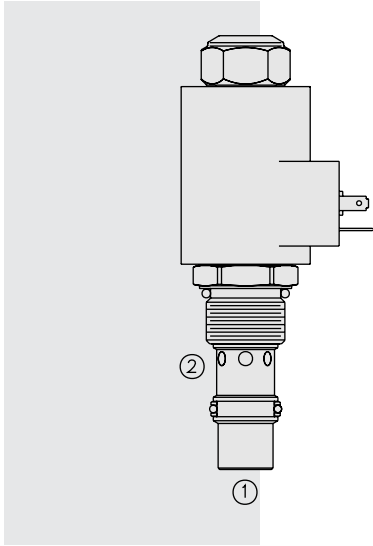


# ELECTRO-PROPORTIONAL VALVES—FLOW CONTROLS

## PV72-21 Proportional Flow Control Cartridge,



### DESCRIPTION

A solenoid operated, electrically-variable, two-port, pressure-compensated, spool-type, normally open when de-energized, proportional flow control valve.

### OPERATION

The **PV72-21** will regulate flow out of port ② regardless of system working pressure. With an increasing current applied to the solenoid, the PV72-21 will decrease output flow.

#### Operation of Manual Override:

- To Engage: Turn clockwise approximately 1 turn to reach start point. Continue another approximately 5 turns to full shift.
- To Disengage: Turn counterclockwise approximately 6 turns until positive stop is found.

### FEATURES

- Excellent linearity and hysteresis characteristics.
- Hardened spool and cage for long life.
- Efficient wet armature construction.
- Optional coil voltages and terminations.
- Cartridges voltage interchangeable.
- Unitized, molded coil design.
- Coil waterproofing standard.
- Manual override option.

### RATINGS

**Operating Pressure:** Port ①: 240 bar (3500 psi); Port ②: 207 bar (3000 psi)

**Regulated Flow Rate:** 56 lpm (15 gpm)

**Internal Leakage:** .38 lpm (0.1 gpm) fully closed at 207 bar (3000 psi)

**Electrical:** 2 standard voltage ratings

Coil Voltage	Threshold Current	Max. Control Current
12 VDC	150 ± 100 mA	1350 ± 150 mA
24 VDC	75 ± 50 mA	675 ± 75 mA

**Filtration:** See page 9.010.1

**Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

**Installation:** No restrictions; See page 9.020.1.

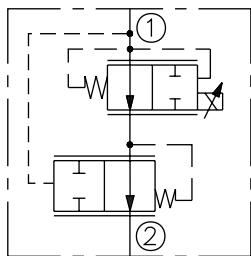
**Cavity:** VC12-2, Cavity Variation "B"; See page 9.112.1

**Cavity Tool:** CT12-2X-XX; See page 8.600.1

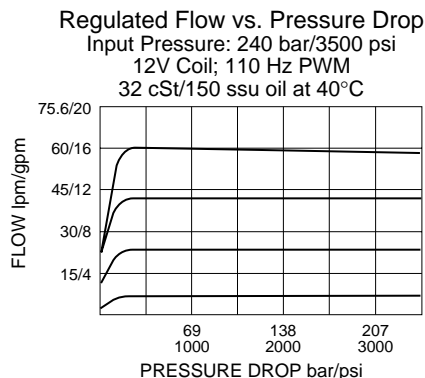
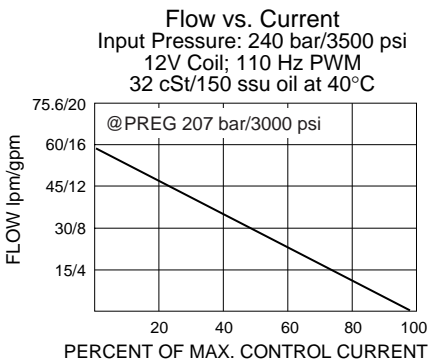
**Seal Kit:** SK12-2X-M; See page 8.650.1 for seal kit options and appropriate seals based on application temperature range.

