



# Counterbalance Valves Technical Information

## Dual Counterbalance - Hydraulic Vent VCB06-EN-DL

### OPERATION

This is a dual counterbalance HIC, 6-size metric, hydraulically vented, internally-piloted, low leakage, with a nose to nose design. The VCB06-EN-DL 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

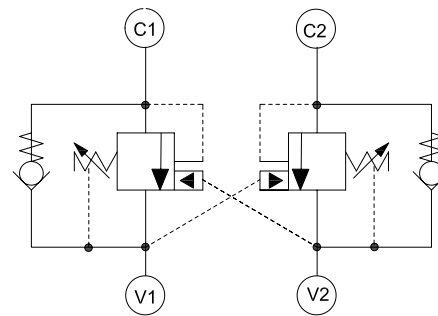
Use dual counterbalance HIC's for controlling loads in bidirectional motion such as wheel motor applications or for cylinders going over center. They are also suitable for use on the boom and dipper cylinder on an excavator.

### SPECIFICATIONS

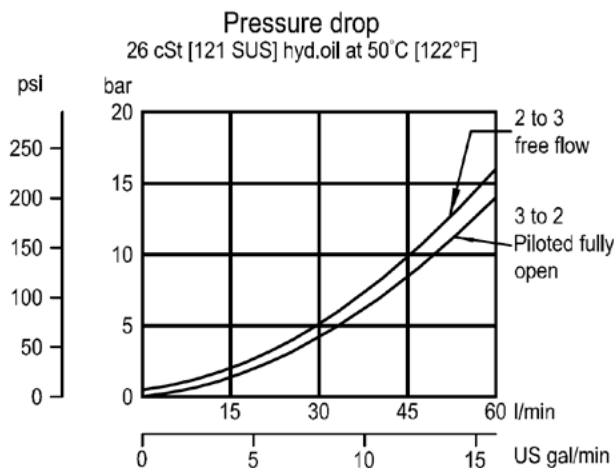
Rated pressure	350 bar [5075 psi]*
Rated flow at 22 bar (319 psi)	60 l/min [16 US gal/min]
Leakage	10 drops/min @ at 70% of crack pressure
Weight	1.02 kg [2.25 lb]
Pilot ratio	4.1:1, 7.1:1
Cavity	CIB

\* 350 bar with steel housing  
210 bar with aluminum housing

### SCHEMATIC



### PERFORMANCE





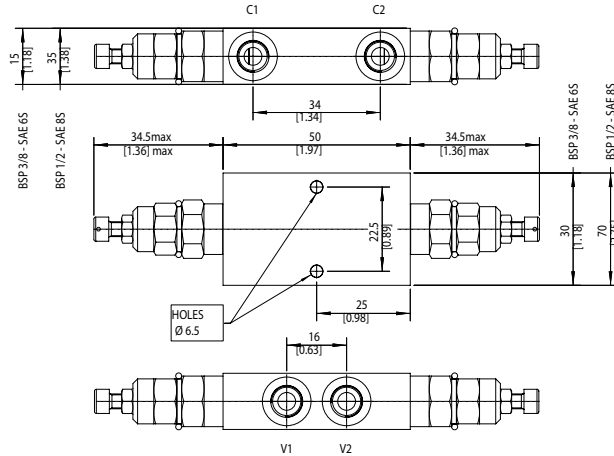
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## Dual Counterbalance - Hydraulic Vent

### VCB06-EN-DL

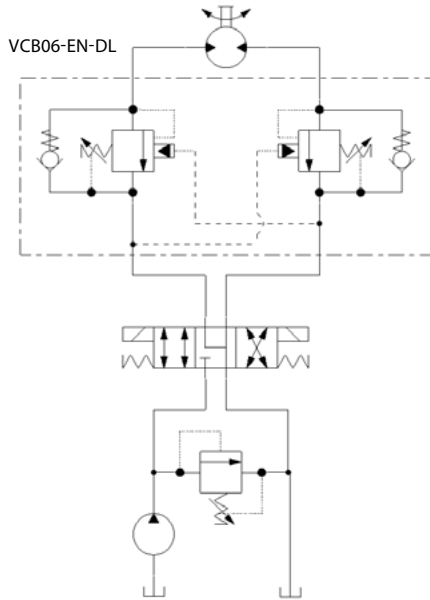
### DIMENSIONS

mm [in]

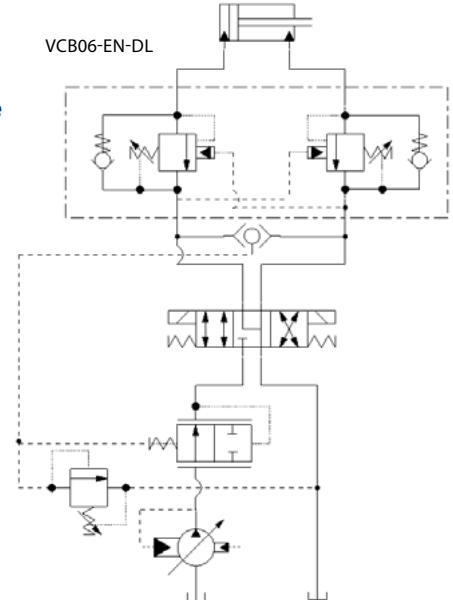


### EXAMPLE CIRCUITS

**Bi-directional Counterbalance**



**Counterbalance with Pressure Limiting**



### ORDERING INFORMATION

## VCB06 - EN - 2 - A - 00 - B - XXX

Counterbalance Valve, Pilot Port 1, 06 size (metric), external adjustment, hydraulic vent

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 ect.)

Code	Pilot Ratio
1	25-140 [363-2030]
2	70-210 [1015-3045]
3	105-350 [1523-5075]

Seal Option	Seal Material	Seal kit
B	BUNA	230000070
V	VITON	230000110

Code	Pilot Ratio
A	7.1:1
B	4.1:1

Code	Ports & Material	Body Nomenclature
00	00 = Cartridge only	No Body
DL3B	AL, 3/8 BSP	NCS06/3-DL3/8
DL4B	AL, 1/2 BSP	NCS06/3-DL1/2
DL6S	AL, #6 SAE	NCS06/3-DL6S
DL8S	AL, #8 SAE	NCS06/3-DL8S