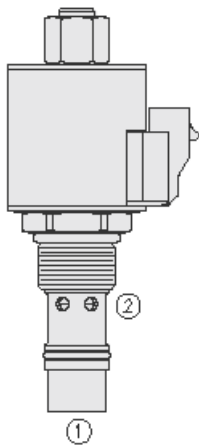




## Overview



### Description

The HPV12-21 is a solenoid-operated, pressure compensated, spool type, normally open, proportional flow control regulator

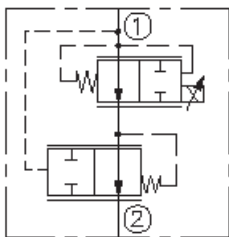
### Operation

With inlet flow at port 1 the HPV12-21 valve will regulate flow out of port 2 regardless of system working pressure with flow rate inversely proportional to current applied to the solenoid

### Features

- Continuous-duty rated coil.
- Hardened spool and cage for long life.
- Efficient wet-armature construction.
- Cartridges are voltage interchangeable.
- Waterproof E-Coils rated up to IP69K.
- 960 hour salt-spray rated solenoid tubes.
- All HyPerformance products are tested to NFPA specification T2.6.1.
- and are tested at a verification level of 90% and an assurance of 99%.

## Symbol



## Ratings

### Pressure Ratings

Pressure rating	350 bar (5075 psi) 420 bar (6090 psi)	- <b>Note:</b> 10% cycle life
Proof pressure	690 bar (10000 psi)	
Burst pressure	1241 bar (18000 psi)	

### Flow Ratings

Flow rating	60.6 lpm (16.0 gpm)	
Maximum internal leakage	0.38 lpm (0.10 gpm)	- <b>Note:</b> At port 2 at 100% current and 345 bar (5000 psi) at port 1
Hysteresis flow	lpm (gpm)	- <b>Note:</b> Maximum

### Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- <b>Note:</b> With buna N seals
	-26 to 204 °C (-15 to 400 °F)	- <b>Note:</b> With fluorocarbon seals
	-54 to 107 °C (-65 to 225 °F)	- <b>Note:</b> With urethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 160 °F)	

## Operating Parameters

Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

## Properties

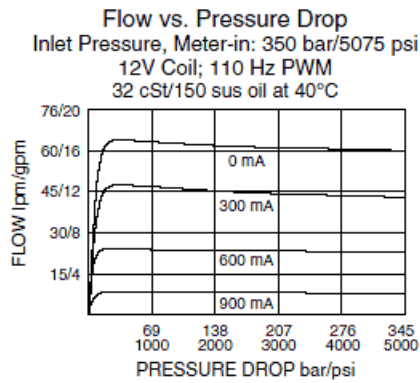
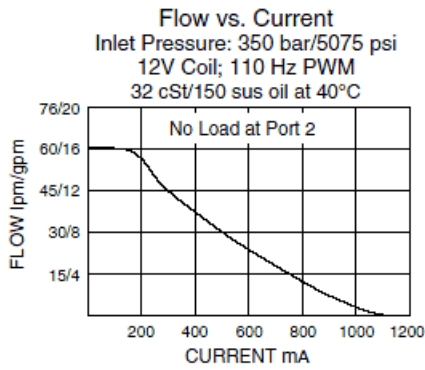
Unit weight	0.29 kg (0.64 lb)
Internal wetted surface area	28729 mm <sup>2</sup> (44.53 in <sup>2</sup> )



