

# Motion Control Valves

## 1CEB300

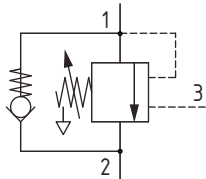
Overcenter Valve, Fully Balanced, Differential Area, Atmospheric Vent, Port 3 Pilot

350 bar [5000 psi] • 300 l/min [80 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 atmosphere so any back pressure will have no effect on the opening of the valve. At some point there will be leakage past the seals to atmosphere so the 4 ported valve should be considered as the best option. This is also available in a dual housing for bi-directional control.

### SCHEMATIC

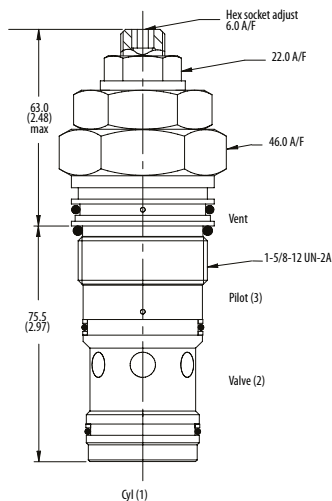


### PERFORMANCE DATA

<b>Rated pressure</b>	<b>350 bar [5000 psi]</b>
<b>Rated flow</b>	<b>300 l/min [80 US gpm]</b>
Max total relief pressure	350 bar [5000 psi]
Max recommended load pressure at max setting	270 bar [3900 psi]
Pilot Ratio	3:1, 8:1
Leakage	4 ml/min nominal [60 drops/min]
Weight	0.91 kg [2.00 lb]
Cavity	A6935

### DIMENSIONS

mm [in]



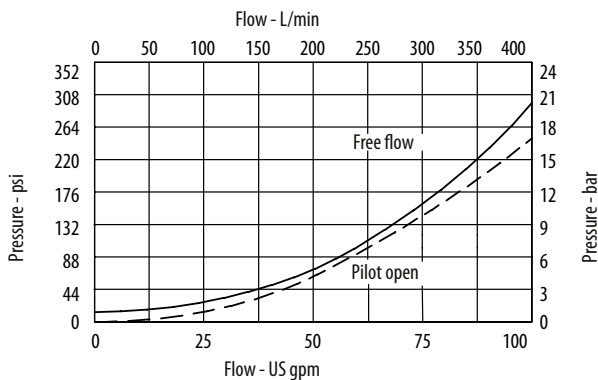
Turn CW to increase pressure setting and CCW to decrease pressure setting

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

**Installation Torque**  
150 Nm [110 ft. lbs]

### PERFORMANCE CURVES

#### Pressure Drop



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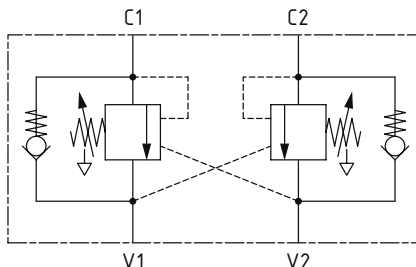
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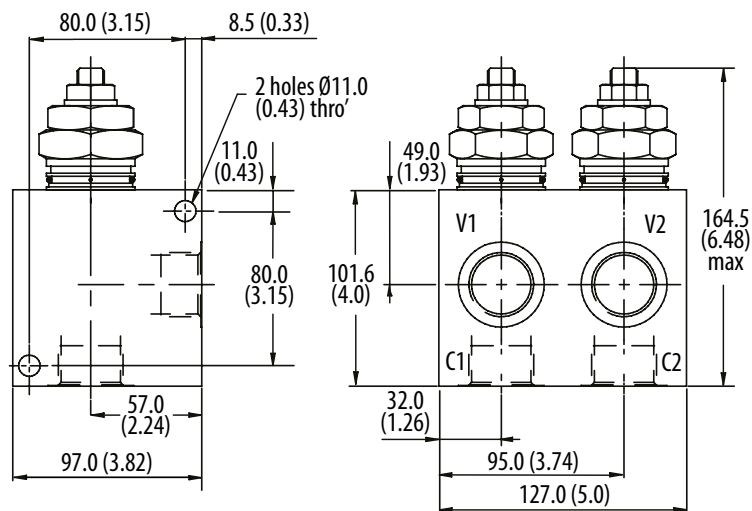
### ■ SCHEMATIC

1CEEB350 (dual)



### ■ DIMENSIONS

mm [in]



### ■ MODEL CODE

**1CEB300 - F - 10W - 35 - S - 3 - 377 - 210**

#### Basic Code

1CEB300 - No housing  
1CEB350 - Cartridge and housing  
1CEEB350 - Cartridges and dual housing

#### Adjustment Option

F - External

#### Housing

Code	Ports	Aluminum single	Steel single	Aluminum dual	Steel dual
Omit	No housing				
10W	1 1/4" BSP Valve & Cyl Port 1/4" BSP Pilot Port	B6814	B8610	C8704	C8705
20T	1 1/4" SAE Valve & Cyl Port 1/4" SAE Pilot Port	B10630	B11474	C10811	C11564

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

\* Additional housings available

#### Pressure Range

Code	Bar	Psi
35	70-350	[1015-5000]
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
210	210	[3000]

#### Housing Material

Omit - Aluminum/No housing  
377 - Steel

#### Pilot Ratio

3 - 3:1  
8 - 8:1

#### Seal Option

Code	Seal kit
S-Buna-N	SK686
SV-Viton	SK686V