



Logic Elements Technical Information

Pressure Compensator CP301-4

OPERATION

The CP301-4 is a 12-size, flow control, restrictive type pressure compensator. Restrictive-type pressure compensators are three-ported valves that work in series with a fixed or variable control orifice. The pressure compensator is located downstream of the orifice and is spring-biased to an open position as shown in the example circuit. The spool “senses” the pressure on either side of the control orifice and will vary it’s restriction in order to maintain a constant pressure differential across the control orifice, hence maintaining a constant flow rate.

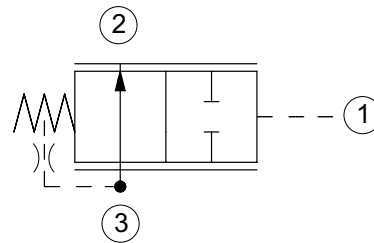
APPLICATION

Common applications include any circuit that requires compensated flow control going to one actuator or circuit. Pressure compensators offer the circuit designer capability to add pressure compensation to any fixed or variable orifice. This ensures that flow, and resulting actuator speed, are maintained regardless of system and working pressures

SPECIFICATION

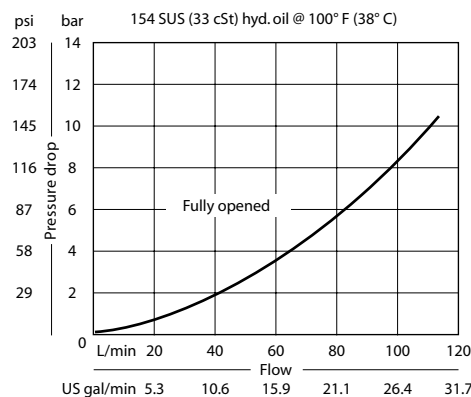
Rated pressure	210 bar [3045 psi]
Rated flow at 7 bar [100 psi]	90 l/min [24 US gal/min]
Weight	0.30 kg [0.67 lb]
Cavity	CP12-3

SCHEMATIC



PERFORMANCE CURVE

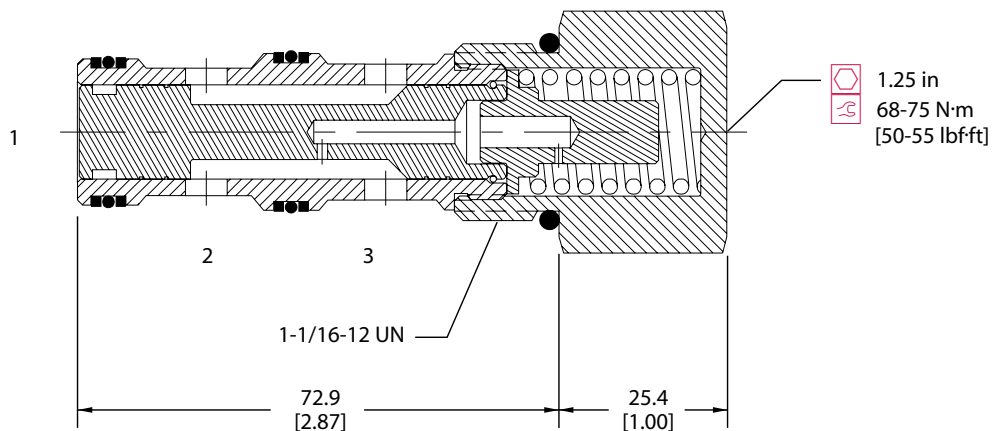
Theoretical performance



DIMENSION

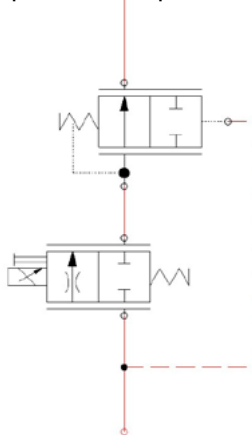
mm [in]

Cross-sectional view



EXAMPLE CIRCUITS

Post-Compensated Proportional Flow Control



ORDERING INFORMATION

CP301 - 4 - B - 12S - 0 - 080

Seals

B = Buna-N
V = Viton

Housing and ports

0 = No housing
10S = AL, #10 SAE
12S = AL, #12 SAE
4B = AL, 1/2 BSP
6B = AL, 3/4 BSP

Seal kit
120053
120052

Housing P/N

No housing
CP12-3-10S
CP12-3-12S
CP12-3-4B
CP12-3-6B

Differential Control Pressure

bar	[psi]
050	= 3.5 [50]
080	= 5.5 [80]
100	= 6.9 [100]
150	= 10.3 [150]
190	= 13.1 [190]