

# Motion Control Valves

## 1CEB90

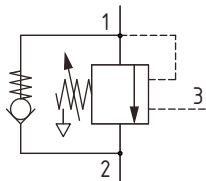
Overcenter Valve, Fully Balanced, Direct Acting, Atmospheric Vent, Port 3 Pilot

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 atmosphere, so any back pressure will have no effect on the opening of the valve. Over time, there may be leakage past the seals to atmosphere. For valves with a separate drain port, reference the 1CEBD products. This is also available in a dual housing for bi-directional control.

### SCHEMATIC

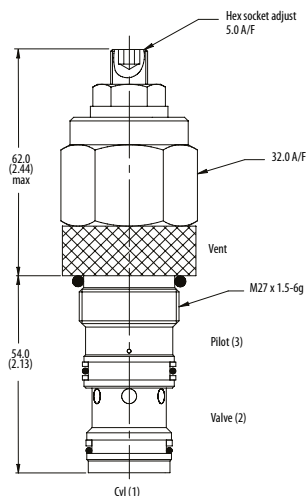


### PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	90 l/min [24 US gpm]
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	A12336

### DIMENSIONS

mm [in]

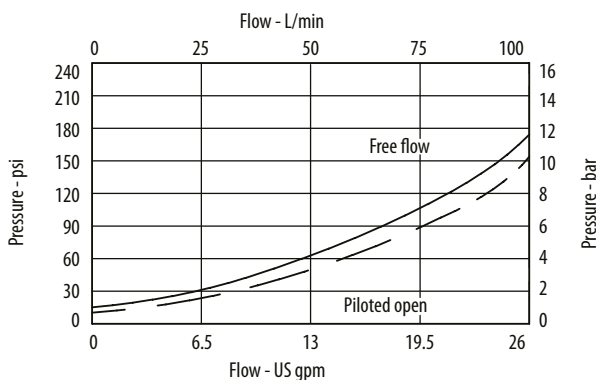


Turn CW to increase pressure setting and CCW to decrease pressure setting  
Torque lock nut to 20-25 Nm [15-18 ft lbs]

Installation Torque  
60 Nm [44 ft. lbs]

### PERFORMANCE CURVES

#### Pressure Drop



# Motion Control Valves

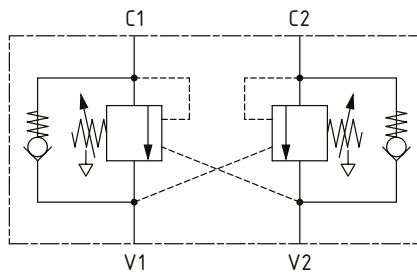
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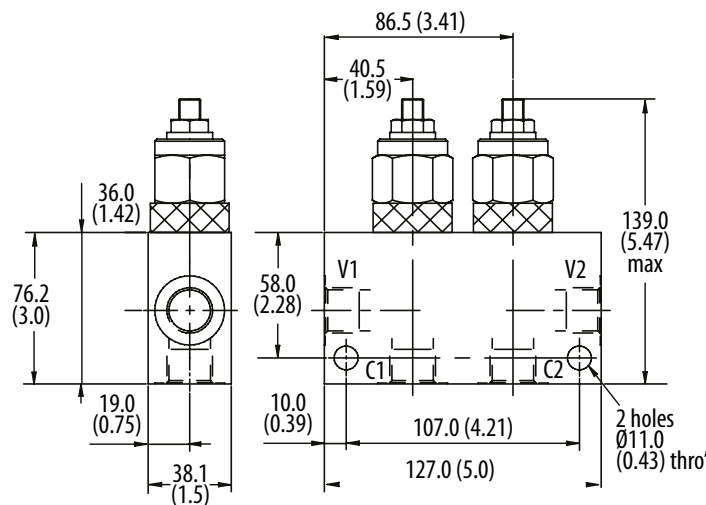
### ■ SCHEMATIC

1CEEB95 (dual)



### ■ DIMENSIONS

mm [in]



### ■ MODEL CODE

**1CEB90 - F - 4W - 35 - S - 4 - 377 - 210**

#### Basic Code

1CEB90 - No housing  
1CEB95 - Cartridge and housing  
1CEEB95 - Cartridges and dual housing

#### Adjustment Option

F - External  
N - Non-adjustable option, contact technical support.

#### Housing

Code	Ports	Aluminum single	Steel single	Aluminum dual	Steel dual
Omit	No housing				
4W	1/2" BSP Valve & Cyl Port 1/4" BSP Pilot Port	B13625	B13626	C13627	C13628
8T	1/2" SAE Valve & Cyl Port 1/4" SAE Pilot Port	B10806	B10922	C10807	C11561

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

#### 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

4 - 4:1

#### Seal Option

Code	Seal kit
S	Buna-N SK634
SV	Viton SK634V

#### Pressure Range

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

Std setting made at 4.5 l/min