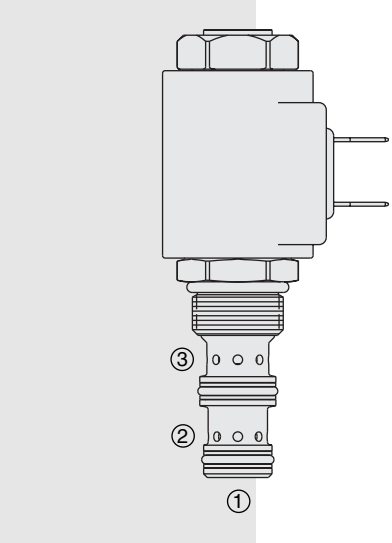
PV08-30 Proportional Flow Control Cartridge,



DESCRIPTION

A solenoid-operated, electrically-variable, three-port, pressure-compensated, spool-type, normally closed when de-energized, proportional flow control valve. It can be used as a priority-type flow regulator with pressure-compensated, regulated and bypass flow. It can also be used as a restrictive-type 2-way, pressure-compensated flow regulator when the bypass line (port ②) is blocked.

OPERATION

The **PV08-30** will regulate flow out of port ③ regardless of system working pressure. With an increasing current applied to the solenoid, the PV08-30 will increase output flow.

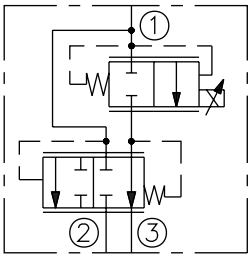
Note: When used as a bypass flow control in applications where the priority flow port will be blocked by external valving (dead-headed), a small bleed orifice is required at the priority port (port ③). Consult factory.

FEATURES

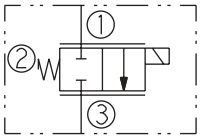
- Excellent linearity and hysteresis characteristics.
- Hardened spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet armature construction.

SYMBOLS

USASI/ISO:



2-Ported:



RATINGS

Operating Pressure: Inlet: 240 bar (3500 psi); Ports ② and ③: 207 bar (3000 psi)

Regulated Flow Rate: Bypass Blocked, Range A: 11.4 lpm (3.0 gpm)
Bypass Blocked, Range B: 5.7 lpm (1.5 gpm)
Bypass Open, Range A: 11.4 lpm (3.0 gpm)
Bypass Open, Range B: 5.7 lpm (1.5 gpm)

Nominal Input Flow: Bypass Open, Range A: 15.2 lpm (4.0 gpm)
Bypass Open, Range B: 7.6 lpm (2.0 gpm)

Maximum Input Flow: Bypass Open, Range A: 22.8 lpm (6.0 gpm)
Bypass Open, Range B: 22.8 lpm (6.0 gpm)

Internal Leakage: 100 cc/min. (6 cu. in./min.) fully closed at 207 bar (3000 psi)

Electrical: 2 standard voltage ratings (Uses EHPR Series Coil; See page 3.200.8)

Coil Voltage	Threshold Current	Max. Control Current
12 VDC	400 ± 100 mA	1400 ± 150 mA
24 VDC	200 ± 50 mA	700 ± 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 ssu)

Installation: No restrictions; See page 9.020.1.

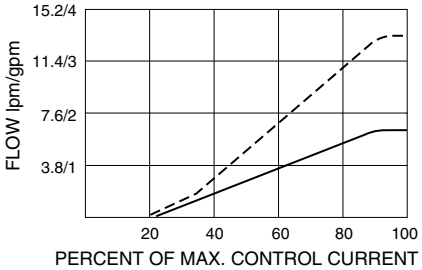
Cavity: VC08-3; See page 9.108.1

Cavity Tool: CT08-3X-XX; See page 8.600.1

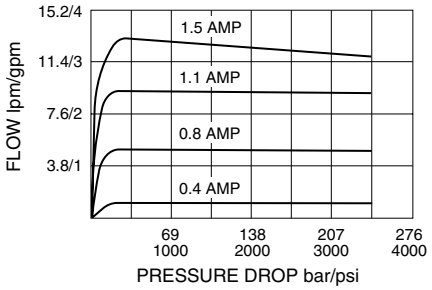
Seal Kit: SK08-3X-MM; See page 8.650.1

PERFORMANCE

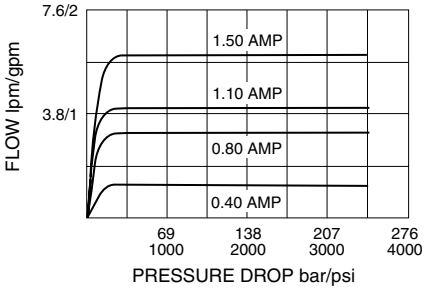
Nominal Flow vs. Current
207 bar/3000 psi; 12V Coil; 200 Hz PWM
32 cSt/150 ssu oil at 40°C
– – – – – – Range A, 2-Ported or 3-Ported
——— Range B, 2-Ported or 3-Ported



