



# Counterbalance Valves Technical Information

## Atmospheric Vent

### CB10-AV

### OPERATION

CB10-AV : Counterbalance valve, 10-size, atmospheric vent. This is a 3-ported, externally piloted, cartridge style, low leakage unit. The check section allows free flow from the directional valve (port 2) to the load (port 1). Reverse flow is blocked until pilot pressure is applied at port 3. When the pressure at port 1 rises above the pressure setting, the integral relief valve is activated and vents the area behind the pilot piston.



### APPLICATIONS

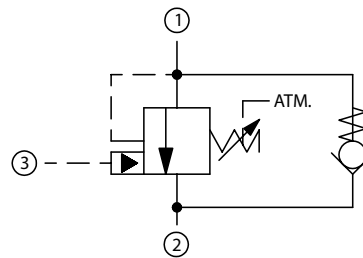
Atmospheric vented valves are applied when it is not practical to connect a separate vent line to the tank. Use a single counterbalance valves when the load is unidirectional, such as aerial lifts, cranes, or winches. In load holding applications, they can be used as hose-break valves when installed 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

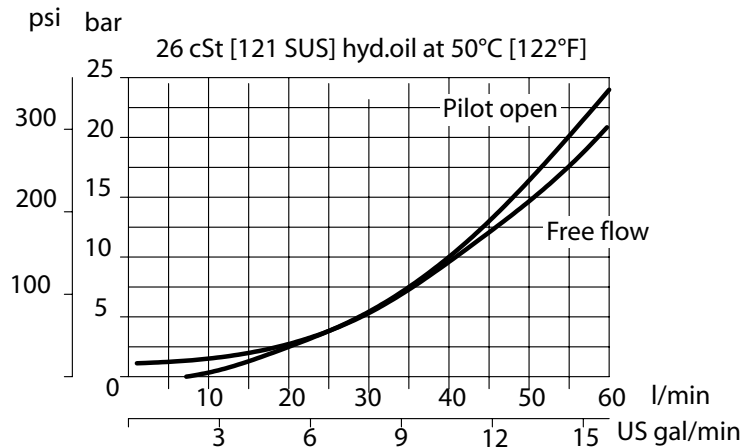
<b>Rated pressure</b>	350 bar [5075 psi]*
<b>Rated flow at 22 bar (319 psi)</b>	60 l/min [16 US gal/min]
<b>Leakage</b>	10 drops/min @ 70% of crack pressure
<b>Weight</b>	0.27 kg [0.60 lb]
<b>Pilot ratio</b>	3:1, 4.5:1, 10:1
<b>Cavity</b>	<b>SDC10-3S</b>

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

### SCHEMATIC



### PERFORMANCE





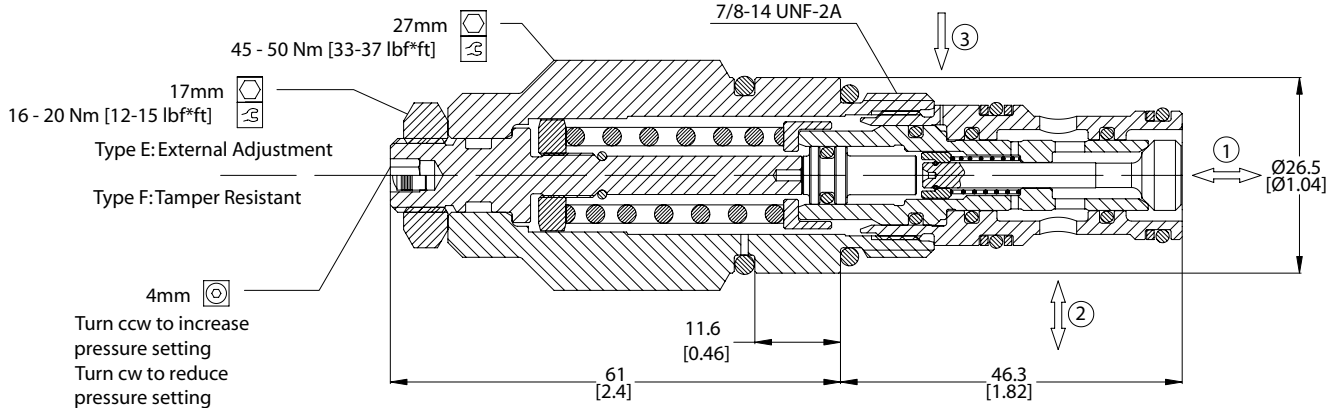
# Counterbalance Valves Technical Information

## Atmospheric Vent

### CB10-AV

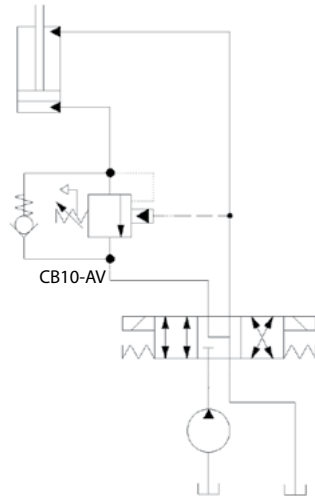
### DIMENSIONS

mm [in]

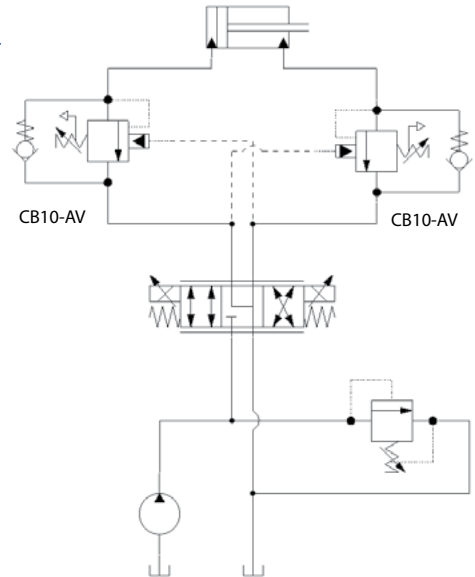


### EXAMPLE CIRCUITS

Load Holding - Single Actuator



Counterbalance - Double Actuator



### ORDERING INFORMATION

**CB10 - AV - 1 - A - 1 - E - XXX - B - 00**

CB10- AV: Counterbalance valve, 10-size, atmospheric 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	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.)

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
SE54B Steel, 1/2 BSPP	SDC10-3S-SE54B
SE4B AL, 1/2 BSPP	SDC10-3S-SE4B
6S AL, #8 SAE	SDC10-3S-6S
8S AL, #8 SAE	SDC10-3S-8S
S8S Steel, #8 SAE	SDC10-3-S8S

Adjustment type  
E external adjustment  
F tamper resistant