

Counterbalance, 4 port vented poppet type external drain, counterclockwise adjustment Sun cavity interchange, T-23A

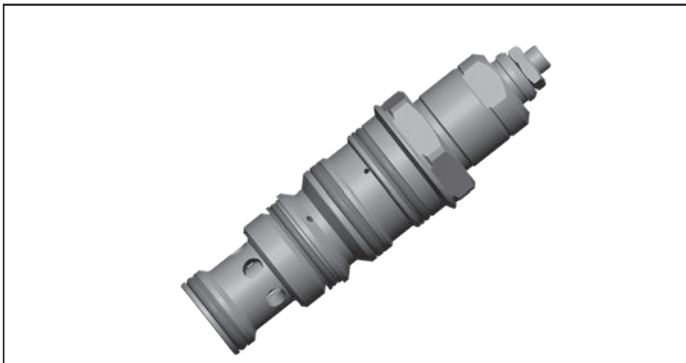
VBSY-16U-RS

04.59.34 - X - 47 - Z

RE 18320-28

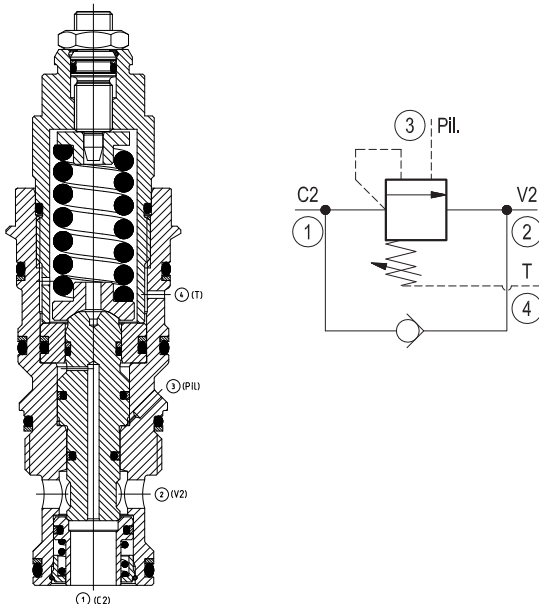
Edition: 07.2023

Replaces: 03.2016



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 (turn counterclockwise to increase setting - turn clockwise to decrease setting), the direct-acting, 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 vented to 4, allowing operation of all functions independent of back-pressure at 2. Any back-pressure at 4 is additive to the pressure setting in all functions. Valve design prevents spring going solid and complete unscrewing during adjusting.



Technical data

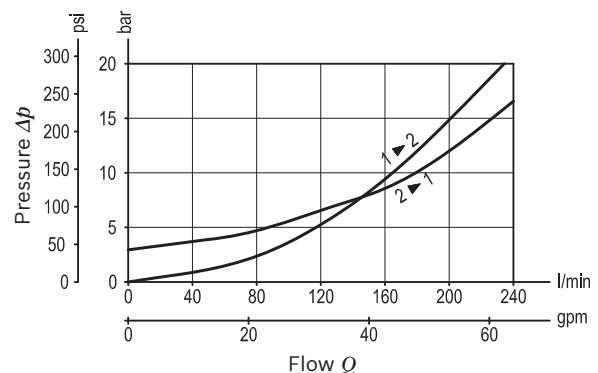
Max. operating pressure	350 bar (5000 psi)
Max. flow	240 l/min (63 gpm)
Max. internal leakage ¹⁾	15 drops/min.
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	200 - 215 Nm (148 - 159 ft-lbs)
Weight	0.8 kg (1.76 lbs)
MTTFD	150 years see RE 18350-51
Cavity	SUN T-23A
Adjustment	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: RG16U4020110100 material no: R930000994
Fluids	Mineral-based or synthetics with lubricating properties at viscosities of 10 to 500 mm ² /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

04.59.34	X	47	Z	*	*
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Counterbalance, 4 port vented
poppet type external drain,
counterclockwise adjustment

Pilot ratio

03 3:1

47 SUN cavity interchange, T-23A

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) cracking pressure
20	70-250 (1000-3600)	70 (1015)	200 (2900)
40	200-350 (2900-5000)	105 (1523)	350 (5000)

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

Preferred types

Type	Material number
04593403472000M	R930081383
04593403474000M	R930081346

Type	Material number

Dimensions

Technical drawing of the VBSY-16U-RS counterbalance valve. The drawing shows a side view of the valve with various dimensions and adjustment points labeled. Key dimensions include: Hex 5 (0.2), Hex 16 15 Nm Hex (0.63) (11) ft-lb, Across Flat 27 (1.06), Ø32 (1.26), Hex 41 (1.61), Ø40.44 (1.59), Ø39.67 (1.56), M36x2, Ø31.75 (1.25), 48 (1.91), 145 (5.71), 95 (4.13), and 95 (4.13). The drawing also shows the pilot ratio of 03:1 and the SUN cavity interchange (47).

Turn adjustment clockwise to decrease setting
and release load

OPTION
Protection cap orange
Mat. no. R900168151

Tamper proof cap black
Mat. no. R930092782

Bosch Rexroth Oil Control S.p.A.
Via Leonardo da Vinci 5
P.O. Box no. 5
41015 Nonantola – Modena, Italy
Tel. +39 059 887 611
Fax +39 059 547 848
compact-hydraulics-cv@boschrexroth.com
www.boschrexroth.com/compacthydraulics

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