

Proportional Valves

EPV10

Proportional Flow Control Valve, Poppet Type, Normally Closed, Uni-Directional, Pressure Compensated

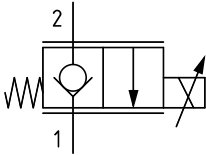
350 bar [5000 psi] • 30 l/min [8 US gpm]



DESCRIPTION AND OPERATION

This is a 2-way, poppet type, normally closed, pressure compensated, uni-directional proportional valve. In the de-energized condition, flow is blocked from port 2 to 1. Energizing the coil will proportionally push the poppet away from its seat opening port 2 to 1. This valve is ideal as a lowering valve for single acting cylinders.

SCHEMATIC



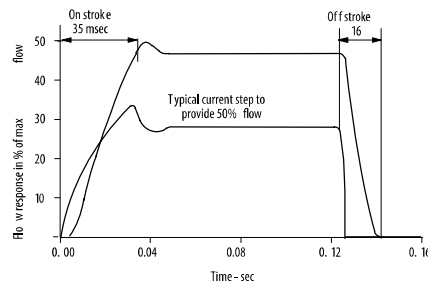
PERFORMANCE DATA

Rated pressure*	350 bar [5000 psi]
Rated flow	30 l/min [8 US gpm]
Leakage	10 ml/min @ 140 bar [2000 psi]
Maximum Hysteresis	4%
Recommended PWM frequency	100-200 Hz
Threshold current	300 - 600 mA [12 VDC coil] 150 - 300 mA [24 VDC coil]
Maximum control current	1.4 A [12 VDC coil] 0.7 A [24 VDC coil]
Coil Options	EPV series
Weight	0,78 kg [1.72 lbs]
Cavity	SDC10-2

*Rated pressure based on NFPA fatigue test standards (at 1 million cycles)

PERFORMANCE CURVES

Step response data

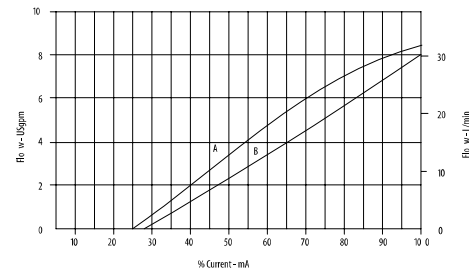


Flow vs current

With 10 bar differential between inlet and outlet

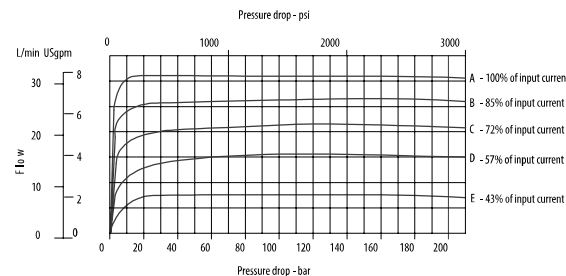
A - 210 bar (3000 psi) pressure drop from Port 2 to Port 1

B - 10 bar (150 psi) pressure drop from Port 2 to Port 1



Flow vs pressure drop

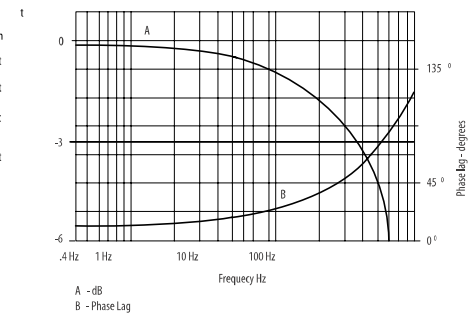
Per % of input current



Typical flow response

For an amplitude of $\pm 40\%$ maximum stroke (center to offset) about the 50 % position.

$\Delta P = 10$ bar (145 psi)



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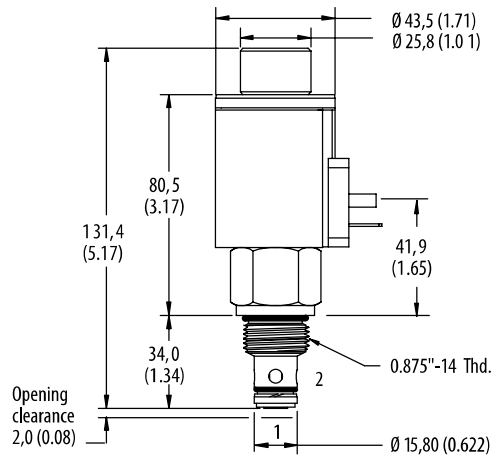


DIMENSIONS

mm [in]

Coil nut torque

2.5-3.0 Nm [22-27 in-lbs]



Installation torque

A - 47-54 Nm [35-40 ft lbs]

S - 68 - 75 Nm [50 - 55 ft. lbs.]

MODEL CODE

EPV10 - A - 0 - V - 12D - M - N - 10

Housing Material

Omit - No housing
A - Aluminum
S - Steel

Housing

Code	Ports	Aluminium	Steel
0	No housing		
3G	3/8" BSP	876703	02-175103
6H	#6 SAE	876700	02-175100
8H	#8 SAE	876701	02-175101

* Aluminum bodies are to be used for pressures less than 210 bar [3000 psi].

* Additional housings available

Seal Option

Code	Seal Kit
Omit - Buna - N	02-317580
V - Viton	
NF - Buna - N and 60 mesh filter screen	
VF - Viton and 60 mesh filter screen	

Connector Type

0 - No coil
W - Leadwire (DC only)
U - DIN 43650
Y - Metri-Pack 150 male
N - Deutsch DT04-2P

Manual Override Option

0 - No manual override
M - Pin type
S - Screw type

Coil Voltage

00 - No coil, nut included (p/n 02-148332)
12D - 12VDC
24D - 24VDC

*Use EPV series, 16W coils