

## Motion Control Valves

### 1CE90

406AA00164A, 1CE90-F-20S4

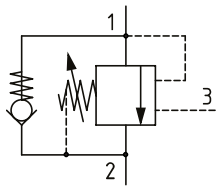
Overcenter Valve, Standard, Direct Acting, Internal Drain, Port 3 Pilot

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 with a free flow check. With the relief valve set at approximately 1.3 times the maximum load induced pressure, the valve will prevent flow from port 1 to 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 takes place from port 2 to port 1 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 and the pressure at which the valve will open as a relief valve. This is also available in a dual housing for bi-directional control.

#### SCHEMATIC

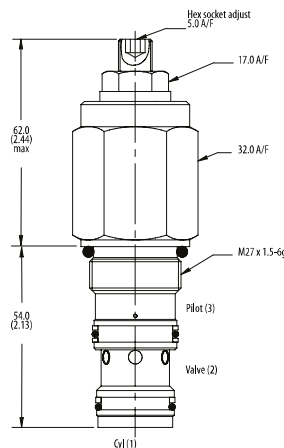


#### PERFORMANCE DATA

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, 8:1
Leakage	0.3 ml/min nominal [5 drops/min]
Weight	0.29 kg [0.63 lb]
Cavity	A12336

#### DIMENSIONS

mm [in]



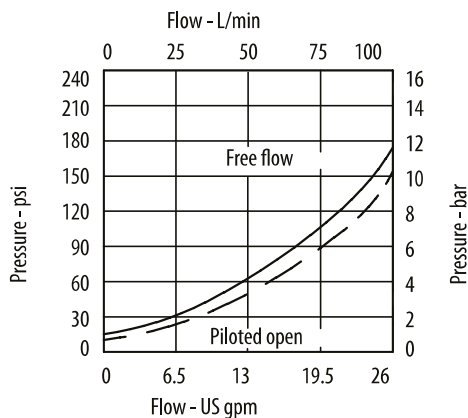
Turn CW to increase pressure setting and CCW to decrease pressure setting.

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

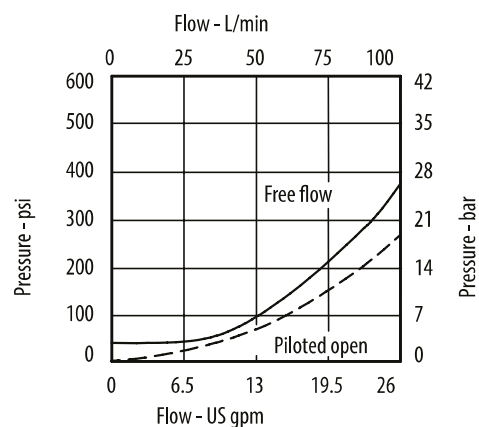
**Installation torque**  
60 Nm [44 ft. lbs]

#### PERFORMANCE CURVES

#### Pressure Drop



4:1 Version



8:1 Pilot Ratio

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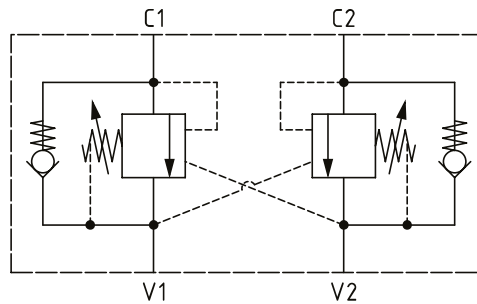
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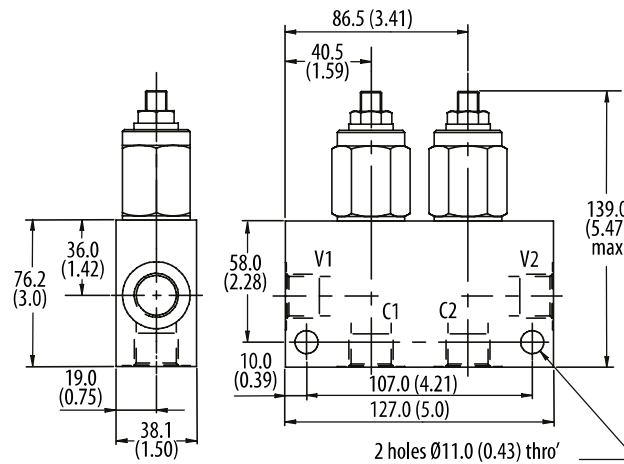
#### ■ SCHEMATIC

1CEE95 (dual)



#### ■ DIMENSIONS

mm [in]



#### ■ MODEL CODE

**1CE95 - F - 4W - 35 - S - 4 - 377 - 200**

##### Basic Code

1CE90 - No housing  
1CE95 - Cartridge and housing  
1CEE95 - 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 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

##### 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
200	200	[2900]

##### Housing Material

Omit - Aluminum/No housing  
377 - Steel

##### Pilot Ratio

4 - 4:1  
8 - 8:1

##### Seal Option

Code	Seal kit
S - Buna-N	SK633
SV - Viton	SK633V