

# Motion Control Valves

## 1CER140

Overcenter Valve, Part Balanced, Direct Acting, Internal Drain, Port 3 Pilot

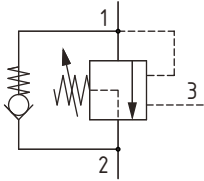
420 bar [6100 psi] • 140 l/min [37 US gpm]



### DESCRIPTION AND OPERATION

This is a direct acting overcenter valve, which is a pilot assisted relief 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 the valve port 2 so any back pressure will increase the pilot pressure required to keep the valve open. However, the balanced poppet design allows the relief valve to remain open provided the inlet pressure is higher than the setting. This is also available in a dual housing for bi-directional control.

### SCHEMATIC

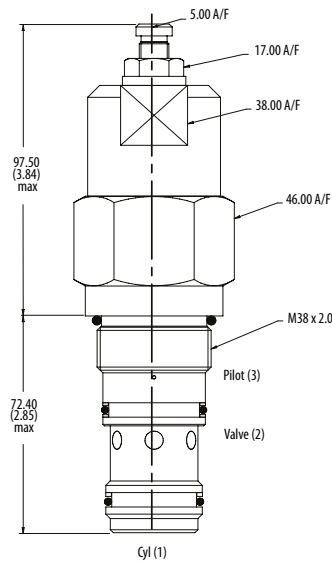


### PERFORMANCE DATA

Rated pressure	420 bar [6100 psi]
Rated flow	140 l/min [37 US gpm]
Max total relief pressure	420 bar [6100 psi]
Max recommended load pressure at max setting	340 bar [4900 psi]
Pilot Ratio	4:1, 6:1
Leakage	0.3 ml/min nominal [5 drops/min]
Weight	1.2 kg [2.6 lb]
Cavity	A20081

### DIMENSIONS

mm [in]



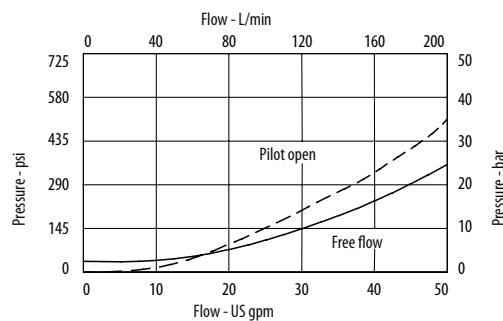
Turn CW to increase pressure setting and CCW to decrease pressure setting

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

Installation Torque  
150 Nm [110 ft. lbs]

### PERFORMANCE CURVES

#### Pressure Drop



# Motion Control Valves

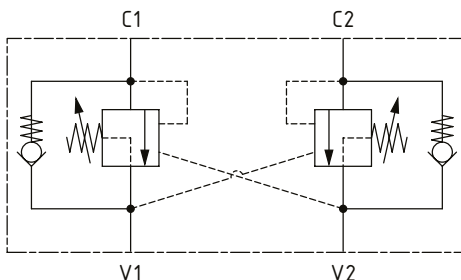
## 1CER140

Overcenter Valve, Part Balanced, Direct Acting, Internal Drain, Port 3 Pilot

420 bar [6100 psi] • 140 l/min [37 US gpm]

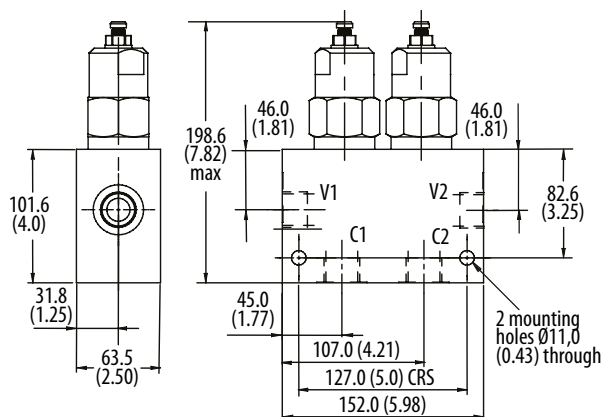
### ■ SCHEMATIC

1CEER145 (dual)



### ■ DIMENSIONS

mm [in]



### ■ MODEL CODE

**1CER145 - F - 6W - 20 - S - 4 - 377 - 210**

#### Basic Code

1CER140 - No housing  
1CER145 - Cartridge and housing  
1CEER145 - Cartridges and dual housing

#### Adjustment Option

F - External

#### Housing

Code	Ports	Aluminum single	Steel single	Aluminum dual	Steel dual
Omit	No housing				
6W	3/4" BSP Valve & Cyl Port. 1/4" BSP Pilot Port	B20105	B20106		
8W	1" BSP Valve & Cyl Port. 1/4" BSP Pilot Port	B20107	B20108	C20285	C20287
12T	3/4" SAE Valve & Cyl Port. 1/4" SAE Pilot Port	B11952	B11953		
16T	1" SAE Valve & Cyl Port. 1/4" SAE Pilot Port	B11946	B11947	C30105	C30106

\* 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  
6 - 6:1

#### Seal Option

Code Seal kit

S-Buna-N SK1108

SV-Viton SK1108V

#### Pressure Range

Code	Bar	Psi
20	140-250	[2000-3600]
Standard Setting	190	[2750]
30	220-330	[2200-4800]
Standard Setting	270	[3900]
40	310-420	[4500-6100]
Standard Setting	370	[5400]

Std setting made at 4.5 l/min