Regulated Flow vs. Pressure Drop
2-Ported; Flow Range A
240 bar/3500 psi Inlet
12V Coil; 200 Hz PWM
32 cSt/150 ssu oil at 40°C



Regulated Flow vs. Pressure Drop
2-Ported; Flow Range B
240 bar/3500 psi Inlet
12V Coil; 200 Hz PWM
32 cSt/150 ssu oil at 40°C

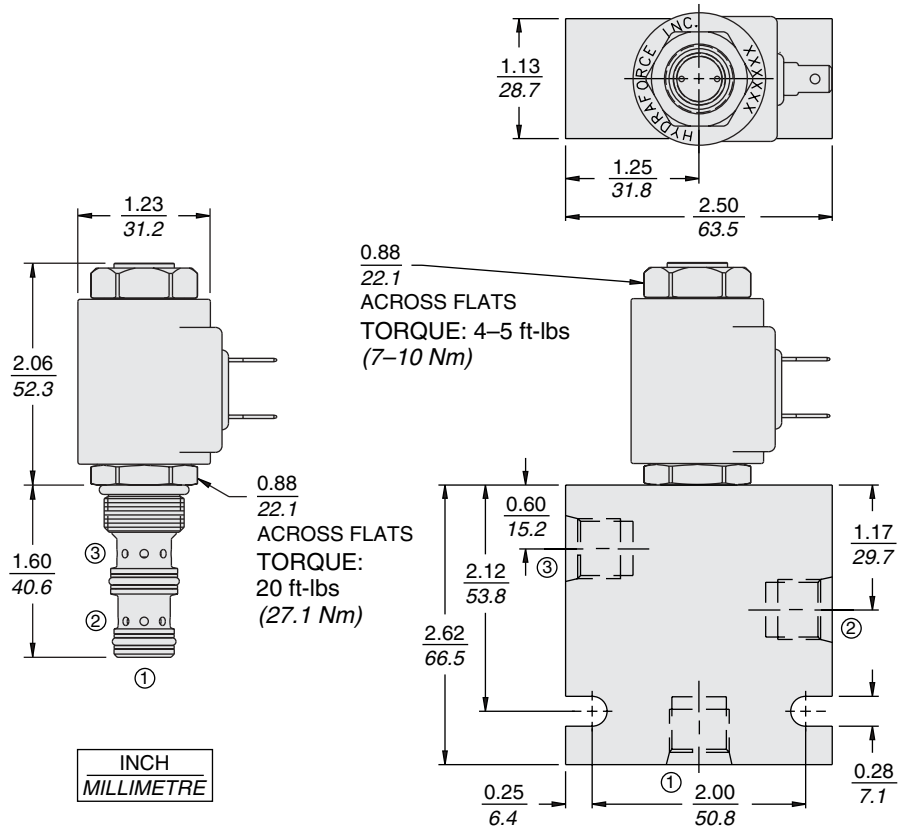


Normally Closed — PV08-30

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				
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: 0.13 kg. (0.28 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

Standard Ported Body: Weight: 0.27 kg. (0.60 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); See page 8.008.1. Ductile iron and steel bodies available; dimensions may differ; consult factory.

EHPR Series Coil: Weight: 0.32 kg. (0.7 lbs.); Unitized thermoplastic encapsulated, Class H high temperature magnet-wire; See page 3.200.8.

TO ORDER

PV08-30 _ _ - _ _ _ _ - _ - _ _ _ _

Flow Range (Required. Refer to Performance Curves)
- **A**
- **B**

Porting
- **0** Cartridge Only
- **6T** SAE 6
- **3B** 3/8 in. BSP*

*BSP Body; U.K. Mfr. Only

Terminations
- **DS** Dual Spades
- **DG** DIN 43650
- **DL** Leadwires (2)
- **DL/W** Leads w/Weatherpak® Connectors

Coils with internal diode are available. Consult factory.

Option(s)
- None (Blank)

Seals
- Buna N (Std.) **N**
- Fluorocarbon **V**

Voltage
- **0** Less Coil
- **12** 12 VDC
- **24** 24 VDC