

# Pressure relief pilot operated poppet type and anti-cavitation valve - External drain

## Special cavity, FC - LG

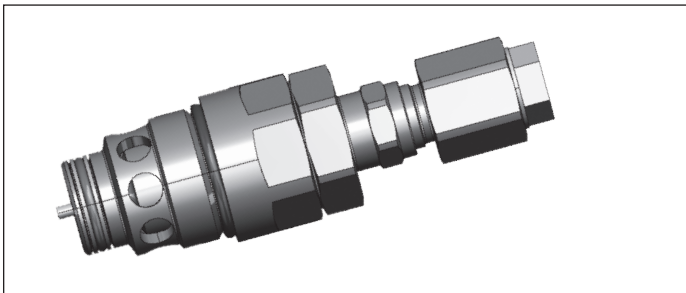
VMR2-22

VMR2.EFC/ELG

**RE 18319-17**

Edition: 07.2023

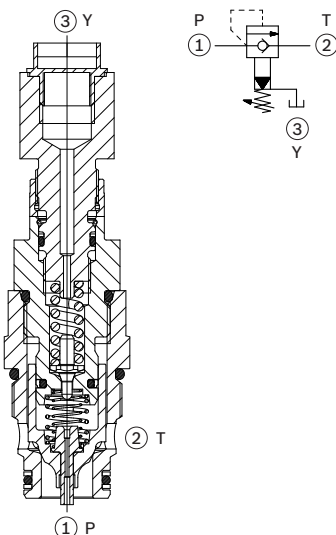
Replaces: 07.2020



### 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

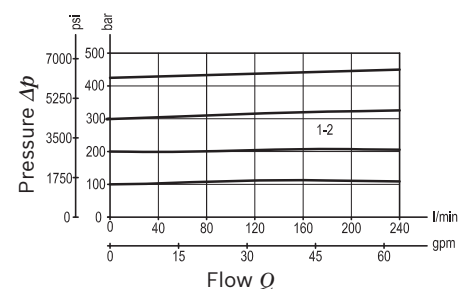
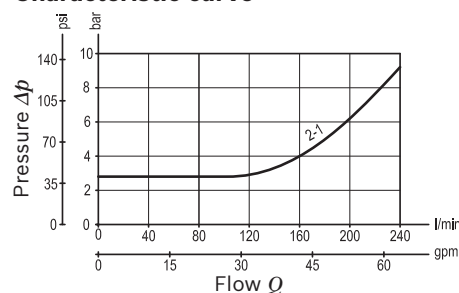
Max. operating pressure port 1 (P)	420 bar (6000 psi)
Max. pressure admitted port 2 (T)	50 bar (725 psi)
Max counter pressure port 3 Y (added to the pressure adjustment at a ratio of 1:1)	420 bar (6000 psi)
Max. flow	240 l/min (63,40 gpm)
Max. internal leakage <sup>1)</sup>	45 drops/min.
Fluid temperature range	-20 to 120 °C (-4 to 248 °F) (Viton)
Installation torque <sup>2)</sup>	100 Nm (73,76 ft-lbs) for FC 120 Nm (88,51 ft-lbs) for LG
Weight	0.36 kg (0.79 lbs) for FC 0.45 kg (0.99 lbs) for LG
Special cavity	FC - LG (see data sheet 18325-75)
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit (Viton) <sup>2)</sup>	Code: RG22R2040540100 material no: R930077562 for FC Code: RGLGR2040520100 material no: R930054948 for LG
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>VMR2.E</b>	<b>*</b>	<b>.VG</b>	<b>*</b>
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Pressure relief pilot operated poppet type and anti-cavitation valve - External drain

Cavity **FC**  
Cavity **LG**

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

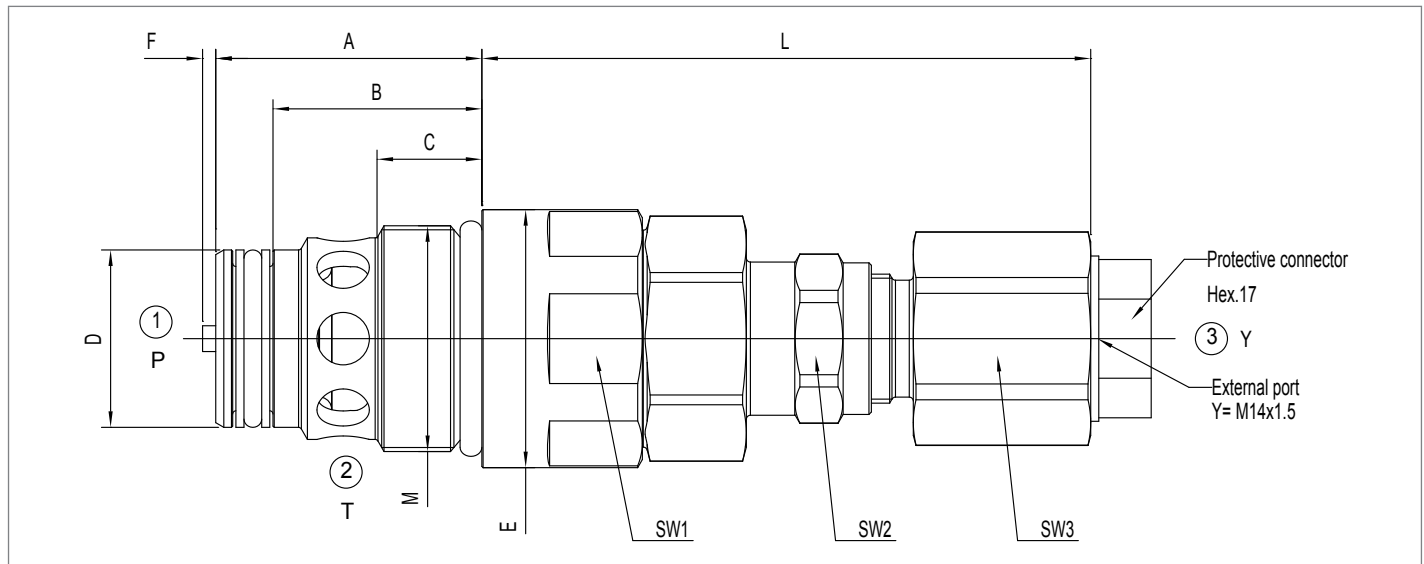
\* Valves are delivered set at pressure setting <25 bar and with adjustment device not tighten. Fine setting to be done by customer. For case of request of factory set valve, please consult factory.

**Preferred types**

Type	Material number
VMR2.EFC.VG.000	R930073917
VMR2.ELG.VG.000	R930076123

Type	Material number

**Dimensions**



Type	A	B	C	L	F	D	E	M	Wrench size			Tightening torque [Nm (ft-lbs)]	
									SW1	SW2	SW3	SW1	SW2
<b>FC</b>	33 (1.30)	26 (1.02)	13 (0.51)	76 (2.99)	1.7 (0.07)	22 (0.87)	32 (1.26)	M28x1	30 (1.18)	19 (0.75)	24 (0.95)	100 (74)	15 (11)
<b>LG</b>	38.5 (1.52)	30.4 (1.18)	15 (0.59)	95 (3.74)	-	27 (1.06)	34.5 (1.36)	M30x1.5	30 (1.18)	19 (0.75)	24 (0.95)	120 (88.51)	15 (11)

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