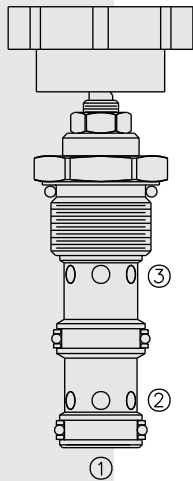


FLOW CONTROLS

FR12-33 Flow Regulator, Pressure Compensated



DESCRIPTION

A screw-in, cartridge-style, adjustable orifice, pressure-compensated, manually-operated, bypass-type hydraulic flow regulating valve. It can be used as a priority-type flow regulator or a restrictive-type 2-way flow regulator when the bypass port is blocked.

OPERATION

The **FR12-33** maintains a constant flow rate from ③ regardless of load pressure changes in the system downstream of ③, or in the bypass leg at ②. Reverse flow (③ to ①) bypasses the control orifice.

The regulated flow increases from closed to fully open, with counter-clockwise rotation of the knob.

Note: When used as a bypass flow control in applications where the priority flow port will be blocked by external valving, bypass pressure drop will increase unless a small amount of leakage is provided for the priority port. Consult factory.

FEATURES

- Bypass port ② may be fully pressurized.
- Hardened steel parts for long life.
- Quiet, modulated response.
- Industry common cavity.

RATINGS

Operating Pressure: 240 bar (3500 psi)

Flow Rate: 3-ported regulated flow: 0 to 68 lpm (0 to 18 gpm)
2-ported regulated flow: 0 to 45 lpm (0 to 12 gpm)

Input Flow: 3-ported: 76 lpm (20 gpm) nominal; 114 lpm (30 gpm) max.

Internal Leakage: 0.12 lpm (7.3 cu. in./minute) at port 3, at 207 bar (3000 psi)

Adjustment Torque Required: 1.7 Nm (15 inch-pounds) at 207 bar (3000 psi)

Operating Temperature: -40 to 100°C with standard Buna N seals
-26 to 204°C with Fluorocarbon seals
-54 to 107°C with Polyurethane seals

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 9.112.1

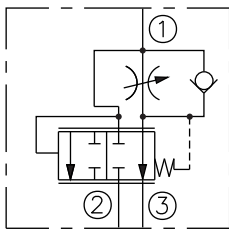
Cavity Tool: CT12-3XX; See page 8.600.1

Seal Kit: SK12-3X-MM; See page 8.650.1

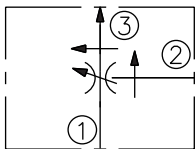
Knob Kit: Part Number 6113160

SYMBOLS

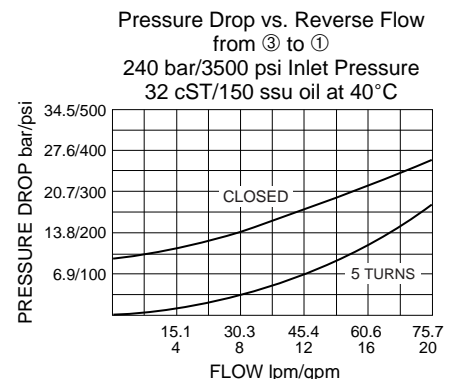
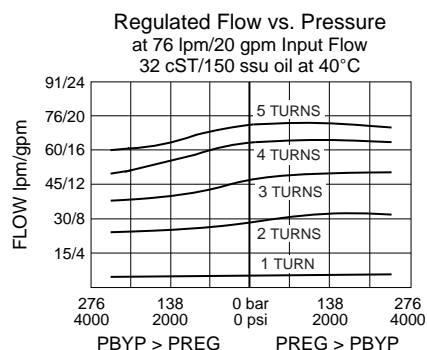
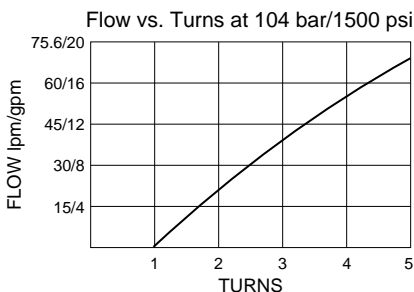
USASI/ISO:



