



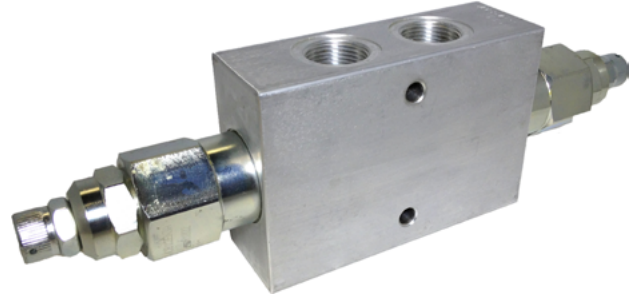
Counterbalance Valves Technical Information

Dual Counterbalance - Hydraulic Vent

VCB12-EN-DL

OPERATION

The VCB12-EN-DL is a dual counterbalance HIC, 12-size metric, hydraulically vented, internally-piloted, low leakage, with a nose to nose design. This catalog HIC allows free flow from the V ports to the C ports and blocks flow in the reverse direction until the relief setting is reached, or until adequate pilot pressure has been applied to the opposite V port.



APPLICATIONS

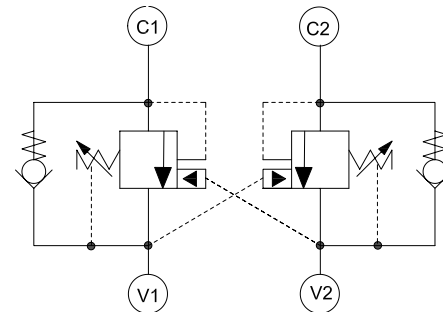
Use dual counterbalance HIC's for controlling loads in bidirectional motion such as wheel motor applications or for cylinders going over center. They are also suitable for use on the boom and dipper cylinder on an excavator.

SPECIFICATIONS

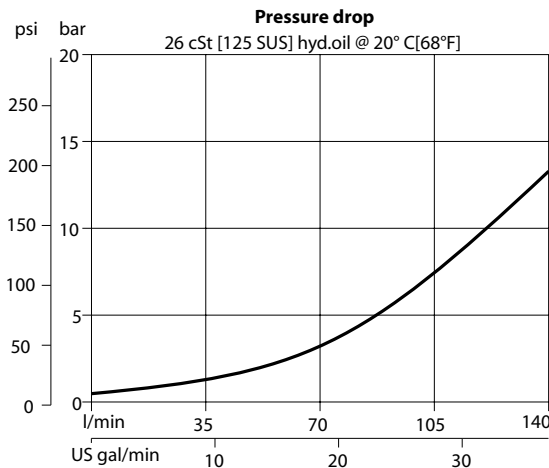
Rated pressure	350 bar [5075 psi]*
Rated flow at 22 bar (319 psi)	140 l/min [37 US gal/min]
Leakage	10 drops/min @ at 70% of crack pressure
Weight	2.54 kg [5.60 lb]
Pilot ratio	4.7:1, 5.9:1, 6.9:1
Cavity	CIB

* 350 bar with steel housing
210 bar with aluminum housing

SCHEMATIC



PERFORMANCE





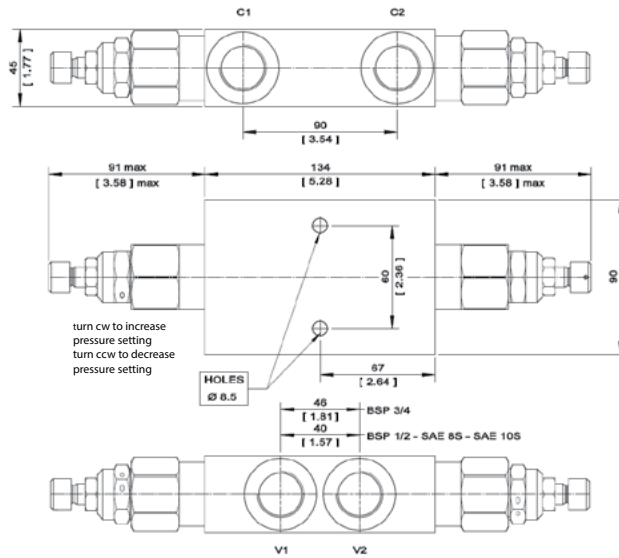
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Dual Counterbalance - Hydraulic Vent

VCB12-EN-DL

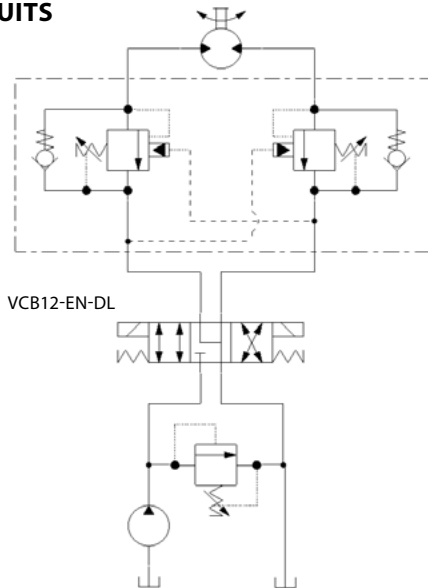
DIMENSIONS

mm [in]

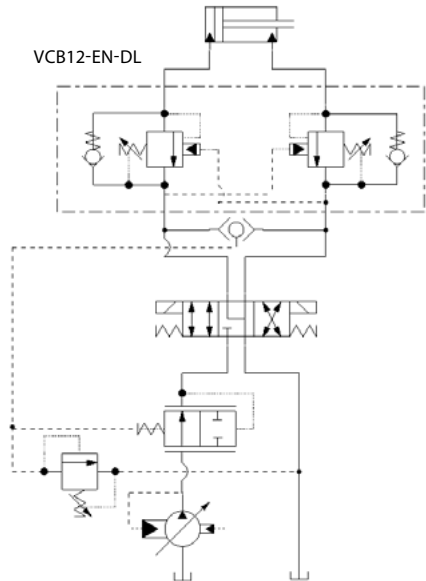


EXAMPLE CIRCUITS

Bi-directional Motion Control



Counterbalance with Pressure Limiting



ORDERING INFORMATION

VCB12 - EN - 2 - A - 00 - B - XXX

VCB12-EN:
Counterbalance Valve, Pilot Port 1, 12 size (metric), external adjustment, hydraulic vent

Code	Pilot Ratio
A	6.9:1
B	4.7:1
C	5.9:1

Code	Pilot Ratio A,C bar [psi]	Pilot Ratio B bar [psi]
1	25-140 [363-2031]	25-120 [363-1740]
2	70 - 250 [1015-3625]	60-200 [870-2900]
3	105 - 350 [1523-5075]	90-280 [1305-4060]

Code	Seal Material
B	Buna-N
V	Viton

Crack Pressure Setting [in bar]

XXX: No factory setting / no stamping

For customer specified settings, enter value in bar (Example 70 bar = 70; 125 bar = 125 etc.)

Housing & Ports	Housing Nomenclature
00: Cartridge Only	No Body
SE4B: AL, 1/2 BSP	NCS12-3-SE4B
SE6B: AL, 3/4 BSP	NCS12-3-SE6B
SES6B: Steel, 3/4 BSP	NCS12-3-SES6B
SE8S: AL, #8 SAE	NCS12-3-SE8S
SE12S: AL, #12 SAE	NCS12-3-SE12S