

# Proportional Valves

## EPV10

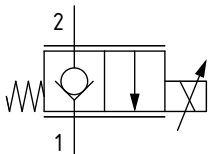
Proportional Flow Control Valve, Poppet Type, Normally Closed, Uni-Directional, Pressure Compensated

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

### DESCRIPTION AND OPERATION

This is a 2-way, poppet type, normally closed, non-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



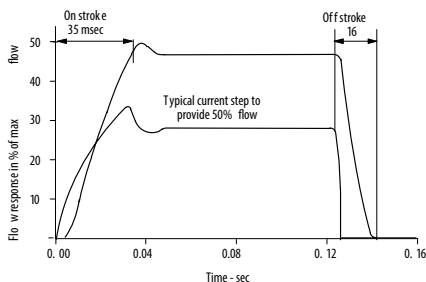
### PERFORMANCE DATA

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

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

### PERFORMANCE CURVES

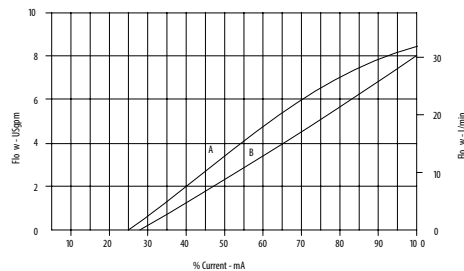
Step response data



Flow vs current

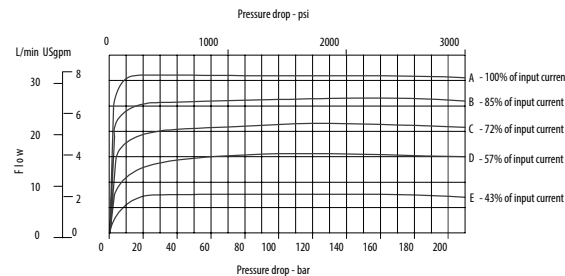
With 10 bar differential between inlet and outlet

- 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

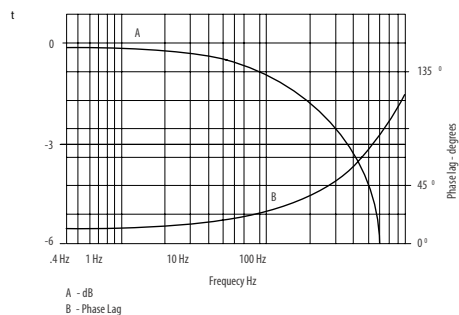
Per % of input current



Typical flow response

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

ΔP = 10 bar (145 psi)



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## EPV10

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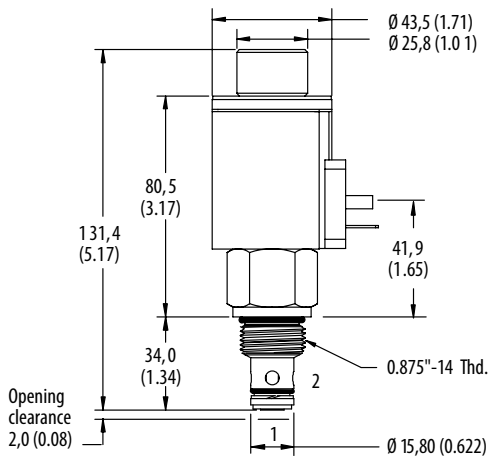
350 bar [5000 psi] • 30 l/min [8 US gpm]

### DIMENSIONS

mm [in]

#### Coil nut torque

2.5-3.0 Nm [22-27 ft 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** - Aluminium  
**S** - Steel

#### Housing

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

\* Aluminium bodies are to be used for pressures less than 210 bar [3000 psi].  
 \* Additional housings available

#### Seal Option

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