

# Counterbalance, standard poppet type differential area Common cavity, Size 16

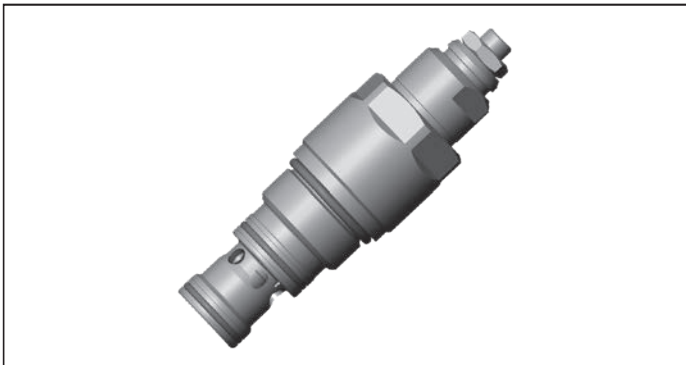
VBSN-16A

04.52.29 - X - 27 - Z

**RE 18320-04**

Edition: 07.2023

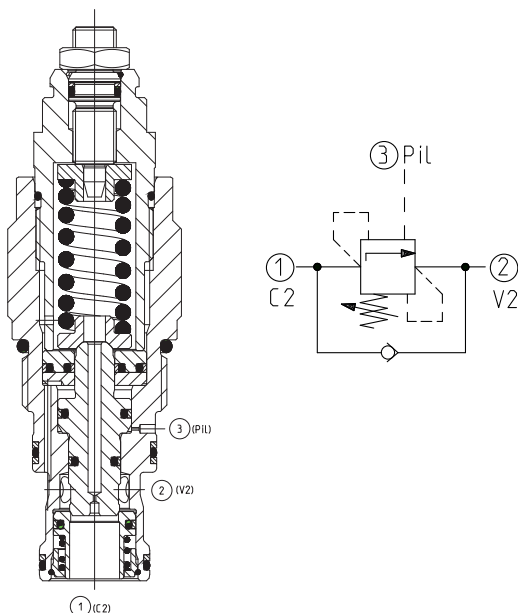
Replaces: 05.2022



Technical data	
Max. operating pressure	350 bar (5000 psi)
Max. flow	200 l/min (53 gpm)
Max. internal leakage <sup>1)</sup>	15 drops/min.
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	108 - 122 Nm (80 - 90 ft-lbs)
Weight	0.82 kg (1.81 lbs)
MTTFD	150 years see RE 18350-51
Cavity	CA-16A-3C (see data sheet 18325-70)
Adjustment	according to ISO 4413 with sealed adjustment screw to prevent oil leakage during adjustment
Salt spray test	500h according to DIN EN ISO 9227:2017-07
Lines bodies and standard assemblies	Please refer to section "Hydraulic integrated circuit" or consult factory
Seal kit <sup>2)</sup>	Code: RG16A9010530100 material no: R930001200
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm <sup>2</sup> /s (cSt)
Recommended degree of fluid contamination	Nominal value max. 10µm (NAS 8) / ISO 4406 19/17/14
Installation position	No restrictions
Other Technical Data	See data sheet 18350-50

## Description

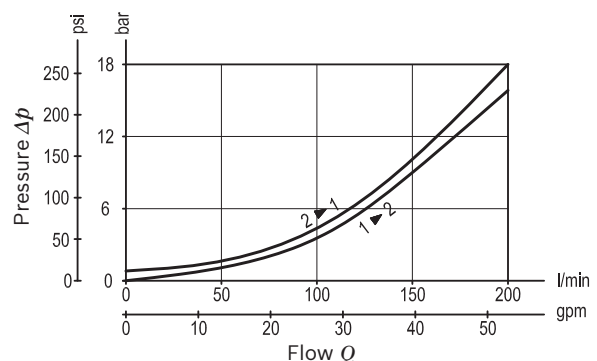
When pressure at 2 rises above the spring bias pressure, the check seat is pushed away from the piston and flow is allowed from 2 to 1. When load pressure at 1 rises above the pressure setting, the direct-acting, differential area relief function is activated and flow is relieved from 1 to 2. With pilot pressure at 3, the pressure setting is reduced in proportion to the stated ratio of the valve, until fully open with free-flow from 1 to 2. The spring chamber is drained to 2, and any back-pressure at 2 is additive to the pressure setting in all functions. Valve design prevents spring going solid and complete unscrewing during adjusting.



