Motion Control Valves

CP448-1

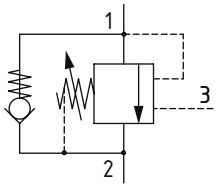
Overcenter Valve, Standard, Direct Acting, Internal Drain, Port 3 Pilot

350 bar [5000 psi] • 19 l/min [5 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

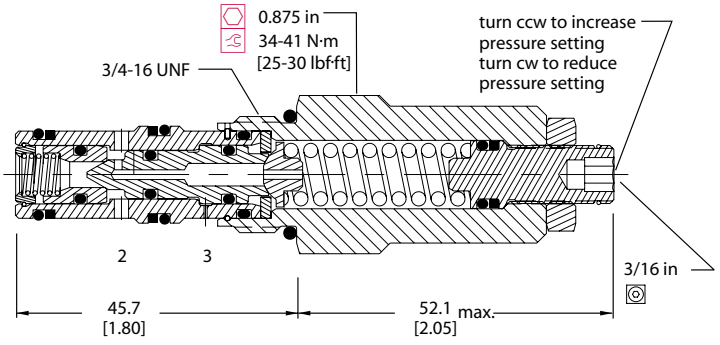


PERFORMANCE DATA

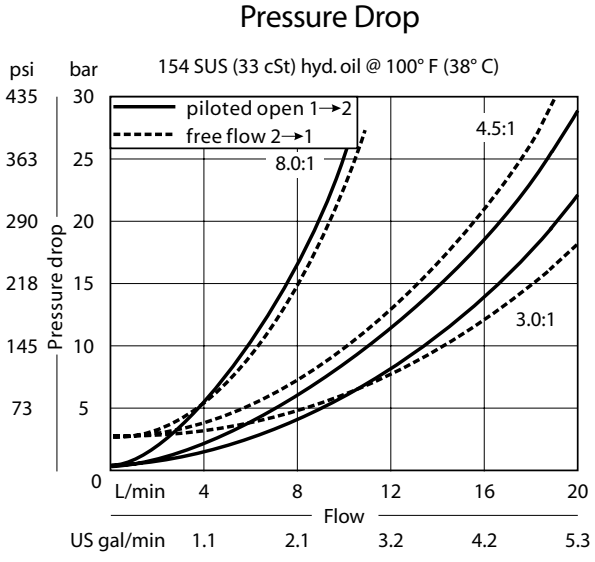
Rated pressure	**350 bar [5000 psi]**
Rated flow	**19 l/min [5 US gpm]**
Max total relief pressure	350 bar [5000 psi]
Max recommended load pressure at max setting	270 bar [3900 psi]
Pilot Ratio	3:1, 4.5:1, 8:1
Leakage	10 drops/min @ 70% of crack pressure
Weight	0.16 kg [0.36 lb]
Cavity	CP08-3L

DIMENSIONS

mm [in]



PERFORMANCE CURVES



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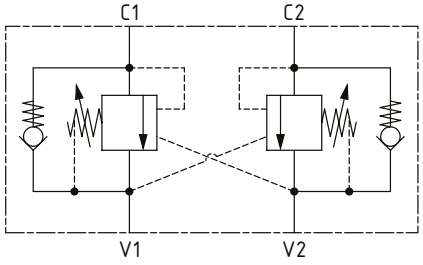
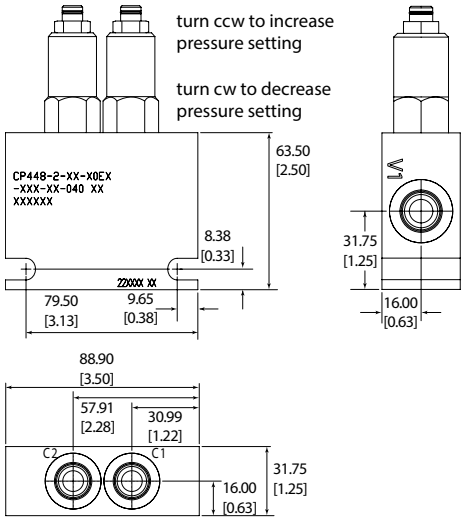
SCHEMATIC

CP448-2 (dual)



DIMENSIONS

mm [in]



MODEL CODE

CP448 - 1 - B - 6S - E - B - 075 - 3.0 - 040

Basic Code

CP448-1 - Cartridge and Housing
CP448-2 - Cartridges and Dual Housing

Seal Option

Code	Seal kit
B-Buna - N	120238
V-Viton	120239

Housing

Code	Ports & Material	Housing Model Code	Dual Housing Model Code
0	No housing		
2B	AL, 1/4 BSP	CP08-3L-2B	
3B	AL, 3/8 BSP	CP08-3L-3B	CP448-2-3B
S3B	Steel, 3/8 BSP	CP08-3L-S3B	CP448-2-S3B
4S	AL, #4 SAE	CP08-3L-4S	CP448-2-4S
6S	AL, #6 SAE	CP08-3L-6S	CP448-2-6S
S6S	Steel, #6 SAE	CP08-3L-S6S	

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

Adjustment Option

E - External

Free Flow Check Crack Pressure

Code	Bar	Psi
040	2.76	[40]

Pilot Ratio

3.0 - 3.0:1
4.5 - 4.5:1
8.0 - 8.0:1

Pressure Setting

Code x10 - Pressure setting in psi (10 psi increments within specified Pressure Range)
XXX-Standard setting (see Pressure Range for value)
Example:

Code	Bar	Psi
075	52	[750]

Pressure Range

Code	Pilot Ratio 3.0 Psi	Pilot Ratio 3.0 Bar	Pilot Ratio 4.5 Psi	Pilot Ratio 4.5 Bar	Pilot Ratio 8.0 Psi	Pilot Ratio 8.0 Bar
A	600-1800	[41-124]	800-2700	[55-186]	1500-5000	[103-350]
Standard Setting	1000	[69]	1500	[103]	2500	[172]
B	1000-3500	[269-240]	1500-5000	[103-350]		
Standard Setting	1500	[103]	2500	[172]		
C	1800-5000	[124-350]				
Standard Setting	2500	[172]				