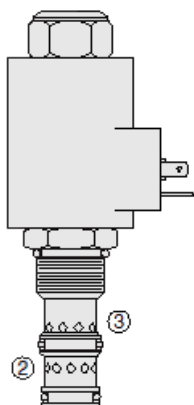




## Overview



### Description

PV72-33 is a solenoid operated, spool type, normally closed proportional flow control valve

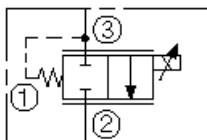
### Operation

The valve provides regulated flow from port 3 to port 2 with input from port 1 blocked. Regulated flow is proportional to electric current applied to solenoid. The valve is intended for use with a pressure compensator at pressure differential not exceeding 175 psi [12 bar]

### Features

- Choice of two regulated flow ranges
- Excellent linearity and hysteresis characteristics.
- Hardened spool and cage for long life.
- Optional control orifice sizes.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage-interchangeable.
- Unitized, molded coil design.
- Coil waterproofing standard.
- Manual Override option.

### Symbol



## Ratings

### Pressure Ratings

Pressure rating	240 bar (3500 psi)
Proof pressure	345 bar (5000 psi)
Burst pressure	896 bar (13000 psi)

### Flow Ratings

Flow rating	0 to 57 lpm (0 to 15.0 gpm)
Maximum internal leakage	0.38 lpm (0.1 gpm)    - <b>Note:</b> Max at 100 current

### 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 polyurethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 160 °F)	

### Other Ratings

Corrosion protection	960 hr salt spray per ASTM b117
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## 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

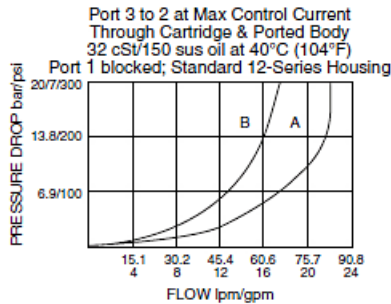
Unit weight	0.40 kg (0.88 lb)	- <b>Note:</b> Blank option
	0.44 kg (0.98 lb)	- <b>Note:</b> "m" option
	0.55 kg (1.21 lb)	- <b>Note:</b> "g" option
Internal wetted surface area	283 cm <sup>2</sup> (43.8 in <sup>2</sup> )	- <b>Note:</b> Blank option
	348 cm <sup>2</sup> (53.9 in <sup>2</sup> )	- <b>Note:</b> "m" option "g" option



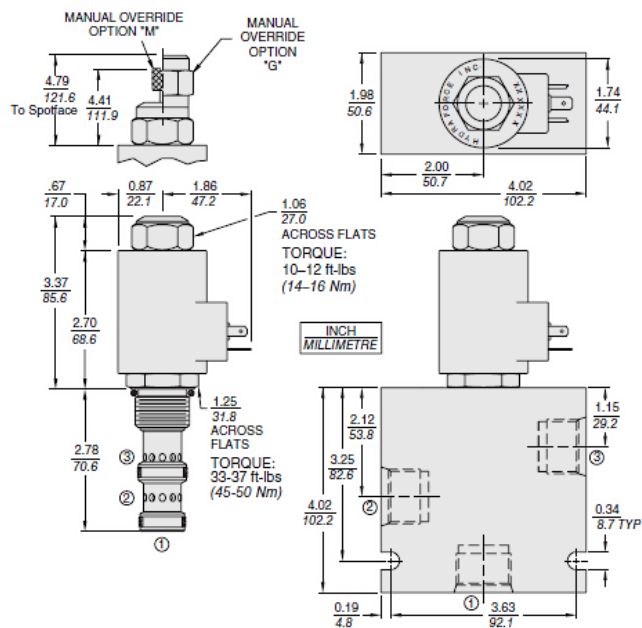
## Electrical Parameters

Note	With size 70 e-series and d-series coils	
Maximum control current	1500 mA	- <b>Note:</b> 12 V coil
	750 mA	- <b>Note:</b> 24 V coil
Threshold current	300 mA	- <b>Note:</b> 12 V coil
	150 mA	- <b>Note:</b> 24 V coil
Valve inductance	240 mH	- <b>Note:</b> E-coil 12 V
	200 mH	- <b>Note:</b> D-coil 12 V
	700 mH	- <b>Note:</b> E-coil 24 V
	600 mH	- <b>Note:</b> E-coil 24 V
Dither PWM frequency	100 to 250 Hz	

## Performance



## Dimensions



## Materials

### Materials

**Cartridge:** Weight: 0.35 kg. (0.92 lbs.) With Option M: 0.48 kg (1.05 lb.); With Option G 0.56 kg (1.24 lb.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

**Standard Ported Body:** Weight: 1.09 kg. (2.4 lbs.) Anodized high strength aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page

**70-Size  $\alpha$ Coil:** Weight: 0.32 kg. (0.7 lbs.) Unitized thermoplastic encapsulated, Class H high temperature magnet wire.

**70-Size  $\beta$ Coil:** Weight: 0.41 kg. (0.9 lbs.) Fully encapsulated with rugged external metal shell. IP69K rated.



## Installation Specifications

Cavity	VC12-3
Cartridge installation torque	47 N-m (35 ft-lb)
Coil nut torque	14 to 16 N-m (10 to 12 ft-lb)
Cover cap torque	7 to 9 N-m (5 to 7 ft-lb)
Orientation restriction	None

## Accessories

Seal kit	SK12-2X-M	- <b>Note:</b> X = seal option
Housings		
Coils		



**Order Code**

POSITION	CODE	DESCRIPTION
		PV72-33DE-H-J-L
D		Max Regulated Flow
D	A	80.6 lpm (21.3 gpm) Max Regulated Flow
D	B	58.7 lpm (15.5 gpm) Max Regulated Flow
E		Manual Override
E	BLANK	NONE
E	G	Variable Position Override, Red Knurled Knob with Cover Cap
E	M	Variable Position Override, Red Knurled Knob
H		Line Body
H	0	No Body
H	8T	Aluminum SAE 8
H	10T	Aluminum SAE 10
H	12T	Aluminum SAE 12
H	12TD	Ductile Iron SAE 12
H	6B	Aluminum BSPP 3/4" (6)
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	P	Polyurethane
J	U	PPDI Urethane
L		Coil
L	0	No Coil
L	12DG	12 VDC, D-Coil, DIN 43650
L	12DL	12 VDC, D-Coil, Dual Lead Wires
L	12DL/W	12 VDC, D-Coil, Dual Lead Wires with Weatherpak
L	12DS	12 VDC, D-Coil, Dual Spade
L	12ER	12 VDC, E-Coil, Deutsch
L	12EY	12 VDC, E-Coil, Metri-Pack 150
L	24DG	24 VDC, D-Coil, DIN 43650
L	24DL	24 VDC, D-Coil, Dual Lead Wires
L	24DS	24 VDC, D-Coil, Dual Spade
L	24ER	24 VDC, E-Coil, Deutsch