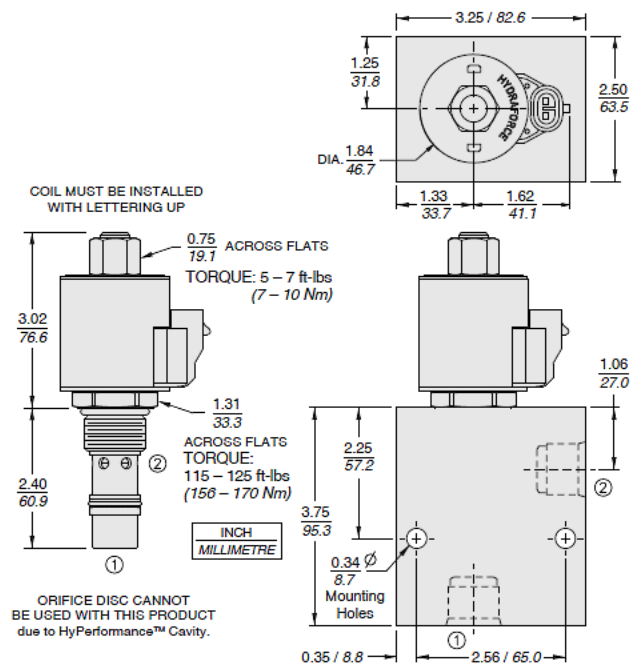
## Electrical Parameters

Note	With size 10 e-series coil	
Maximum control current	1100 mA	- <b>Note:</b> Coil 12 V
	550 mA	- <b>Note:</b> Coil 24 V
Threshold current	250 mA	- <b>Note:</b> Coil 12 V
	125 mA	- <b>Note:</b> Coil 24 V
Valve inductance	247 mH	- <b>Note:</b> Coil 12 V
	973 mH	- <b>Note:</b> Coil 24 V
Dither PWM frequency	100 to 250 Hz	

## Performance



## Dimensions





## Materials

### Materials

**Cartridge:** Weight: 0.29 kg (0.64 lb); Steel with hardened work surfaces. Zinc-plated exposed surfaces; Buna N O-rings and polyester elastomer back-ups standard.

**Ported Body:** Weight: 2.74 kg (6.05 lbs.); H-Series Ductile iron. Rated to 345 bar (5000 psi).

**E-Coil:** Weight: 0.41 kg (0.9 lb); Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

## Installation Specifications

Cavity	HVC12-2A	
Cartridge installation torque	156 to 170 N-m (115 to 125 ft-lb) 122 to 136 N-m (90 to 100 ft-lb)	- <b>Note:</b> Steel/ductile iron cavity - <b>Note:</b> Aluminum cavity
Coil nut torque	7 to 10 N-m (5 to 7 ft-lb)	
Orientation restriction	None	

## Accessories

Seal kit	HSK12-2N-M HSK12-2V-M HSK12-2U-0	- <b>Note:</b> Buna N - <b>Note:</b> Fluorocarbon - <b>Note:</b> Urethane
Housings		
Coils		

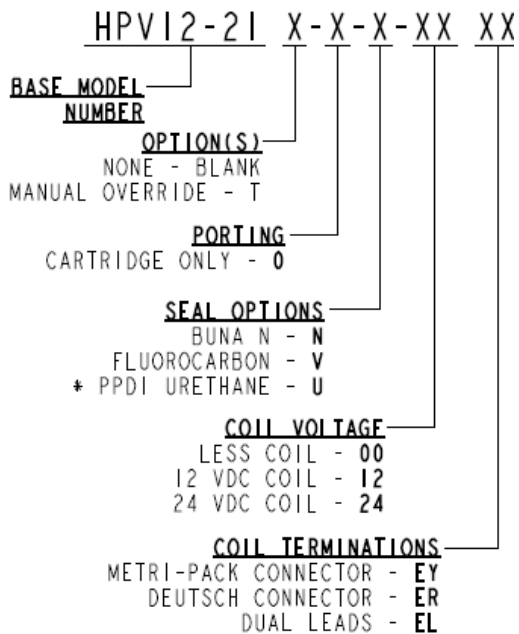
## Order Code

POSITION	CODE	DESCRIPTION
		HPV12-21E-H-J-L
E		Manual Override
E	BLANK	NONE
E	T	Variable Position Override, Red Knurled Knob
H		Line Body
H	0	No Body
H	12HT	Ductile Iron SAE 12
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	U	PPDI Urethane
L		Coil
L	0	No Coil
L	10EL	10 VDC, E-Coil, Dual Lead Wires
L	10ER	10 VDC, E-Coil, Deutsch
L	12EG	12 VDC, E-Coil, DIN 43650
L	12EJ	12 VDC, E-Coil, AMP Jr.
L	12EL	12 VDC, E-Coil, Dual Lead Wires, 18 inches long
L	12EL/36	12 VDC, E-Coil, Dual Lead Wires, 36 inches long
L	12ER	12 VDC, E-Coil, Deutsch
L	12EY	12 VDC, E-Coil, Metri-Pack 150
L	20ER	20 VDC, E-Coil, Deutsch
L	24EG	24 VDC, E-Coil, DIN 43650
L	24EJ	24 VDC, E-Coil, AMP Jr.
L	24EL	24 VDC, E-Coil, Dual Lead Wires, 18 inches long



POSITION	CODE	DESCRIPTION
L	24EL/36	24 VDC, E-Coil, Dual Lead Wires, 36 inches long
L	24ER	24 VDC, E-Coil, Deutsch
L	24EY	24 VDC, E-Coil, Metri-Pack 150

**ORDERING INFORMATION:**



\* URETHANE SEALS RECOMMENDED FOR OPERATING PRESSURES ABOVE 3500 psi [241 bar]