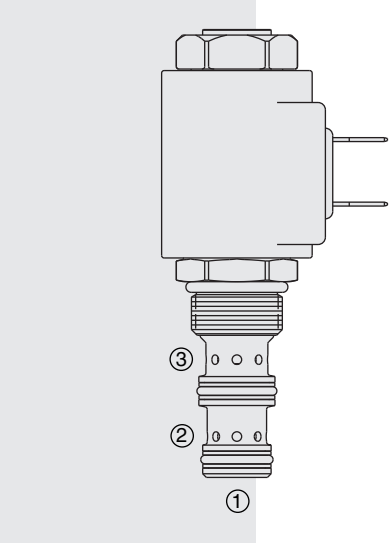
PV08-31 Proportional Flow Control Cartridge,



DESCRIPTION

A solenoid-operated, electrically-variable, three-port, pressure-compensated, spool-type, normally open 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 **PV08-31** will regulate flow out of port 3 regardless of system working pressure. With increasing current applied to the solenoid, the PV08-31 will decrease output flow.

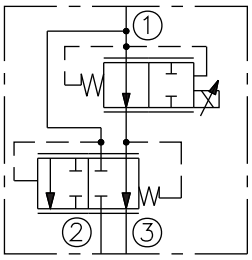
Note: When used as a bypass flow control in applications where the priority flow port will be blocked by external valving (dead-headed), a small bleed orifice is required at the priority port (port 3). Consult factory.

FEATURES

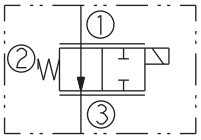
- Excellent linearity and hysteresis characteristics.
- Hardened spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet armature construction.

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 3.200.1)

Coil Voltage	Threshold Current	Max. Control Current
12 VDC	250 ± 150 mA	1350 ± 150 mA
24 VDC	125 ± 75 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 sus); See Temperature and Oil Viscosity, page 9.060.1

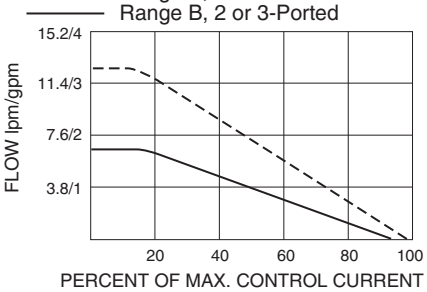
Installation: No restrictions; See page 9.020.1.

Cavity: VC08-3; See page 9.108.1; **Cavity Tool:** CT08-3X-XX; See page 8.600.1

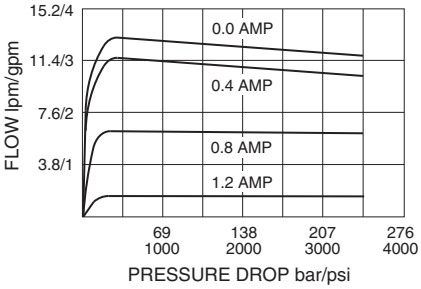
Seal Kit: SK08-3X-MM; See page 8.650.1 for seal kit options and appropriate seals based on application temperature range.

PERFORMANCE

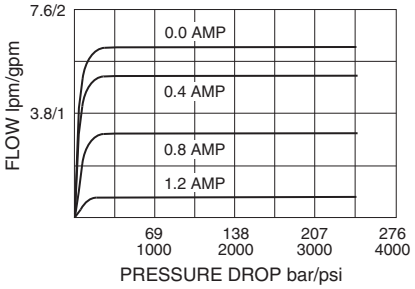
Nominal Flow vs. Current
207 bar/3000 psi; 12V Coil; 100 Hz PWM
32 cSt/150 sus oil at 40˚C
– – – – – Range A, 2 or 3-Ported
——— Range B, 2 or 3-Ported



Regulated Flow vs. Pressure Drop
2-Ported; Flow Range A
240 bar/3500 psi Inlet
12V Coil; 100 Hz PWM
32 cSt/150 sus oil at 40˚C

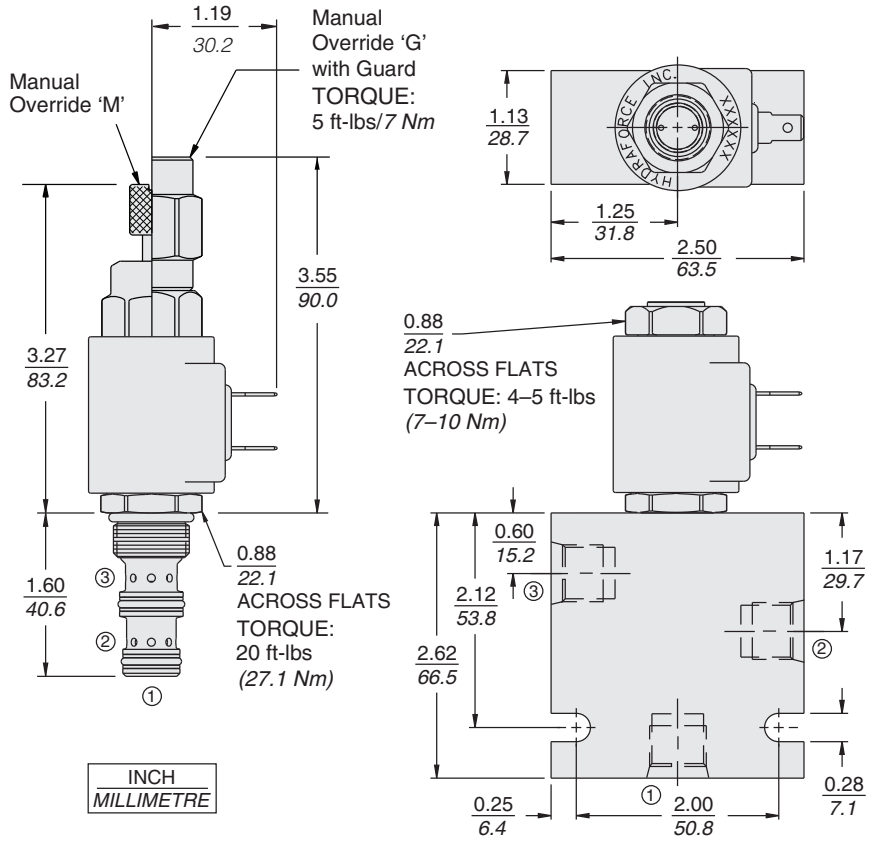


Regulated Flow vs. Pressure Drop
2-Ported; Flow Range B
240 bar/3500 psi Inlet
12V Coil; 100 Hz PWM
32 cSt/150 sus oil at 40˚C



Normally Open PV08-31

DIMENSIONS



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

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 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.008.1

EHPR Series Coil: Weight: 0.32 kg. (0.7 lbs.) Unitized thermoplastic encapsulated, Class H high temperature magnet-wire. See page 3.200.1.

TO ORDER

PV08-31__ __ - __ __ __ - __ - __ __ __ __

Flow Range
(Required. See Performance Curves) **A** **B**

Option
None (Blank)
Manual Override **M**
Manual Override with Guard **G**

Porting
Cartridge Only **0**
SAE 6 **6T**
3/8 in. BSP* **3B**
*BSP Body; U.K. Mfr. Only

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

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

Coils with internal diode are available. Consult factory.

Voltage
0 Less Coil
12 12 VDC
24 24 VDC