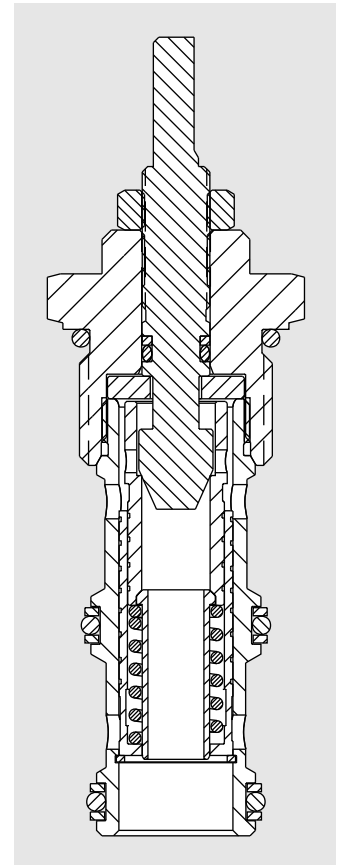
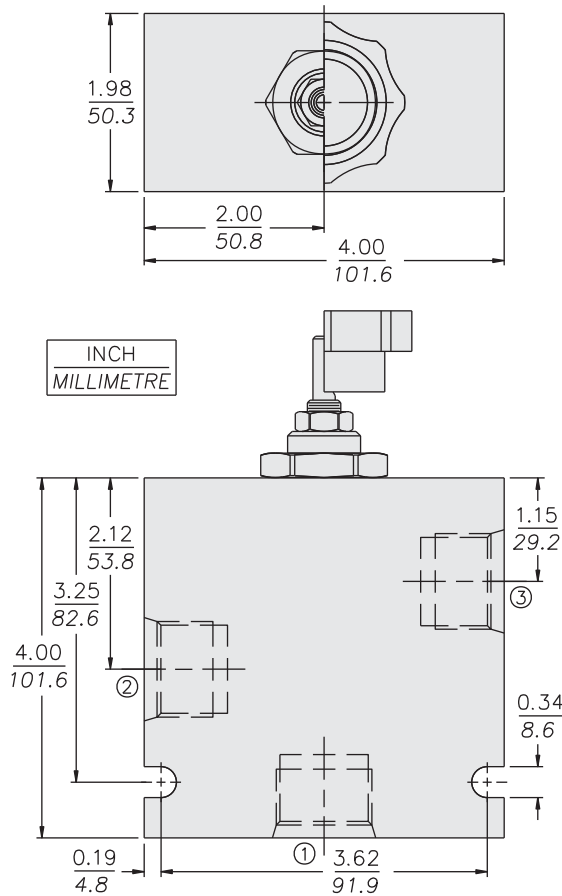
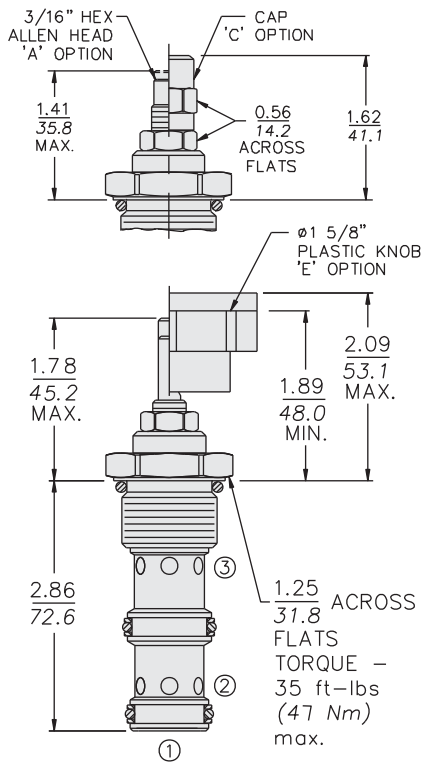
3-Ported:



PERFORMANCE (Cartridge Only)



DIMENSIONS



MATERIALS

Cartridge: Weight: 0.34 kg. (0.70 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.

Standard Ported Body: Weight: 0.98 kg. (2.15 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.

TO ORDER

FR12-33 - - -

Adjustment Option

Extended Shaft Only Blank
3/16" Hex Allen Head **A**
Option "A" with Cover Cap **C**
Plastic Knob **E**

Seals

N Buna N (Std.)
V Fluorocarbon
P Polyurethane

Porting

Cartridge Only **0**
SAE 10 **10T**
SAE 12 **12T**
SAE 16 **16T**
1/2 in. BSP* **4B**
3/4 in. BSP* **6B**

*BSP Body; U.K. Mfr. Only