### SYMBOLS

#### USASI/ISO:



### PERFORMANCE

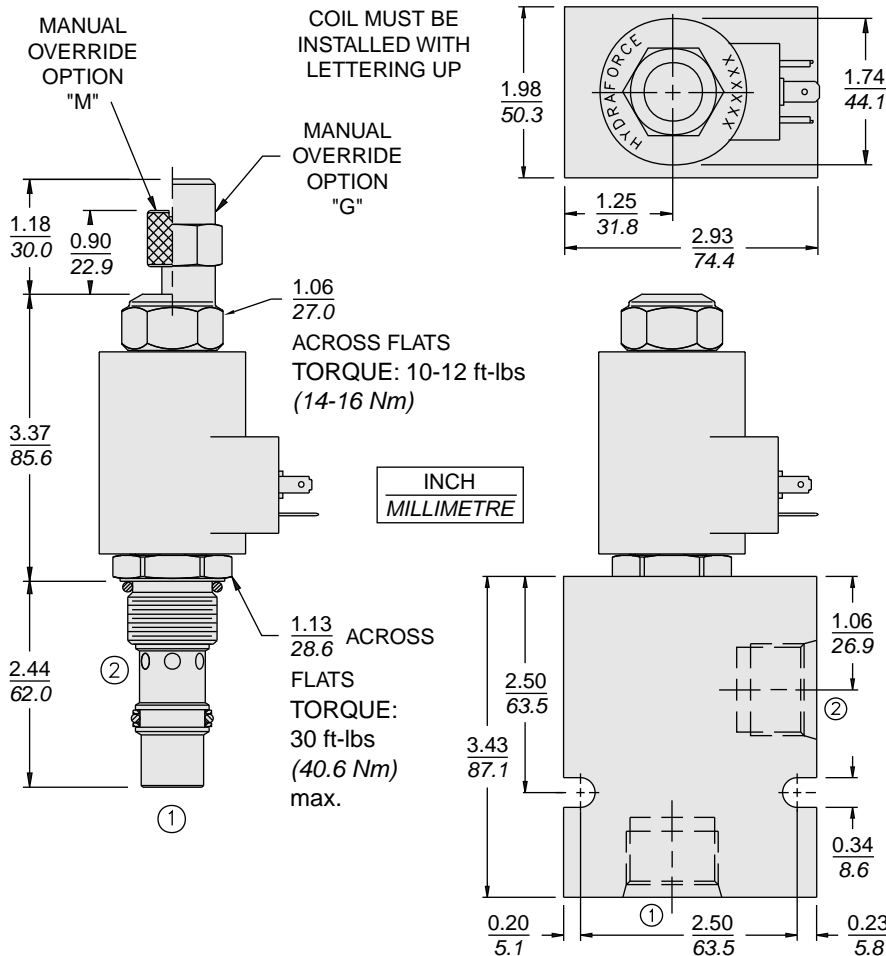


**Recommended Electronic Controllers:**  
See page 2.001.1 or our Electronics catalog.

# Normally Open

# PV72-21

## DIMENSIONS



## MATERIALS

**Cartridge:** Weight: 0.32 kg. (0.7 lbs.)  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces. Buna  
N O-rings and polyester elastomer  
back-ups standard.

**Standard Ported Body:** Weight:  
0.59 kg. (1.3 lbs.); Anodized high-  
strength 6061 T6 aluminum alloy,  
rated to 207 bar (3000 psi). Ductile  
iron bodies available; dimensions  
may differ. See page 8.012.1.

**70-Size "D" Coil:** Weight: 0.32 kg.  
(0.7 lbs.) Unitized thermoplastic  
encapsulated, Class H high  
temperature magnet-wire.  
See page 3.200.7.

**70-Size "E" Coil:** Weight: 0.41 kg.  
(0.9 lbs.) Fully encapsulated with  
rugged external metal shell.  
IP69K rated. See page 3.400.13.

## TO ORDER

<b>PV72-21</b>		-	-	-	-	-
<b>Option(s)</b>						
None (Blank)						
Manual Override	<b>M</b>					
Manual Override with Guard	<b>G</b>					
<b>Porting</b>						
Cartridge Only	<b>0</b>					
SAE 10	<b>10T</b>					
SAE 12	<b>12T</b>					
<b>Seals</b>						
Buna N (Std.)	<b>N</b>					
Fluorocarbon	<b>V</b>					
<b>Terminations D-Coil</b>						
DS	Dual Spades					
DG	DIN 43650					
DL	Leadwires (2)					
DL/W	Leads w/Weatherpak® Connectors					
<b>Terminations E-Coil</b>						
ER	IP69K Rated Deutsch DT04-2P					
EY	Metri-Pack® 150					
	Coils with internal diode are available. Consult factory.					
<b>Voltage</b>						
0	Less Coil					
12	12 VDC					
24	24 VDC					