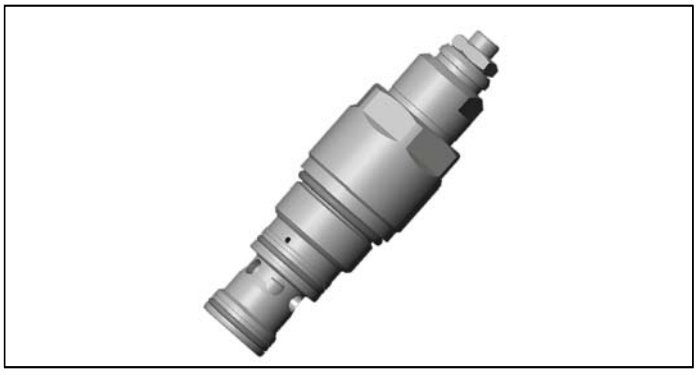
rexroth
A Bosch Company

Counterbalance, relief compensated poppet type differential area Common cavity, Size 16

VBSP-16A

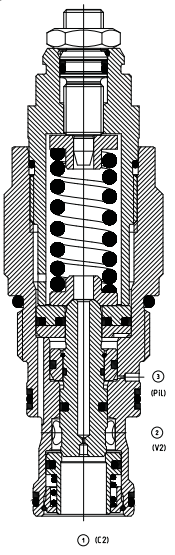
04.54.10 - X - 27 - Z

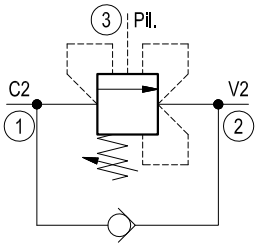
RE 18320-09
Edition: 01.2021
Replaces: 02.2019



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. The valve applies a balanced piston design allowing relief operation at the valve setting independent of back-pressure at 2. However, the piloted opening of the valve remains subject to additive pressure at port 2. Valve design prevents spring going solid and complete unscrewing during adjusting.



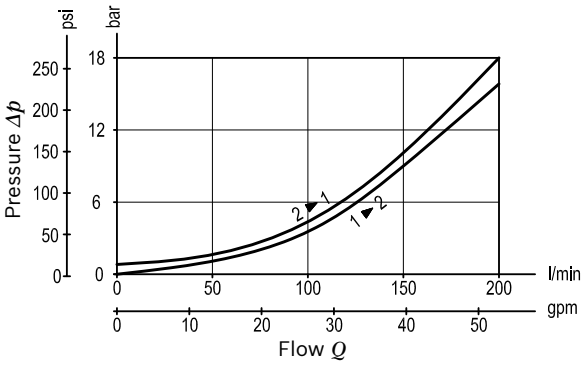


Technical data	
Max. operating pressure	350 bar (5000 psi)
Max. flow	200 l/min (53 gpm)
Max. internal leakage[1)]	15 drops/min.
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	108 - 122 Nm (80 - 90 ft-lbs)
Weight	0.82 kg (1.81 lbs)
MTTFD	150 years see RE 18350-51
Cavity	CA-16A-3C (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[2)]	Code: RG16A9010530100
	material no: R930001200
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm²/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

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

04.54.10	X	27	Z	*	*

Series M to Z
unchanged performances and dimensions

Counterbalance, relief compensated,
poppet type differential area

00 Standard (Buna)
V0 Viton (FKM)

Pilot ratio

03 4:1 Without sealed pilot piston

	SPRINGS		
	Adj. press. range bar (psi)	Pressure increase bar/turn (psi/turn)	Std. setting bar (psi) Q=5 l/min
20	70-210 (1000-3000)	70 (1015)	200 (2900)
35	140-350 (2000-5000)	108 (1566)	350 (5000)

27 Common cavity, Size 16

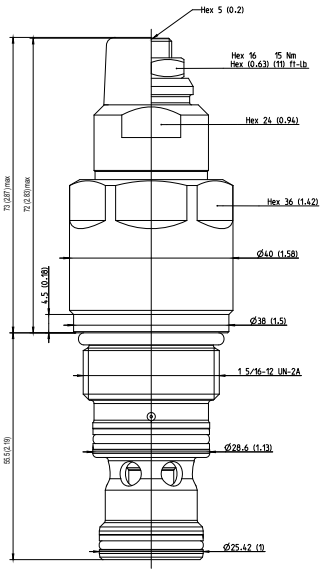
Note: Special settings available with optional tamperproof cap.
Contact factory authorized representative for ordering code.

Preferred types

Type	Material number
04541003272000M	R930081441
04541003273500M	R930081375

Type	Material number

Dimensions



OPTION 1
Protection cap orange
Mat. no. R900168151

OPTION 2
Tamperproof cap red (without Rexroth logo)
Mat. no. R93xxxxxxx

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