

Counterbalance, relief compensated poppet type differential area, counterclockwise adjustment Sun cavity interchange, T-2A

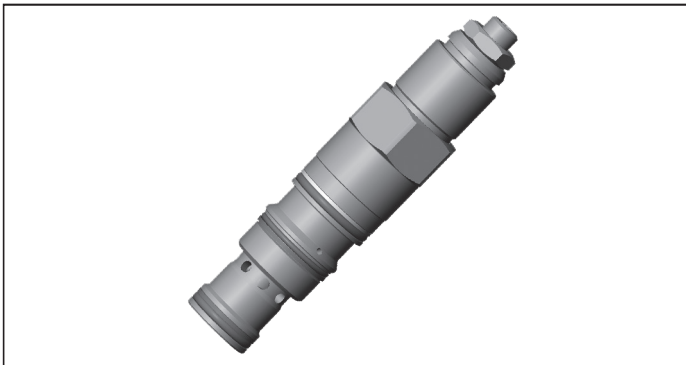
VBSP-12U-RS

04.54.16 - X - 86 - Z

RE 18320-21

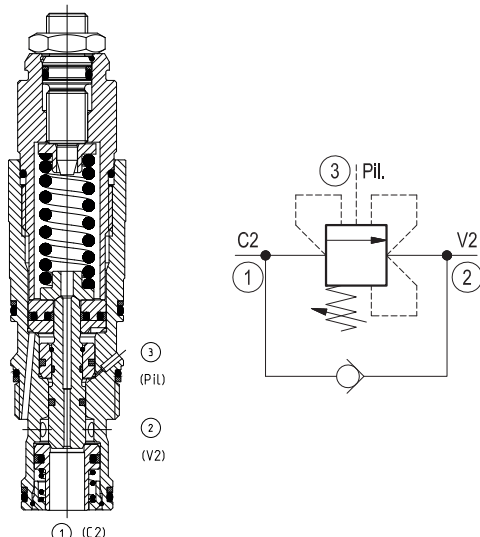
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Replaces: 11.2019



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 (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. 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

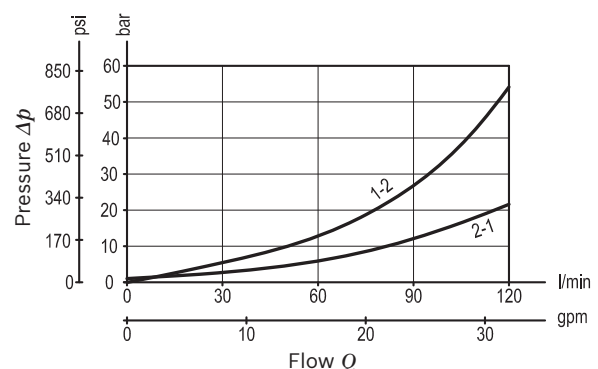
Max. operating pressure	350 bar (5000 psi)
Max. flow	120 l/min (32 gpm)
Max. internal leakage ¹⁾	5 drops/min.
Fluid temperature range	-30 to 100 °C (-22 to 212 °F)
Installation torque	60 - 70 Nm (44 - 52 ft-lbs)
Weight	0.37 kg (0.82 lbs)
MTTFD	150 years see RE 18350-51
Cavity	SUN T-2A
Adjustment	according 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: RG12U9020110100 material no: R930005599
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

Ordering code		04.54.16	X	86	Z	*	*		
Counterbalance, relief compensated, poppet type differential area, counterclockwise adjustment						Series M to Z unchanged performances and dimensions			
Pilot ratio						00 Standard (Buna) V0 Viton (FKM)			
03 4:1 Without sealed pilot piston									
86 SUN cavity interchange, T-2A						SPRINGS			
						Adj. press. range bar (psi)	Pressure increase bar/turn (psi/turn)	Std. setting bar (psi) cracking pressure	
						20	70-210 (1000-3000)	40 (580)	200 (2900)
						35	140-350 (2000-5000)	125 (1813)	350 (5000)
Note: Special settings available with optional tamperproof cap. Contact factory authorized representative for ordering code.									

Preferred types

Type	Material number	Type	Material number
04541603862000M	R930081311		
04541603863500M	R930081312		

Dimensions

Technical drawing of the VBSP-12U-RS valve showing dimensions and adjustment instructions.

Dimensions:

- Hex 5 (0.2)
- Hex 16 15 Nm Hex (0.63) (11) ft-lb
- Hex 28.5 (1.12)
- Ø27.38 (1.08)
- 1-14 UNS-2A
- Ø22.22 (0.88)
- 87 (3.42) max
- 85.5 (3.36) max
- 21 (0.83)
- 35 (1.38)

Turn adjustment clockwise to decrease setting and release load

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