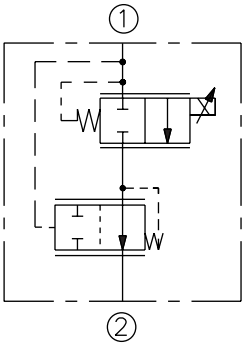
PFR70-33x-E Proportional Flow Regulator, N.C.,

SYMBOLS

USASI:



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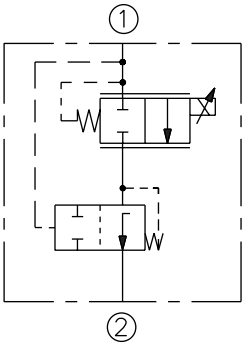


Attention Manifold Designers:
To obtain these high flow capabilities using proportional flow controls and compensators, optimized cavity drillings are required. Please consult factory.

DESCRIPTION

A pressure-compensated electrically-variable two-port flow regulator that is normally closed when de-energized. This combination valve uses a PV70-33x proportional cartridge and an EC10-30 compensator.

OPERATION

This proportional valve/compensator package will regulate flow out of port ②, regardless of system working pressure. With an increasing current applied to the solenoid, the **PFR70-33x-E** will increase output flow.

FEATURES

- Excellent linearity and hysteresis characteristics.
- 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.
- Screw-in manual override option.

RATINGS

Operating Pressure: 207 bar (3000 psi)

Internal Leakage: 410 cc/min. (25 cu. in./min.) fully closed at 207 bar (3000 psi) out port ②.

Electrical: 2 standard voltage ratings

Coil Voltage	Threshold Current (mA) A & B Range	Threshold Current (mA) C Range	Max. Control Current (mA) A & B Range	Max. Control Current (mA) C Range
12 VDC	300 ± 70	360 ± 70	1500 ± 200	1400 ± 200
24 VDC	150 ± 35	180 ± 35	750 ± 100	700 ± 100

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.

Filtration: See page 9.010.1

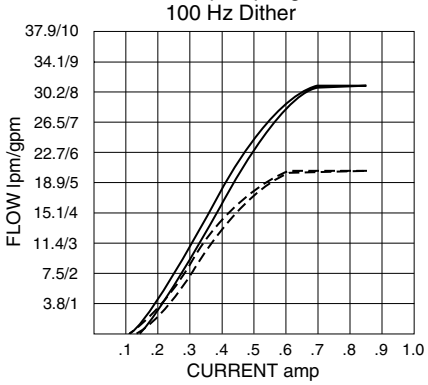
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

Installation: No restrictions; See page 9.020.1

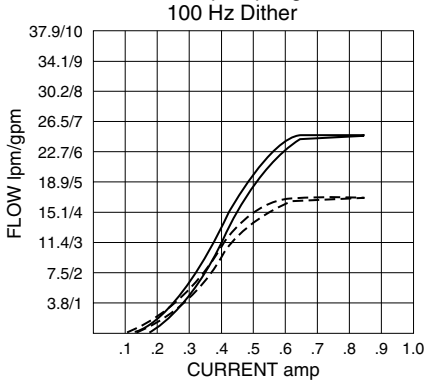
PERFORMANCE CURVES Regulated Flow Delivered Out Port ②:

24 Volt coil used; 130 Hz dither; PWM controller. For 12 volt coils, double the current (amp) values shown.

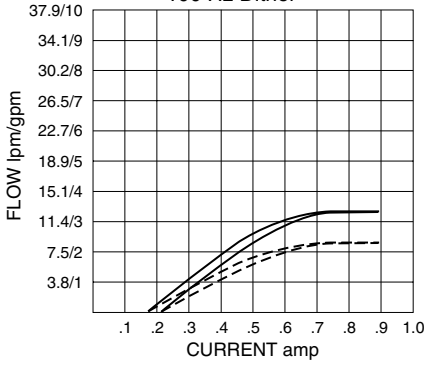
Flow vs. Current (207 bar/3000 psi Load)
PV70-33A with EC10-30
11 bar/160 psi spring ——
5.5 bar/80 psi spring - - - -
100 Hz Dither



