

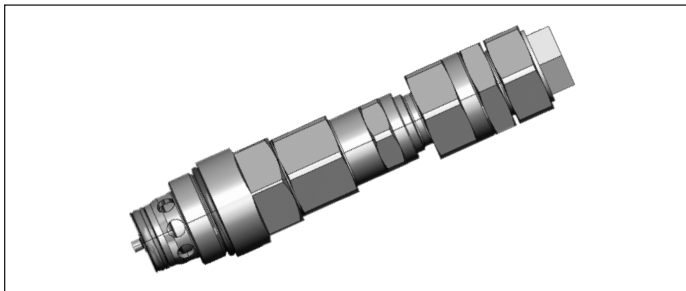
Pressure relief pilot operated poppet type and anti-cavitation valve with pressure sequencing Special cavity, FB

RE 18319-13

Edition: 07.2020

VBB1-16

VBB1.SFB

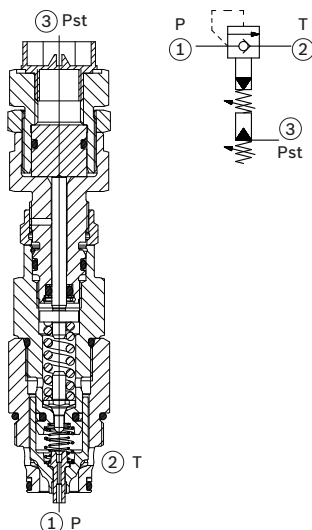


Description

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. Pressure sequencing function occurs by connecting pilot oil pressure to the external port 3 Pst for increasing the preload of the main spring and the maximum set system pressure.

Pressurization at the external port 3 has an effect on the pressure at the main port 1 at a ratio of 21:1.



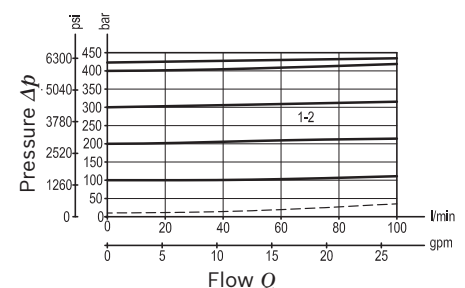
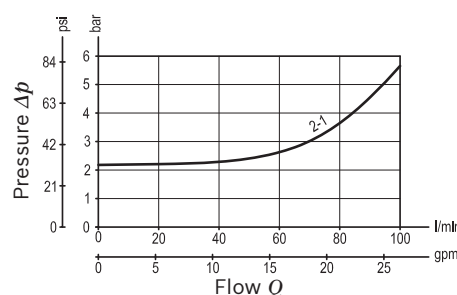
Technical data

Max. operating pressure port 1 (P)	420 bar (6000 psi)
Max. pressure admitted port 2 (T)	50 bar (725 psi)
Max pilot pressure port 3 Pst	30 bar (435 psi)
Arithmetic gear ratio	21:1
Max. flow	100 l/min (63 gpm)
Max. internal leakage ¹⁾	15 drops/min.
Fluid temperature range	-20 to 120 °C (-4 to 248 °F) (Viton)
Installation torque ²⁾	90 Nm (66,4 ft-lbs)
Weight	0.315 kg (0.69 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)	Code: RG16R2040520100 material no: R931002593
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 380 mm ² /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.

Characteristic curve

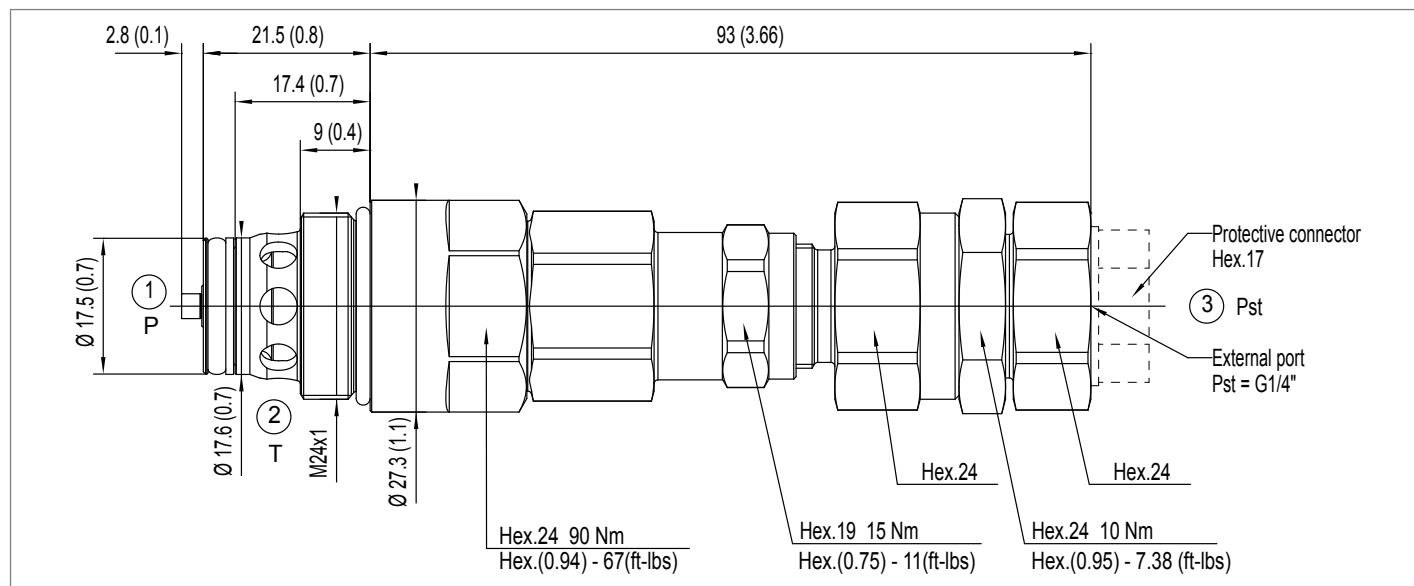


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	SPRINGS		O-RING
	Maximum set pressure bar (psi)	Pressure increase bar/turn (psi/turn)	Material
000	420 (6090)	272 (3945)	Viton (FKM)

Type	Material number
VBB1.SFB.VG.000	R930077184

Type	Material number



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