

# Motion Control Valves

## 1CEBD90

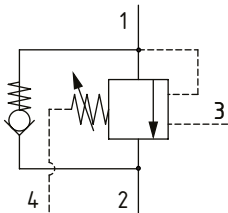
Overcenter Valve, Fully Balanced, Direct Acting, External Drain, Port 3 Pilot

350 bar [5000 psi] • 90 l/min [24 US gpm]

### DESCRIPTION AND OPERATION

This is a direct acting 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

<b>Rated pressure</b>	<b>350 bar [5000 psi]</b>
<b>Rated flow</b>	<b>90 l/min [24 US gpm]</b>
Max total relief pressure	350 bar [5000 psi]
Max recommended load pressure at max setting	270 bar [3900 psi]
Pilot Ratio	4:1
Leakage	0.3 ml/min [5 drops/min]
Weight	0.29 kg [0.63 lb]
Cavity	A12196

### MODEL CODE

**1CEBD90 - F - 4W - 20 - P - 4 - 377 - 210**

#### Basic Code

**1CEBD90** - No housing  
**1CEBD95** - Cartridge and housing

#### Adjustment Option

**F** - External

#### Housing

Code	Ports	Aluminum Steel	
<b>Omit</b>	No housing		
<b>4W</b>	1/2" BSP Valve & Cyl. Port, 1/4" BSP Pilot and Vent Port	B16357	B23615
<b>8T</b>	#8 SAE Valve & Cyl. Port, #4 SAE Pilot and Vent Port	12007706	12007708

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

#### Pressure Range

Code	Bar	Psi
<b>20</b>	70-225	[1015-3260]
Standard Setting	100	[1450]
<b>35</b>	200-350	[2900-5000]
Standard Setting	210	[3000]

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
<b>210</b>	210	[3000]

#### Housing Material

**Omit** - Aluminum/No Housing  
**377** - Steel

#### Pilot Ratio

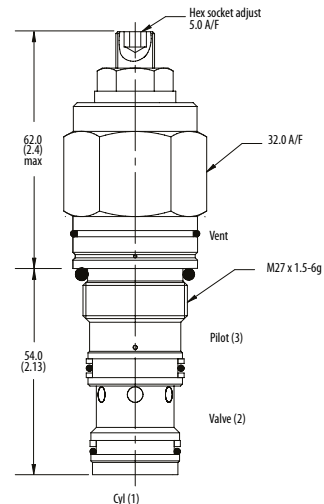
4 - 4:1

#### Seal Option

Code	Seal kit
<b>S</b> - Buna-N	SK634
<b>SV</b> - Viton	SK634V
<b>P</b> - Polyurethane/Buna-N	SK634P

### 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]

**Installation Torque**  
60 Nm [44 ft. lbs]

### PERFORMANCE CURVES

#### Pressure Drop

