



Logic Elements Technical Information

Spool Type CP701-1

OPERATION

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

APPLICATION

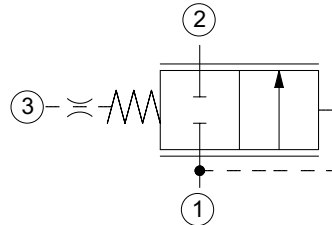
Common applications include load-sensing bypass compensator for a fixed displacement pump with single or multiple actuators as well as bypass-type pressure-compensated flow control. Effective use of logic elements is a key to designing cost-effective circuits, and is limited only by the imagination of the designer.

SPECIFICATION

Rated pressure*	350 bar [5075 psi]
Rated flow at 7 bar [100 psi]	150 l/min [40 US gal/min]
Weight	0.26 kg [0.57 lb]
Cavity	CP12-3S

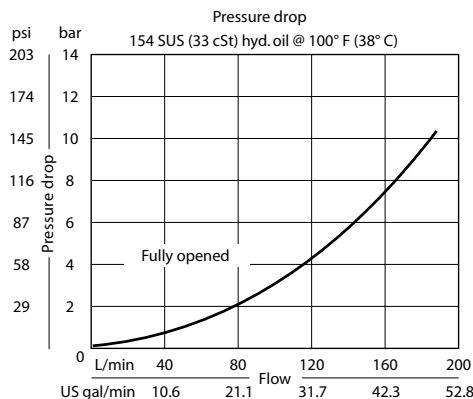
* Rated Pressure based on NFPA fatigue test standards (at 1 Million Cycles).

SCHEMATIC



PERFORMANCE CURVE

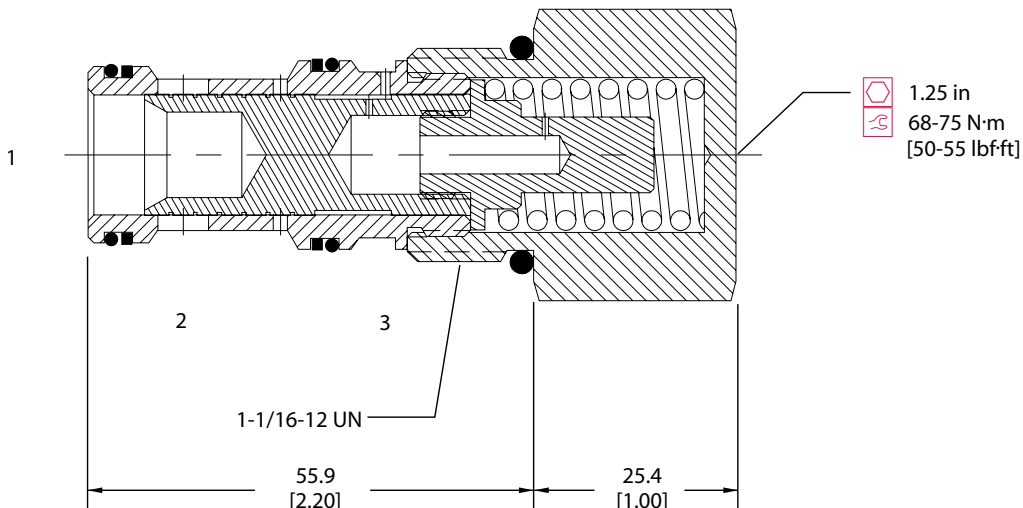
Theoretical performance



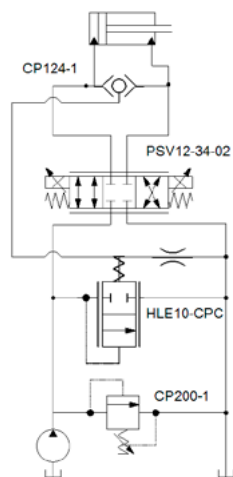
DIMENSION

[ni] mm

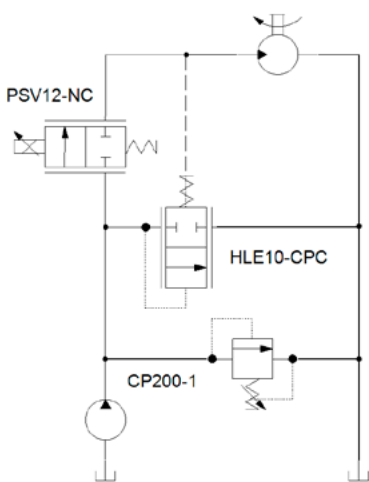
Cross-sectional view



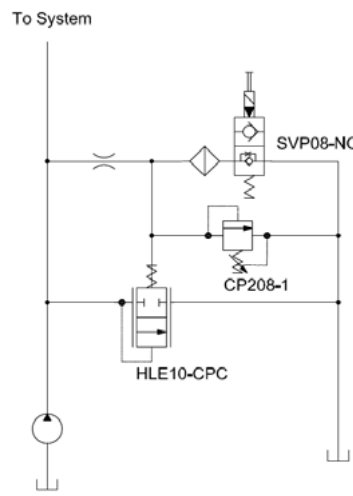
EXAMPLE CIRCUITS



Double Acting Cylinder with
Proportional Speed Control,
Unloading Valve and Circuit Relief



Proportional Bypass Flow Control



Dump and Relief Valve for a Fixed Pump

ORDERING INFORMATION

		CP701 - 1 - B - 12S - 080		
Seals				Differential Control Pressure
B = Buna-N	Seal kit			bar [psi]
V = Viton	120335			030 = 2.1 [30]
	120336			050 = 3.5 [50]
Housing and ports	Housing P/N	Pilot port		080 = 5.5 [80]
0 = No housing	No housing			100 = 6.9 [100]
4B = AL, 1/2 BSP	CP12-3S-4B/2B = 1/4 BSP			150 = 10.3 [150]
6B = AL, 3/4 BSP	CP12-3S-6B/2B = 1/4 BSP			170 = 11.7 [170]
10S = AL, #10 SAE	CP12-3S-10S/4S = #4 SAE			
12S = AL, #12 SAE	CP12-3S-12S/4S = #4 SAE			