OPERATION

The CP311-4 is a 12-size, flow control, priority type pressure compensator. Priority-type pressure compensators are four-ported valves that work in series with a fixed or variable control orifice. As with the restrictive-type valves, these valves maintain a constant pressure differential across the control orifice. However, rather than restricting flow when the differential pressure becomes too high, the priority-type pressure compensators open a fourth bypass port for all flow in excess of that demanded by the control orifice. Note that if the bypass port is blocked, the valve will function as a restrictive-type pressure compensator.

APPLICATION

Common applications include any circuit that requires compensated priority flow going to one actuator (for example, steering or charge pressure to a hydrostatic pump), and a the remaining going to a secondary function (for example, a fan motor). 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
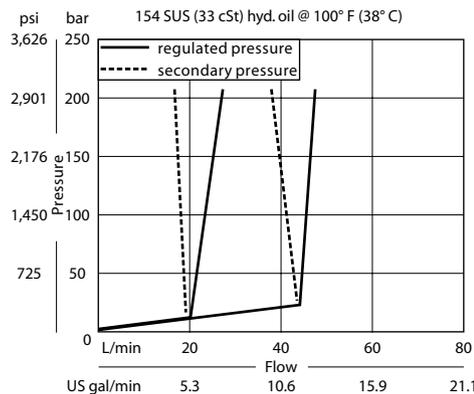
SPECIFICATION

Rated pressure	210 bar [3045 psi]
Rated flow at 7 bar [100 psi]	60 l/min [16 US gal/min]
Weight	0.31 kg [0.69 lb]
Cavity	**CP12-4**

SCHEMATIC
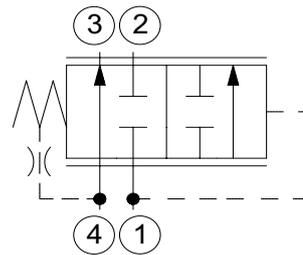
PERFORMANCE CURVE

Theoretical performance

DIMENSION
mm [in]

Cross-sectional view

◇ 1.25 in
🔧 68-75 N·m
[50-55 lbf·ft]

1

2   3   4

1-1/16-12 UN

82.6 [3.25]   25.4 [1.00]
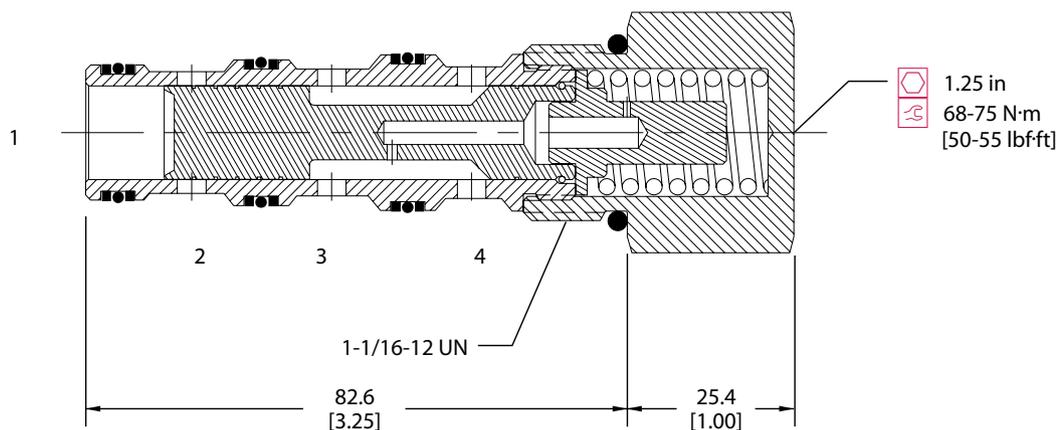
EXAMPLE CIRCUITS

Priority-type Pressure Compensator operation

Control orifice

Regulated flow

Bypass flow
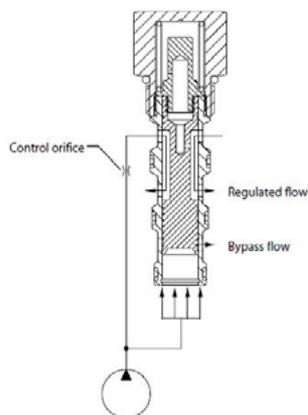
Post-Compensated Proportional Priority Flow Control
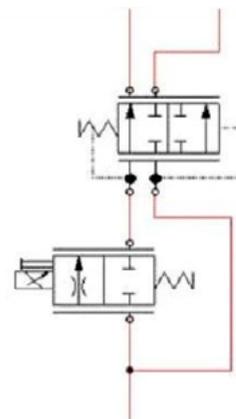
ORDERING INFORMATION

CP311 - 4 - **B** - 10S - 080

Differential Control Pressure

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

Seals

		Seal kit
B	= Buna-N	120262
V	= Viton	120263

Housing and ports   **Housing P/N**

0	= No housing	No houisng	
10S	= AL, #10 SAE	CP12-4-10S	
12S	= AL, #12 SAE	CP12-4-12S	
3B	= AL, 1/2 BSP	CP12-4-3B	
4B	= AL, 3/4 BSP	CP12-4-4B	
Other housings available			