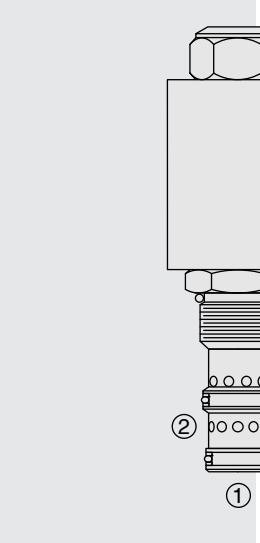
PV72-33 Proportional Flow Control Cartridge,



DESCRIPTION

A linear solenoid-driven, two-way normally closed, screw-in cartridge valve designed for use with a pressure compensator to function as an electrically stroked variable flow regulator.

OPERATION

With increasing electric current, the **PV72-33** changes from full closed to full open with flow from port 3 to port 2. Port 1 is used only to pressure balance the spool and should be plugged. The proportional valve is intended to function in tandem with standard HydraForce pressure compensators at pressure differentials of 12 bar (175 psid) or less, or alone in variable volume pressure-compensated circuits with load sense capability.

The valve is designed to work with industry-common controllers which typically feature current capability to 2 amps @ 12 VDC, PWM, and start/stop trim adjustments (I-min./I-max.). Consult factory for details and potential sourcing.

Operation of Manual Override:

To Engage: Turn clockwise approximately 1 turn to reach start point. Continue another approximately 5 turns to full shift.

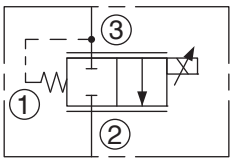
To Disengage: Turn counterclockwise approximately 6 turns to positive stop.

FEATURES

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

SYMBOLS

USASI/ISO:



RATINGS

Operating Pressure: 240 bar (3500 psi)

Internal Leakage: 492 cc/min. (30 cu. in./min.) fully closed at 207 bar (3000 psi)

Electrical: 2 standard voltage ratings

Coil Voltage	Threshold Current	Max. Control Current
12 VDC	300 ± 70 mA	1500 ± 100 mA
24 VDC	150 ± 35 mA	750 ± 100 mA

Filtration: See page 9.010.1

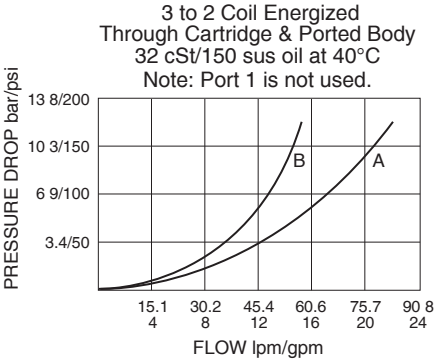
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

Installation: No restrictions; See page 9.020.1.

Cavity: VC12-3; See page 9.110.1; **Cavity Tool:** CT12-3X-XX; See page 8.600.1

Seal Kit: SK12-3X-MM; See page 8.650.1 for seal kit options and appropriate seals based on application temperature range.

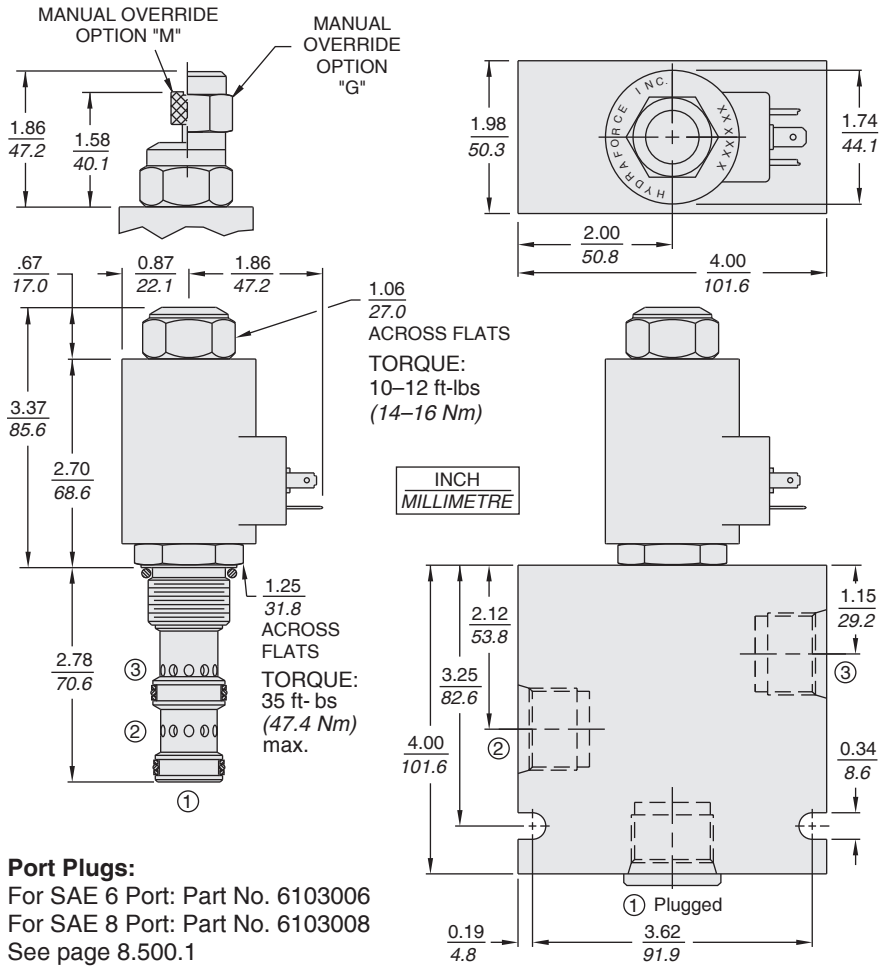
PERFORMANCE



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

Normally Closed PV72-33

DIMENSIONS



Port Plugs:
For SAE 6 Port: Part No. 6103006
For SAE 8 Port: Part No. 6103008
See page 8.500.1

MATERIALS

Cartridge: Weight: 0.36 kg. (0.80 lbs.) 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 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

PV72-33 __ __ - __ __ __ - __ - __ __ __ __

Flow Range
Required. See Performance Curves.
A
B

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

Porting
0 Cartridge Only
10T SAE 10
12T SAE 12
16T SAE 16
4B 1/2 in. BSP*
6B 3/4 in. BSP*
*BSP Body; U.K. Mfr. Only

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

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

Terminations E-Coil
IP69K Rated
ER Deutsch DT04-2P
EY Metri-Pack® 150
Coils with internal diode are available. Consult factory.

Voltage
0 Less Coil
12 12 VDC
24 24 VDC