

# Motion Control Valves

## 1CEBD120

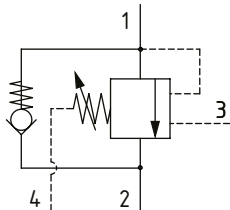
Overcenter Valve, Fully Balanced, Differential Area, External Drain, Port 3 Pilot

400 bar [5800 psi] • 180 l/min [47 US gpm]

### DESCRIPTION AND OPERATION

This is a differential area overcenter valve, which is a pilot assisted relief valve with a free flow check. With the relief valve set at around 1.3 times the maximum load induced pressure, the valve will prevent flow from taking place between ports 1 and 2. When pilot pressure is applied to port 3, the valve will meter the flow from port 1 to 2, compensating for any change in pilot pressure due to over-running or unstable loads. Free flow from port 2 to port 1 can take place freely through the check portion of the valve. These valves are ideal in most applications bringing stability, load holding, and hose failure protection when the valve is mounted onto or into the actuator. The spring chamber is connected to a drain port 4, so any back pressure in port 2 will have no effect on the pilot pressure required to open the valve.

### SCHEMATIC



### PERFORMANCE DATA

Rated pressure	400 bar [5800 psi]
Rated flow	180 l/min [47 US gpm]
Max total relief pressure	400 bar [5800 psi]
Max recommended load pressure at max setting	270 bar [3900 psi]
Pilot Ratio	3:1, 8:1, 12:1, 22:1
Leakage	0.3 ml/min [5 drops/min]
Weight	0.59 kg [1.30 lb]
Cavity	A6726

### MODEL CODE

**1CEBD120 - F - 6W - 35 - P - 8 - 377 - 210**

#### Basic Code

1CEBD120 - No housing  
1CEBD150 - Cartridge and housing

#### Adjustment Option

F - External

#### Housing

Code	Ports	Aluminum Steel	
Omit	No housing		
6W	3/4" BSP Valve & Cyl. Port, 1/4" BSP Pilot and Vent Port	12007710	12007715
12T	#12 SAE Valve & Cyl. Port, #4 SAE Pilot and Vent Port	12007709	12007712

\* Aluminum bodies are to be used for pressures less than 210 bar [3000 psi].

\* Additional housings available

#### Pressure Range

Code	Bar	Psi	Pilot Ratio
35	70-350	[1015-5000]	3:1 8:1 22:1
Standard Setting	350	[5000]	
40	70-400	[1015-5800]	12:1
Standard Setting	350	[5000]	

Std setting made at 4.5 l/min

#### Pressure Setting

Code Pressure setting in bar (10 bar increments within specified Pressure Range)  
XXX-Standard setting (see Pressure Range for value).  
Example:

Code	Bar	Psi
210	210	[3000]

#### Housing Material

Omit - Aluminum/No Housing  
377 - Steel

#### Pilot Ratio

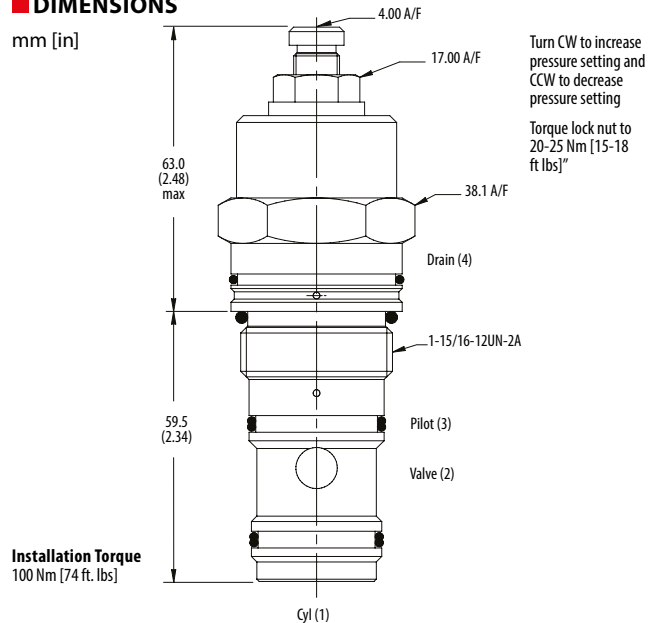
3 - 3:1  
8 - 8:1  
12 - 12:1  
22 - 22:1

#### Seal Option

Code	Seal kit
S-Buna-N	SK830
SV-Viton	SK830V
P-Polyurethane/Buna-N	SK830P

### DIMENSIONS

mm [in]



Turn CW to increase pressure setting and CCW to decrease pressure setting

Torque lock nut to 20-25 Nm [15-18 ft lbs]"

### PERFORMANCE CURVES

#### Pressure Drop