Flow vs. Current (207 bar/3000 psi Load)
PV70-33B with EC10-30
11 bar/160 psi spring ——
5.5 bar/80 psi spring - - - -
100 Hz Dither

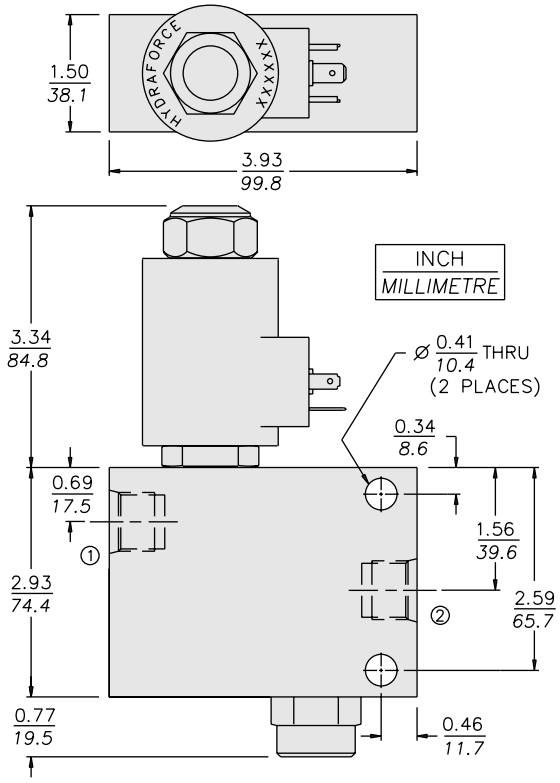


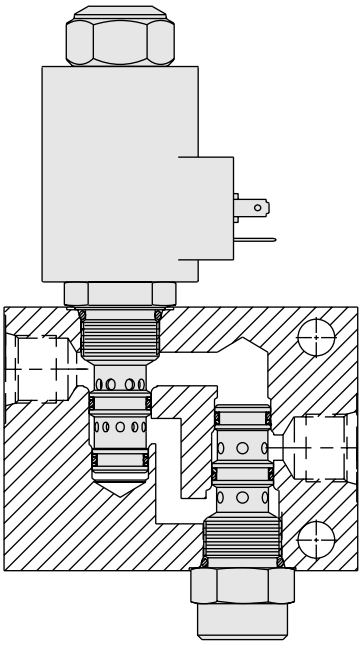
Flow vs. Current (207 bar/3000 psi Load)
PV70-33C with EC10-30
11 bar/160 psi spring ——
5.5 bar/80 psi spring - - - -
100 Hz Dither



2-Port, Pressure Compensated PFR70-33x-E

DIMENSIONS





NOTE: The N.O. PV70-35 may not be substituted in this manifold due to port logic factors.

MATERIALS

Cartridge: Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and back-ups standard.

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

Coil: Unitized thermoplastic encapsulated, Class H high temperature magnetwire; See page 3.200.1.

Package Weight: 2.27 kg. (5 lbs.).

Seal Kit: SK10-3x-MM (PV); SK10-3x-TB (EC)

TO ORDER

PFR70-33__ - E__ - 8T - __ - ____

***PV Orifice Range**
- Orifice Range A
- Orifice Range B
- Orifice Range C

Override Option
- (Blank) None
- **M** Screw Type

***Compensator Spring**
- 5.52 bar (80 psi) **80**
- 11.03 bar (160 psi) **160**

*Select Orifice Range and Compensator Spring by referring to the Performance Curves on the preceding page.

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

Terminations
- **DS** Dual Spades
- **DG** DIN 43650
- **DL** Leadwires (2)
- **DL/W** Leads w/Weatherpak® Connectors
- **DR** Deutsch DT04-2P

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

Coils with internal diode are available. Consult factory.