



Counterbalance Valves Technical Information

Dual Counterbalance - Atmospheric Vent

VCB12-CN-DL

OPERATION

The VCB12-CN-DL is a dual counterbalance HIC, 12-size metric, nose to nose design with atmospheric vent. 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

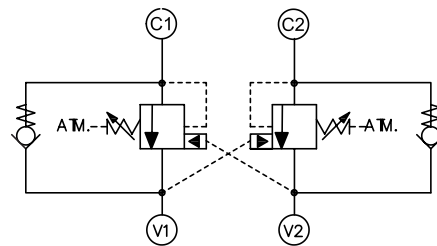
Atmospherically vented valves are applied when it is not practical to connect a separate vent line to the tank. Use dual counterbalance HIC's for controlling loads in bidirectional motion such as wheel motor applications or for cylinders going over center.

SPECIFICATIONS

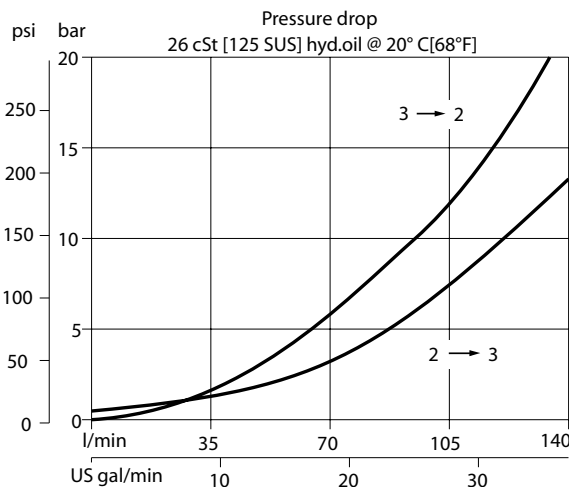
| | |
|--------------------------------|---------------------------|
| Rated pressure | 350 bar [5075 psi]* |
| Rated flow at 22 bar (319 psi) | 140 l/min [37 US gal/min] |
| Weight | 2.92 kg [6.45 lb] |
| Pilot ratio | 4.7:1, 5.9:1, 6.9:1 |
| Cavity | CIB |

* 350 bar with steel housing
210 bar with aluminum housing

SCHEMATIC



PERFORMANCE





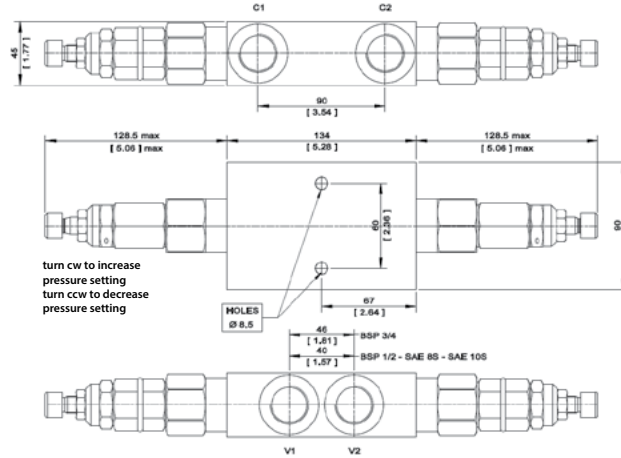
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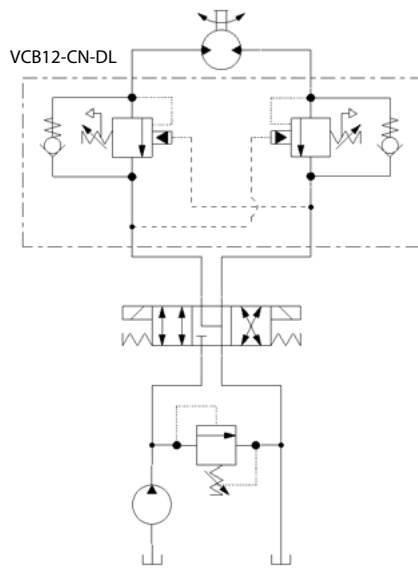
DIMENSIONS

mm [in]

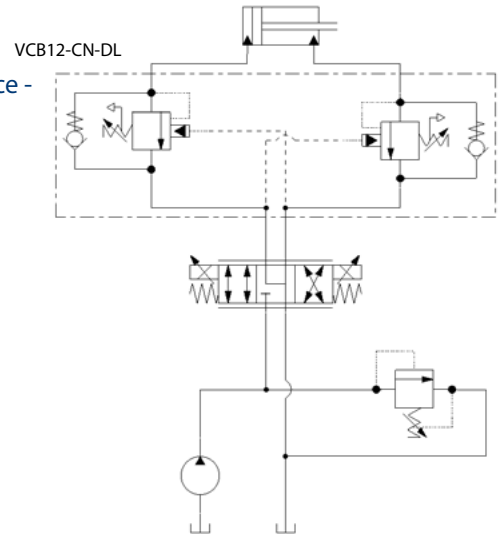


EXAMPLE CIRCUITS

Bi-directional Motion Control



Counterbalance - Double Actuator



ORDERING INFORMATION

VCB12 - CN - 2 - A - 00 - B - XXX

VCB12-CN:
Counterbalance Valve, Pilot Port 1, 12 size (metric), internal adjustment, atmospheric vent

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

Pressure Range

| 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 |