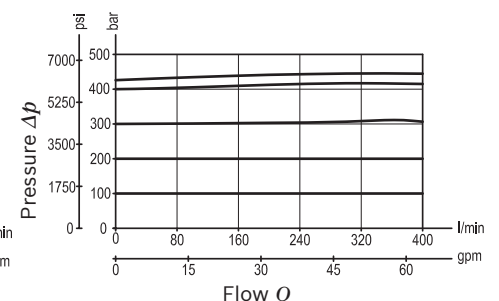
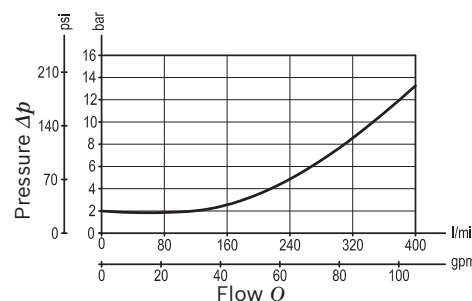


1) At 80% of pressure setting.

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>VMR3.HFK</b>	<b>*</b>	<b>010</b>
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Pressure relief pilot operated poppet type and anti-cavitation valve

	SPRINGS		O-RING
	Adj. press. range bar (psi)	Pressure increase bar/turn (psi/turn)	Material
<b>VG</b>	100-420 (1450-6090)	300 (4350)	Viton (FKM)

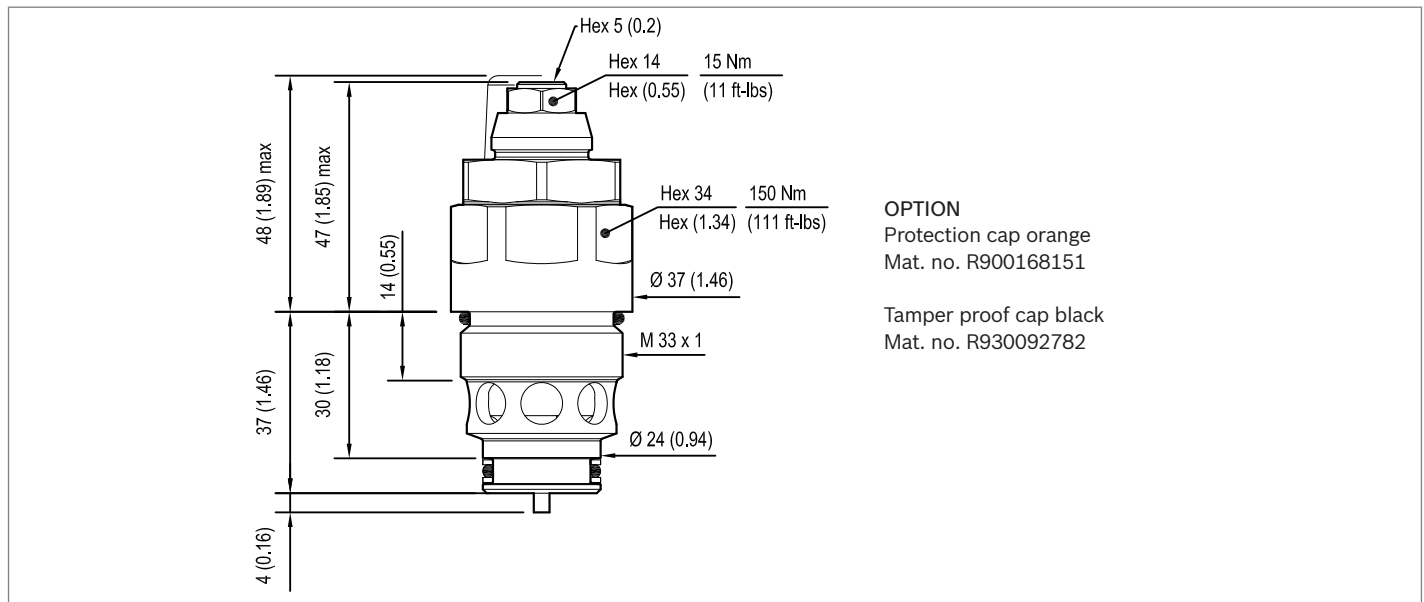
\* Valves are delivered set at pressure setting <25 bar and with adjustment device not tighten. Fine setting to be done by customer. For case of request of factory set valve, please consult factory.

**Preferred types**

Type	Material number
VMR3.HFK.VG.010	R930071773

Type	Material number

**Dimensions**



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