

Counterbalance, standard poppet type differential area, counterclockwise adjustment SUN cavity interchange, T-17A

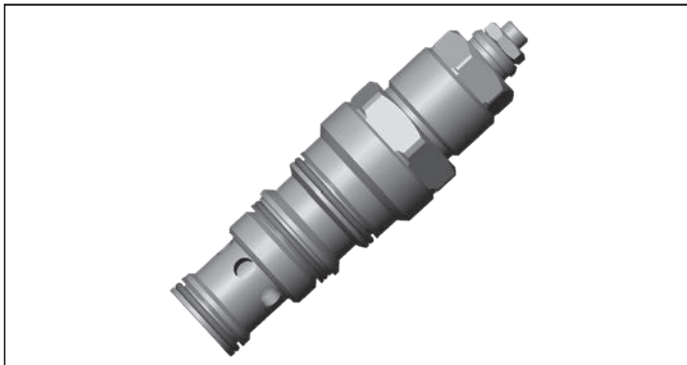
VBSN-16U-RS

04.52.45 - X - 47 - Z

RE 18320-19

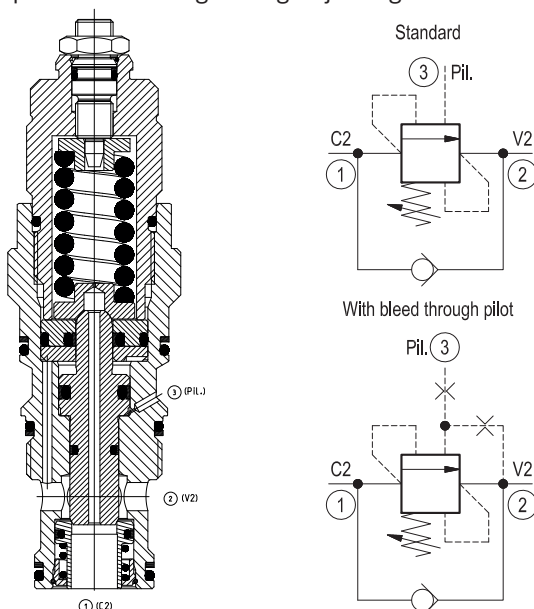
Edition: 07.2023

Replaces: 01.2021



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, 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. 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.



Technical data

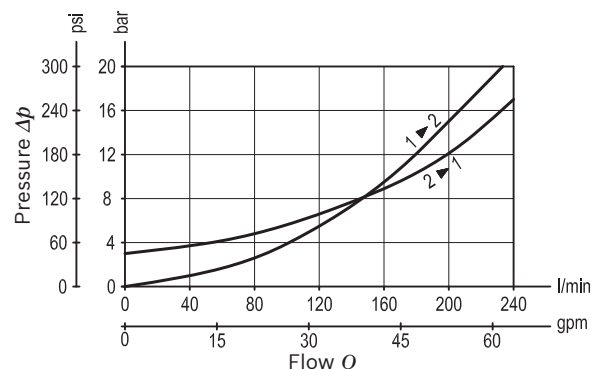
Max. operating pressure	420 bar (6000 psi)
Max. flow	240 l/min (63 gpm)
Max. internal leakage ¹⁾	15 drops/min.
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	200 - 215 Nm (148 - 159 ft-lbs)
Weight	0.8 kg (1.76 lbs)
MTTFD	150 years see RE 18350-51
Cavity	SUN T-17A
Adjustment	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: RG16U9020110100 material no: R930000995
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

04.52.45	X	47	Z	*	*
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Counterbalance,
standard poppet type, differential
area, counterclockwise adjustment

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
Pilot ratio	03 4:1 standard version			
	10 8:1 standard version			
42 2:1 with bleed through pilot				
47 SUN cavity interchange, T-17A		for X= 03	20 70-280 (1000-4000)	80 (1160) 200 (2900)
		40	200-420 (2900-6000)	118 (1711) 350 (5000)
		for X= 10	20 70-280 (1000-4000)	49 (711) 200 (2900)
		40	200-420 (2900-6000)	77 (1117) 350 (5000)
		for X= 42	40 200-420 (2900-6000)	118 (1711) 350 (5000)

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

Preferred types

Type	Material number
04524503472000M	R930081290
04524503474000M	R930081291
04524510472000M	R930081292

Type	Material number
04524510474000M	R930081293
04524542474000M	R930081374

Dimensions

Technical drawing of the VBSN-16U-RS counterbalance valve. The drawing shows a vertical cross-section of the valve with various adjustment points and dimensions. Key features include: Hex 5 (0.2) at the top; Hex 16 15 Nm Hex (0.63) (11) 11-1b; Hex 30 Hex (1.18); Hex 41 (1.61); Ø46 (1.81); Ø39.67 (1.56); M36 x2; and Ø31.75 (1.25) at the base. Two vertical dimension lines on the left indicate overall heights: 97 (4.21) max and 105.5 (4.15) mm. A horizontal dimension line at the bottom indicates a width of 46 (1.81) mm.

Turn adjustment clockwise to
decrease setting and release load

OPTION
Protection cap orange
Mat. no. R900168151

Tamper proof cap black
Mat. no. R930092782

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