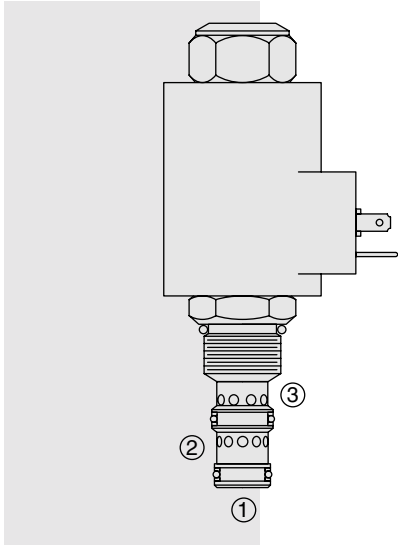


# ELECTRO-PROPORTIONAL VALVES—FLOW CONTROLS

## PV70-34 Proportional Flow Control Cartridge,



### DESCRIPTION

A solenoid operated, electrically-variable, two-way, pressure-compensated, spool-type, normally closed when de-energized, proportional flow control valve with reverse free flow check. It is a restrictive-type 2-way, pressure-compensated flow regulator; port ② is blocked and not used.

### OPERATION

When energized the PV70-34 will regulate flow from port ① to port ③ regardless of system working pressure. With an increasing current applied to the solenoid, the PV70-34 will increase output flow. When the pressure at port ③ exceeds the pressure at port ①, the valve will free reverse flow from port ③ to port ①.

#### 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 to positive stop.

### FEATURES

- Excellent linearity and hysteresis characteristics.
- Hardened spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet armature construction.

### RATINGS

**Operating Pressure:** Inlet: 240 bar (3500 psi)

**Regulated Flow Rate:** 0 to 30 lpm (0 to 8 gpm)

**Reverse Free Flow Cracking Pressure:** 1 to 1.4 bar (15 to 20 psi)

**Internal Leakage:** 0.38 lpm (0.10 gpm) at zero current

**Electrical:** 2 standard voltage ratings

Coil Voltage	Threshold Current	Max. Control Current
12 VDC	300 ± 100 mA	1500 ± 100 mA
24 VDC	150 ± 50 mA	750 ± 50 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 ssu)

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

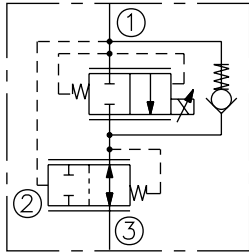
**Cavity:** VC10-3 (Port ② does not need to be drilled); See page 9.110.1

**Cavity Tool:** CT10-3X-XX; See page 8.600.1

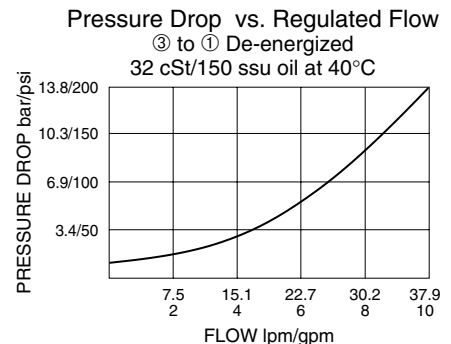
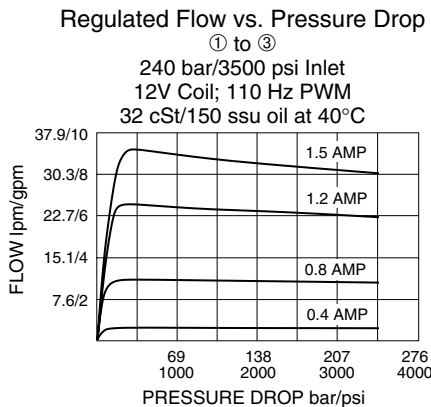
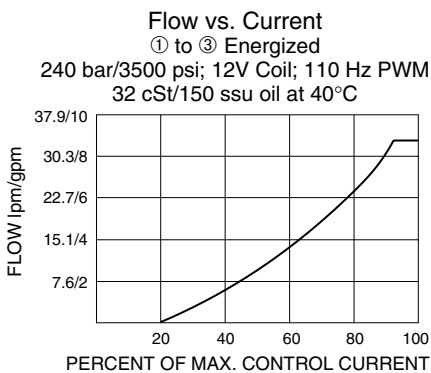
**Seal Kit:** SK10-3X-MM; See page 8.650.1

