

# Motion Control Valves

## 1CPBD30

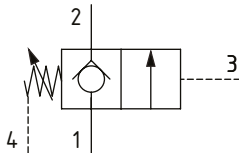
Overcenter Valve, Zero Differential, Poppet Type, External Drain, Port 3 Pilot

350 bar [5000 psi] • 30 l/min [8 US gpm]

### DESCRIPTION AND OPERATION

This is a zero differential overcenter valve, which is a pilot assisted, metered poppet valve with an integral free flow check. The check section allows free flow from port 2 to 1 into the actuator then holds and locks the load in position. By applying pilot pressure on port 3, the valve will open allowing the load to be lowered with oil passing from port 1 to 2. With port 4 connected to tank back pressure will not affect the pilot pressure required to open the valve. These valves are usually used in conjunction with a remote pilot source to maintain control in the event of hose failure. They should always be mounted onto or into the actuator and they do not have a relief function.

### SCHEMATIC



### PERFORMANCE DATA

Rated pressure	350 bar [5000 psi]
Rated flow	30 l/min [8 US gpm]
Leakage	0.3 ml/min [5 drops/min]
Weight	0.15 kg [0.33 lb]
Cavity	A20530

### MODEL CODE

**1CPBD30 - F - 3W - 2 - P - 377 - 10**

#### Basic Code

1CPBD30-No housing  
1CPBD35-Cartridge and housing

#### Adjustment Option

F - External

#### Housing

Code	Ports	Aluminum	Steel
Omit	No housing		
3W	3/8" BSP Valve & Cyl. Port, 1/4" BSP Pilot and Vent Port	12007689	12007699
6T	#6 SAE Valve & Cyl. Port, #4 SAE Pilot and Vent Port	12007686	12007694

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

\* Additional housings available

#### Pilot Pressure Range

Code	Bar	Psi
2	5-20	[73-290]
Standard Setting	10	[145]

Std setting made at 4.5 l/min

#### Pilot 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
10	10	[145]

#### Housing Material

Omit - Aluminum/No Housing  
377 - Steel

#### Seal Option

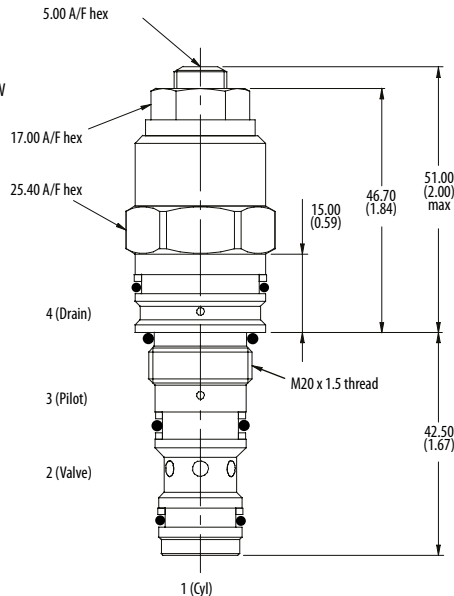
Code	Seal kit
S-Buna-N	SK1159
SV-Viton	SK1159V
P-Polyurethane/Buna-N	SK1159P

### 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  
45 Nm [33 ft. lbs]

### PERFORMANCE CURVES

#### Pressure Drop

