



Counterbalance Valves Technical Information

Dual Counterbalance - Hydraulic Vent CP441-2

OPERATION

This dual counterbalance, internally piloted catalog HIC is a low leakage assembly with hydraulic vent. This HIC uses 2 CP441-1 12-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

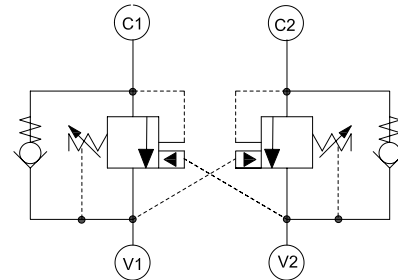
Dual counterbalance HIC's are used for controlling loads in bidirectional motion such as wheel motor applications or for cylinders going over center. They are also suitable for use on the boom and dipper cylinder on an excavator.

SPECIFICATIONS

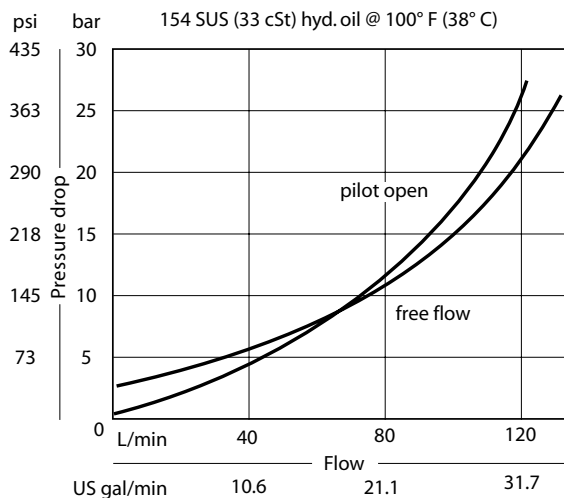
Rated pressure	350 bar [5075 psi]*
Rated flow at 22 bar (319 psi)	115 l/min [30 US gal/min]
Weight	1.26 kg [2.77 lb]
Pilot ratio	3:1, 4.5:1, 10:1
Cavity	CIB

* 350 bar with steel housing
210 bar with aluminum housing

SCHEMATIC



PERFORMANCE





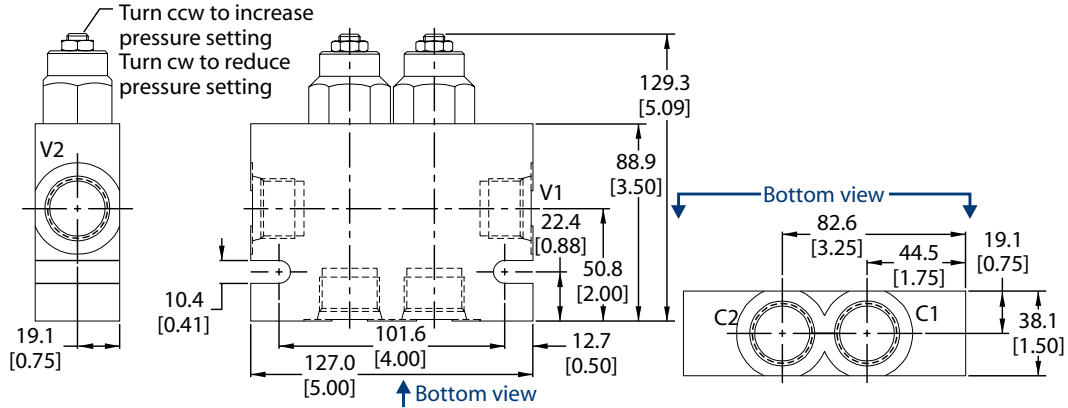
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Dual Counterbalance - Hydraulic Vent

CP441-2

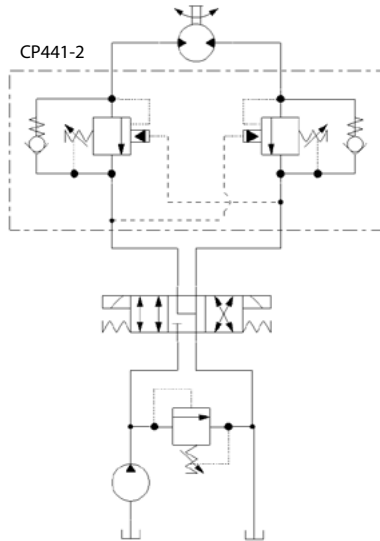
DIMENSIONS

mm [in]

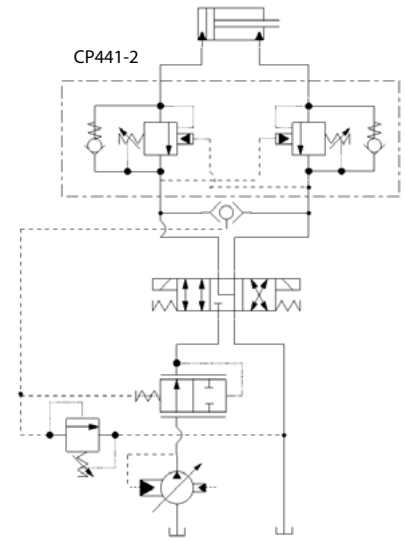


EXAMPLE CIRCUITS

Bi-directional Motor Control



Bi-directional Load Control



ORDERING INFORMATION

CP441 - 2 - 12S - B - E - B - XXX - 4.5 - 015

CP441-2:
Dual counterbalance valve,
12 size, hydraulic vent

Housing & Ports	Housing P/N
4B AL, 1/2 BSP	221445
6B AL, 3/4 BSP	221446
10S AL, #10 SAE	220752
12S AL, #12 SAE	220753

E:
External
Adjustment

Code	Seal Material	Seal Kit
B	Buna	120414
V	Viton	120415

Code	Pilot Ratio
3.0	3.0:1
4.5	4.5:1
10.0	10.0:1

Free flow check
crack Pressure in psi

Code	psi	[bar]
005	5	.34
015	15	1.03

Pressure Setting in psi
XXX - Standard setting with no stamping

For customer specified setting,
code x 10 = total psi
Example: 150 x 10 = 1500 psi (insert 150 above)

Pressure Range

Code	Pilot Ratio 3.0:1 psi [bar]	Pilot Ratio 4.5:1 psi [bar]	Pilot Ratio 10.0:1 psi [bar]
A	500-1500 [34-103] Std. Setting 1000 [69]	500-2000 [34-138] Std. Setting 1500 [103]	100-5000 [69-345] Std. Setting 2500 [172]
B	1500-3000 [103-207] Std. Setting 2500 [172]	1500-5000 [103-345] Std. Setting 3000 [207]	