



Logic Elements Technical Information

Pressure Compensator CP310-4

OPERATION

The CP310-4 is a 10-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.

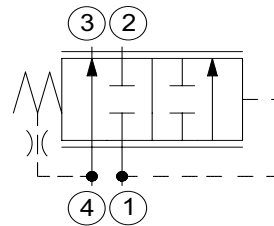
APPLICATION

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 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

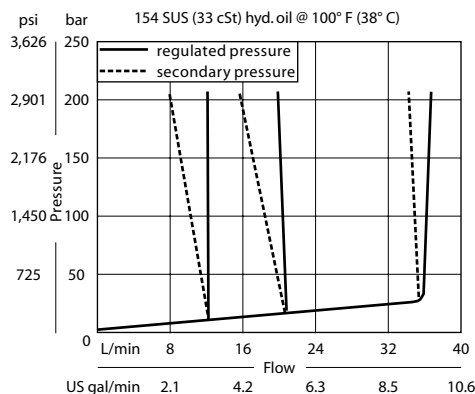
Rated pressure	210 bar [3045 psi]
Rated flow at 7 bar [100 psi]	40 l/min [11 US gal/min]
Weight	0.15 kg [0.32 lb]
Cavity	SDC10-4

SCHEMATIC



PERFORMANCE CURVE

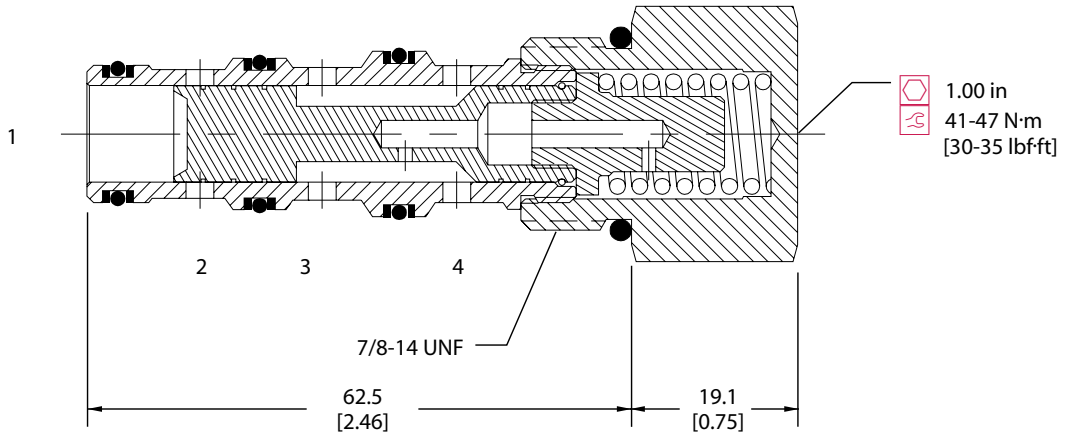
Theoretical performance



DIMENSION

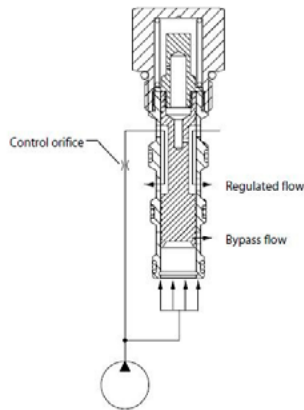
mm [in]

Cross-sectional view

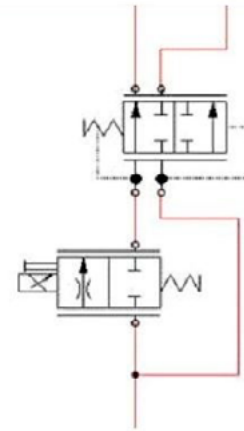


EXAMPLE CIRCUITS

Priority-type Pressure Compensator operation



Post-Compensated Proportional Priority Flow Control



ORDERING INFORMATION

CP310 - 4 - B - 8S - 080

Seals

- B = Buna-N
- V = Viton

Housing and ports

- 0 = No Housing
 - L3B = AL, 3/8 BSP
 - L4B = AL, 1/2 BSP
 - 6S = AL, #6 SAE
 - 8S = AL, #8 SAE
- Other housings available

- Seal kit
120023
- 120024

Housing P/N

- No Housing
- SDC10-4-L-3B
- SDC10-4-L-4B
- CP10-4-6S
- CP10-4-8S

Differential Control Pressure

	bar	[psi]
040	= 2.8	[40]
080	= 5.5	[80]
110	= 7.6	[110]
150	= 10.3	[150]
190	= 13.1	[190]