



Counterbalance Valves Technical Information

Dual Counterbalance - Hydraulic Vent DCB20-HV

OPERATION

DCB20-HV: Dual counterbalance HIC, 20-size, hydraulic vent. This HIC is low leakage and internally piloted. The DCB20-HV uses 2 CB20-HV 20-size cartridges and allows free flow from the V port 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

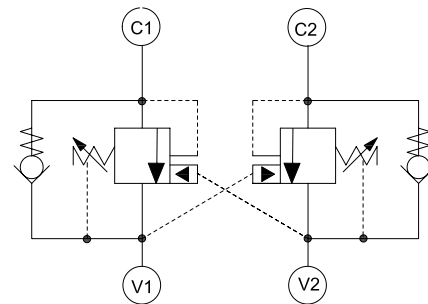
Use dual counterbalance HIC's for controlling loads in bidirectional motion such as wheel motor applications or for cylinders going over center. They are also suitable for use on the boom and dipper cylinder on an excavator.

SPECIFICATIONS

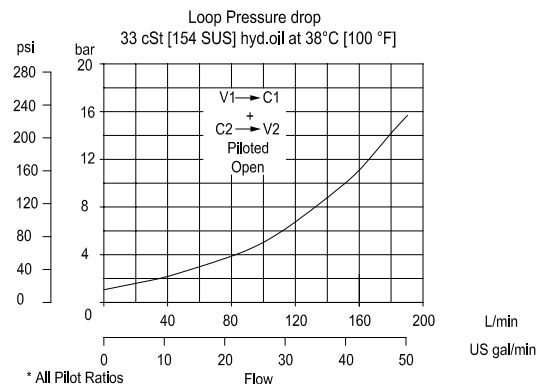
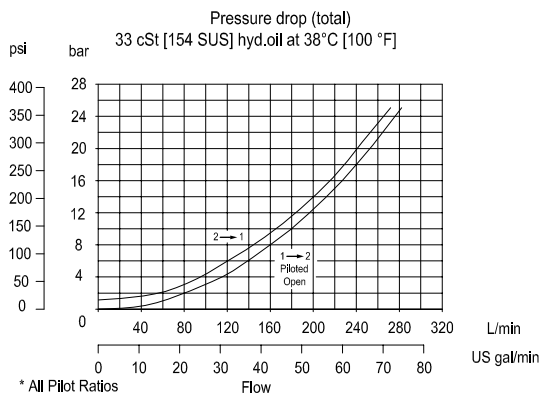
Rated pressure	350 bar [5075psi]*
Rated flow at 22 bar (319 psi)	266 l/min [70 US gal/min]
Leakage	10 drops/min @ at 70% of crack pressure
Weight	Aluminum 5.59 kg [12.59 lb] Ductile 10.68 kg [23.55 lb]
Pilot ratio	3.0:1, 4.5:1, 10.0:1
Cavity	CIB

* 350 bar with steel housing
210 bar with aluminum housing

SCHEMATIC



PERFORMANCE



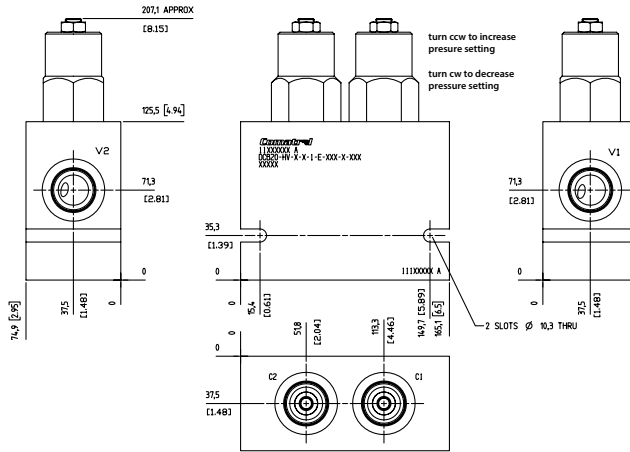


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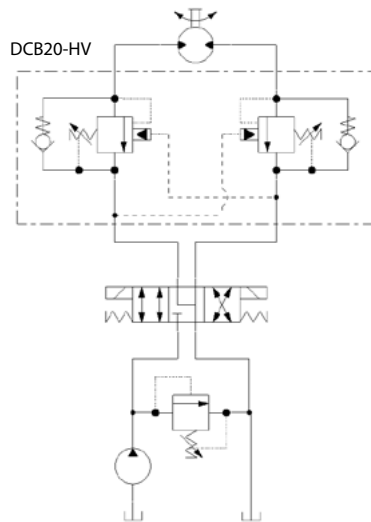
DIMENSIONS

mm [in]

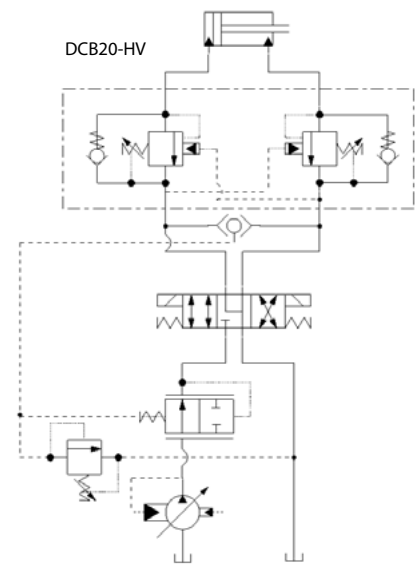


EXAMPLE CIRCUITS

Bi-directional Counterbalance



Counterbalance with Pressure Limiting



ORDERING INFORMATION

DCB20 - HV - 1 - A - 1 - E - XXX - B - 00

DCB20-HV:
Dual counterbalance valve,
20-size, hydraulic vent

Code	Pilot Ratio
A	3 to 1
B	4.5 to 1
C	10 to 1

1: Check crack pressure in bar
1 bar [14.5 psi]

Code	Seal	Seal Kit (1 valve)
B	Buna-N	120380
V	Viton	120381

Pressure Setting [in bar]
XXX - Std. setting with no stamping

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

Adjustment type
E external adjustment

Code	Pressure Range		
	Pilot Ratio A (3:1) bar [psi]	Pilot Ratio B (4.5:1) bar [psi]	Pilot Ratio C (10:1) bar [psi]
1	35-110 [507-1595] Std. Setting 70 [1015]	35-140 [507-2030] Std. Setting 100 [1450]	70-345 [1015-5000] Std. Setting 170 [2465]
2	100-210 [1450-3045] Std. Setting 170 [2465]	100-345 [1450-5000] Std. Setting 200 [2900]	

Body & Ports	Body Nomenclature
8B AL, 1 BSP	DCB20-3S-8B
10B AL, 1-1/4 BSP	DCB20-3S-10B
S10B Steel, 1-1/4 BSP	DCB20-3S-S10B
16S AL, #16 SAE	DCB20-3S-16S
S16S Steel, #16 SAE	DCB20-3S-S16S
20S AL, #20 SAE	DCB20-3S-20S
S20S Steel, #20 SAE	DCB20-3S-S20