



Logic Elements Technical Information

Spool Type CP701-4

OPERATION

The CP701-4 is a 12-size, normally open, pilot-to-open, spring-biased differential-sensing logic element. It will modulate flow from 2 to 1 based on the spring control pressure, outlet pressure at port 1, and pilot pressure at port 3.

APPLICATION

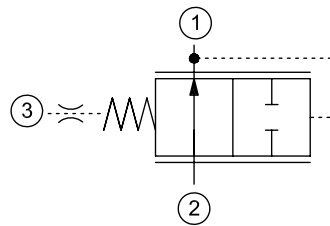
Common applications include: pre-compensator for proportional directional control or flow controls, as well as a pressure control valve. A common application for this valve is as a pressure compensator when applied with a fixed, or adjustable orifice to create a pressure-compensated flow control. This ensures that flow rate, and resulting actuator speed is maintained regardless of pressure drop across the control orifice. Effective use of logic elements is a key to designing cost-effective circuits, and is limited only by the imagination of the designer.

SPECIFICATION

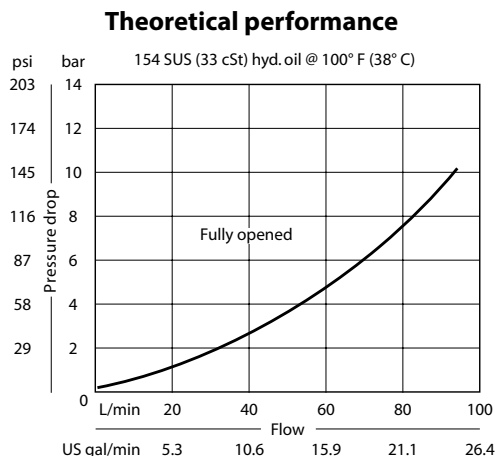
Rated pressure*	350 bar [5075 psi]
Rated flow at 7 bar [100 psi]	75 l/min [20 US gal/min]
Weight	0.26 kg [0.57 lb]
Cavity	CP12-3S

* Rated Pressure based on NFPA fatigue test standards (at 1 Million Cycles).

SCHEMATIC



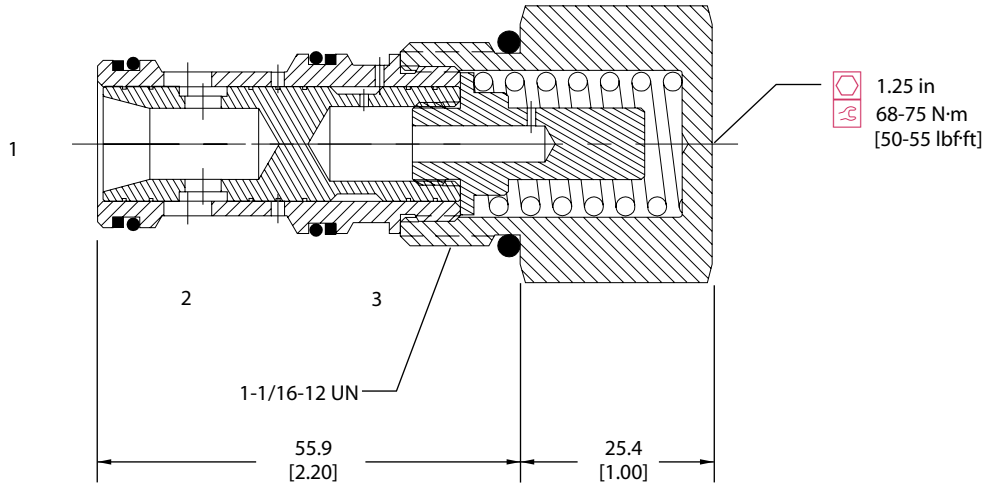
PERFORMANCE CURVE



DIMENSION

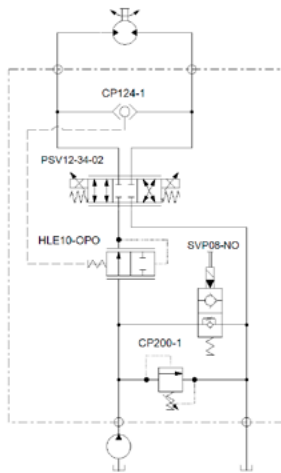
mm [in]

Cross-sectional view

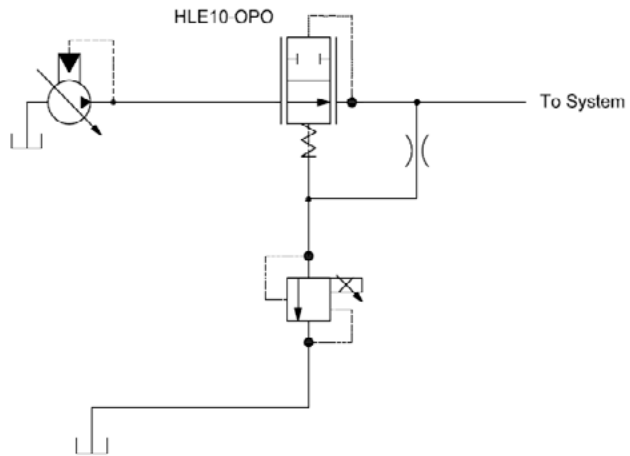


EXAMPLE CIRCUITS

Compensated Circuit



Proportional Pressure Reducing



ORDERING INFORMATION

CP701 - 4 - B - 12S - 080

Seals

B = Buna-N
V = Viton

Seal kit
120335
120336

Housing and ports

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

Housing P/N

No housing
CP12-3S-4B/2B = 1/4 BSP
CP12-3S-6B/2B = 1/4 BSP
CP12-3S-10S/4S = #4 SAE
CP12-3S-12S/4S = #4 SAE

Pilot port

Differential Control Pressure

bar	[psi]
030	2.1 [30]
050	3.5 [50]
080	5.5 [80]
100	6.9 [100]
150	10.3 [150]