### SYMBOLS

#### USASI/ISO:



### PERFORMANCE



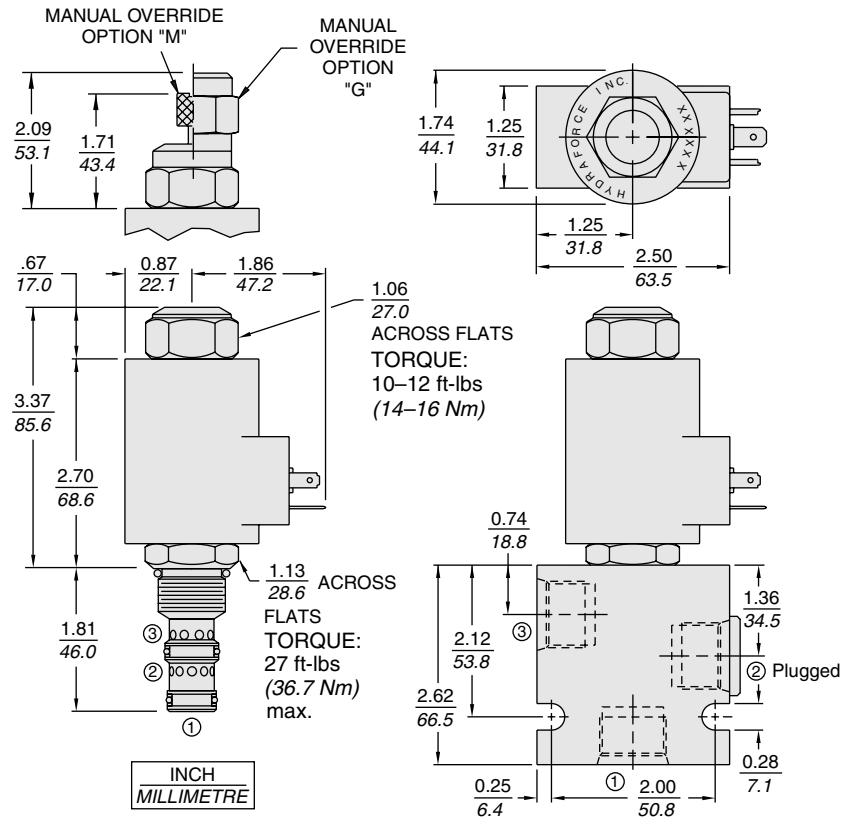
# Normally Closed

# PV70-34

### Recommended Controllers (See Section 3)

Input Sig. w/12V Coil	DIN Coil Mount	PCB Board	Metal Box	DIN Rail Mount
0-5 VDC	7114950	4000046	4000049	4000136
0-10 VDC	4000070	4000141	4000124	4000137
4-20 mA	4000123	4000143	4000130	4000139
PWM	—	4000144	4000133	4000140
w/24V Coil	DIN Coil Mount	PCB Board	Metal Box	DIN Rail Mount
0-5 VDC	4000161	4000194	4000174	4000136
0-10 VDC	4000165	4000141	4000182	4000137
4-20 mA	4000169	4000143	4000186	4000139
PWM	—	4000144	4000133	4000140

### DIMENSIONS



### MATERIALS

**Cartridge:** Weight: 0.19 kg. (0.42 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

**Standard Ported Body:** Weight: 0.36 kg. (0.80 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); See page 8.010.1. Steel and Ductile Iron bodies available; dimensions may differ; consult factory.

**PV70 Series Coil:** Weight: 0.32 kg. (0.7 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnet-wire; See page 3.200.7.

**Port Plug:** For SAE 6 Port: 6103006  
For SAE 8 Port: 6103008;  
See page 8.500.1.

### TO ORDER

