

Fixed setting, 4.5:1 pilot ratio, standard capacity counterbalance valve

Capacity:
15 gpm (60
L/min.)

Functional Group:

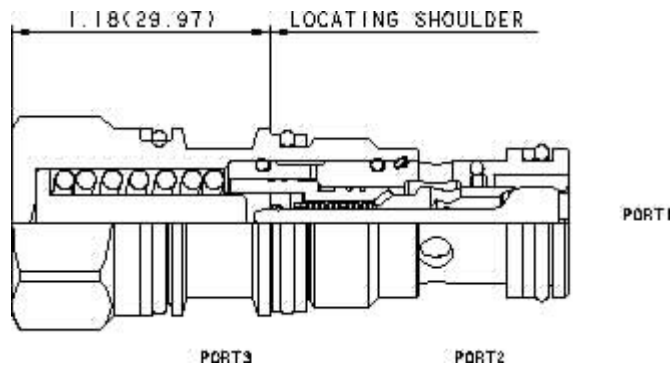
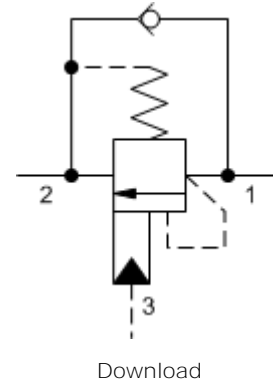
Products : Cartridges : Counterbalance : 3-Port Non-vented, Fixed Setting :
Standard, 4.5:1 Pilot Ratio

Model:
CBCG-XVN

Product Description

Fixed-setting, 3-port counterbalance valves with pilot assist function similarly to the adjustable versions except the fixed setting is pre-set to a nominal value. These fixed-setting valves are meant to control an overrunning load. The check valve allows free flow from the directional valve (port 2) to the load (port 1) while a direct-acting, pilot-assisted relief valve controls flow from port 1 to port 2. Pilot assist at port 3 lowers the effective setting of the relief valve at a rate determined by the pilot ratio.

Other names for this valve include motion control valve and over center valve.



Technical Features

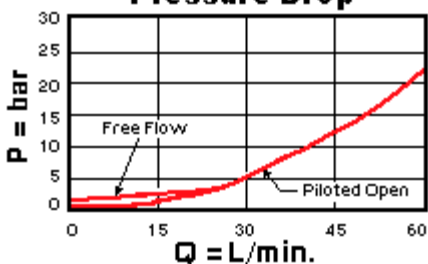
- The maximum recommended load pressure for the M range is 3600 psi (250 bar). The highest cracking pressure for the M range will be less than 5600 psi (390 bar).
- The maximum recommended load pressure for the V range is 2450 psi (170 bar). The highest cracking pressure for the V range will be less than 3800 psi (260 bar).
- The maximum recommended load pressure for the X range is 2700 psi (190 bar). The highest cracking pressure for the X range will be less than 4200 psi (290 bar).
- The maximum recommended load pressure for the Z range is 3170 psi (220 bar). The highest cracking pressure for the Z range will be less than 4900 psi (340 bar).
- Fixed-setting counterbalance valves offer a shorter cartridge extension than the adjustable version.
- Fixed-setting counterbalance valves can be used to protect cylinder seals in outrigger circuits from damage due to thermal expansion, however, they probably should not be applied in circuits in which a matched valve setting may be required such as dual cylinder applications.
- All 3-port counterbalance, load control, and pilot-to-open check cartridges are physically interchangeable (i.e. same flow path, same cavity for a given frame size).
- This valve does not have positive seals on the pilot section and will pass up to 2 in³/min. @ 1000 psi (32 cc/min. @ 70 bar) between port 2 and port 3. This is a consideration in master-slave circuits and in the leak testing of valve-cylinder assemblies.

- Note: The pressures listed under RANGE are approximate, mean values and should not be used for inspection purposes.
- Note: The percentage difference between the cracking and reseal values for the fixed and adjustable versions of this valve are identical. However, the cracking point for the adjustable control can be set via the adjustment mechanism to within +/- 50 psi (3,5 bar) of the specified value. In the case of the fixed-setting version, the setting tolerance can only be maintained within a several hundred psi span, depending on the range. The maximum recommended load pressure for any given range is the minimum possible setting divided by 1.3.
- Backpressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the backpressure.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

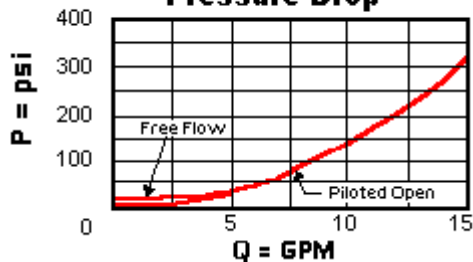
Technical Data

	U.S. Units	Metric Units
Cavity		T-11A
Capacity	15 gpm	60 L/min.
Pilot Ratio		4.5: 1
Factory Pressure Settings Established at	2 in ³ /min.	30 cc/min.
Maximum Valve Leakage at Reseat	5 drops/min.	0,4 cc/min.
Reverse Flow Check Cracking Pressure	25 psi	1,7 bar
Series (from Cavity)		Series 1
Valve Hex Size	7/8 in.	22,2 mm
Valve Installation Torque	30 - 35 lbf ft	45 - 50 Nm
Model Weight	0.27 lb.	0.12 kg.
Seal Kits - Cartridge		Buna: 990-011-007
Seal Kits - Cartridge		Viton: 990-011-006

Free Flow and Piloted Open Pressure Drop



Free Flow and Piloted Open Pressure Drop



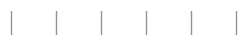
CBCG-XVN

Fixed Pressure Range

External Material/Seal Material

√ 3200 - 3800 psi (220 - 260 bar) +0.00 N Buna-N +0.00

Related Models
CBCG



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