



Counterbalance Valves Technical Information

Hydraulic Vent

CB10-HV

OPERATION

CB10-HV : Counterbalance valve, 10-size, hydraulic vent.
This valve is 3-ported, externally piloted and low leakage.
The check section allows free flow from the directional valve (port 2) to the load (port 1), while normally blocking flow from port 1 to port 2. Reverse flow is blocked until pilot pressure is applied at port 3. When the load pressure at port 1 rises above the pressure setting, the integral relief valve is activated and pressure is relieved from port 1 to port 2.



APPLICATIONS

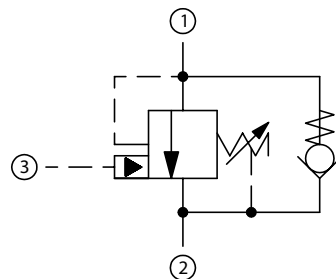
Single counterbalance valves are normally used when the load is unidirectional, such as aerial lifts, cranes, or winches. In load holding applications, they can be used as hose-break valves when installed near or within an actuator. Dual valves can be used for controlling loads bi-directionally in motor applications, or for cylinders going over center.

SPECIFICATIONS

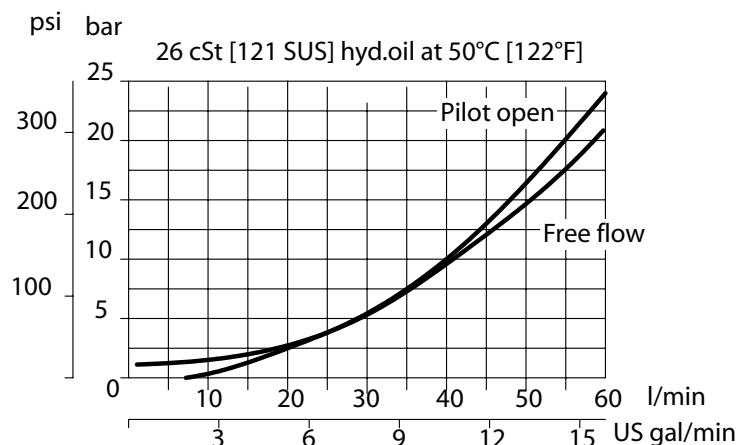
Rated pressure	350 bar [5075 psi]*
Rated flow at 22 bar (319 psi)	60 l/min [16 US gal/min]
Leakage	10 drops/min @ 70% of crack pressure
Weight	0.22 kg [0.47 lb]
Pilot ratio	3:1, 4.5:1, 10:1
Cavity	SDC10-35

* 350 bar with steel housing
210 bar with aluminum housing

SCHEMATIC



PERFORMANCE





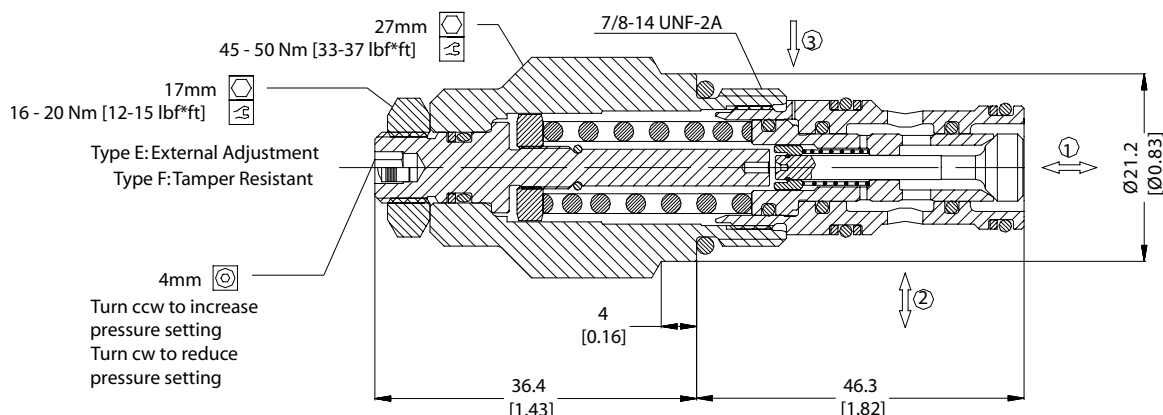
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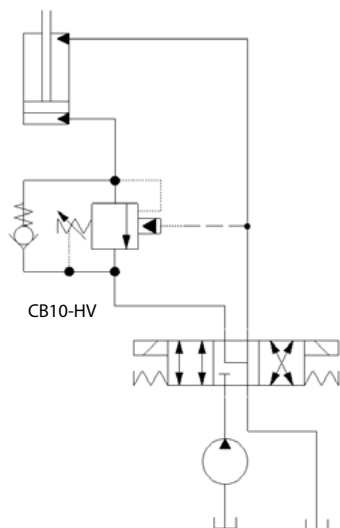
DIMENSIONS

mm [in]

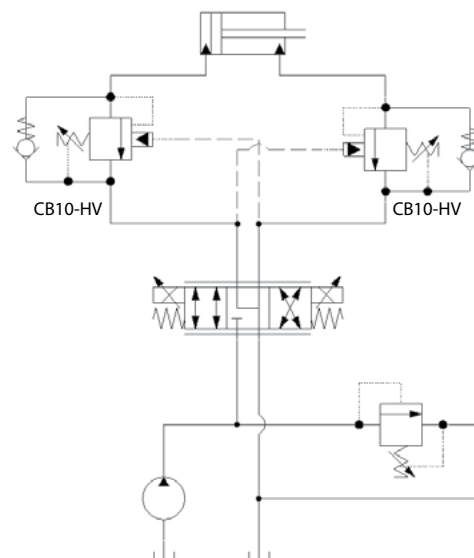


EXAMPLE CIRCUITS

Load Holding - Single Actuator



Counterbalance-Double Actuator



ORDERING INFORMATION

CB10 - HV - 1 - A - 1 - E - XXX - B - 00

CB10- HV:
Counterbalance valve,
10-size, hydraulic vent

Code	Pilot Ratio
A	3 to1
B	4.5 to 1
C	10 to 1

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

Pressure Range

Code	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]	55-180 [797-2610]	90-350 [1305-5075]
2	60-150 [870 - 2175]	75-240 [1087-3480]	
3	80-230 [1160 - 3334]	90-350 [1305-5075]	

Code	Seal	Seal Kit
B	Buna-N	230001020
V	Viton	354001519

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.)

Adjustment type
E external adjustment
F tamper resistant

Body & Ports	Body Nomenclature
00 Cartridge Only	No Body
SE3B AL, 3/8 BSPP	SDC10-3S-SE3B
SE4B AL, 1/2 BSPP	SDC10-3S-SE4B
SES4B Steel, 1/2 BSPP	SDC10-3S-SES4B
SE4B AL, 1/2 BSPP	SDC10-3S-SE4B
6S AL, #6 SAE	SDC10-3S-6S
8S AL, #8 SAE	SDC10-3S-8S
S8S Steel, #8 SAE	SDC10-3S-S8S