Pressure setting: at least 1.3 times the load induced pressure and maximum 1.5 times catalogue max nominal setting.

- 1) At 70% of pressure setting
- 2) Only external seals for 10 valves

## Characteristic curve



**Ordering code**

<b>04.52.29</b>	<b>X</b>	<b>27</b>	<b>Z</b>	<b>00</b>	<b>*</b>
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Counterbalance,  
standard poppet type, differential area

Pilot ratio

**03** 4:1

**10** 8:1

**27** Common cavity, Size 16

Series M to Z  
unchanged performances and dimensions

**00** Standard (Buna)  
**V0** Viton (FKM)

		SPRINGS		
		Adj. press. range bar (psi)	Pressure increase bar/turn (psi/turn)	Std. setting bar (psi) Q=5 l/min
for X= 03	<b>20</b>	70-210 (1000-3000)	40 (580)	200 (2900)
	<b>35</b>	140-350 (2000-5000)	82 (1189)	350 (5000)
for X= 10	<b>40</b>	140-350 (2000-5000)	85 (1233)	350 (5000)

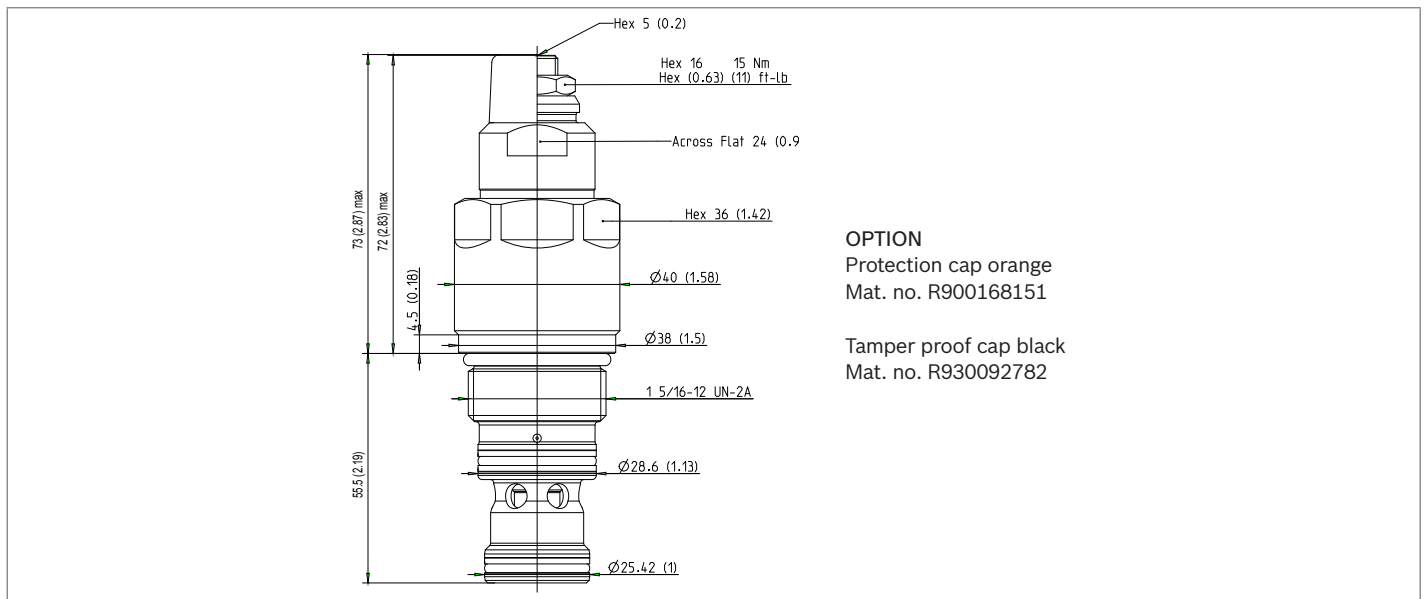
Note: Special settings available with optional tamperproof cap.  
Contact factory authorized representative for ordering code.

**Preferred types**

Type	Material number
04522903272000M	R930079983
04522903273500M	R930079984
04522910274000M	R930081289

Type	Material number

**Dimensions**



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