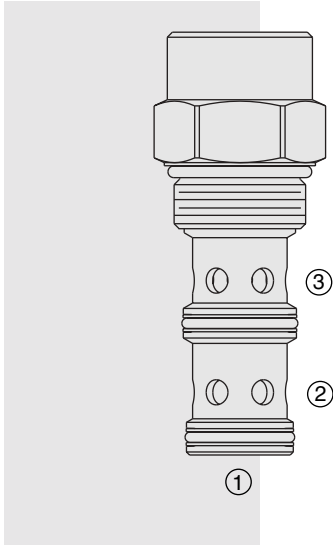


FR16-30F Regulator, Pressure-Compensated



DESCRIPTION

A screw-in, cartridge-style, pressure-compensated, non-adjustable flow regulator, intended for use in fixed displacement hydraulic circuits requiring partial pump flow diversion on a priority basis.

OPERATION

The **FR16-30F** 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.

The valve's spool maintains a constant differential pressure of 5.5 bar (80 psi) across a fixed internal orifice, thereby regulating the hydraulic flow rate from ① to ③.

The FR16-30F is a priority type regulator, delivering the pump flow to ③ first, then bypassing excess to ②. All ports may be fully pressurized.

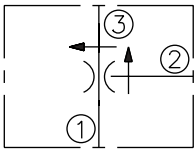
Flow out of priority port ③ may vary based on input flow amount, particularly with lower temperatures and increased fluid viscosities. Settings may need to be established through correlation study. Consult factory.

FEATURES

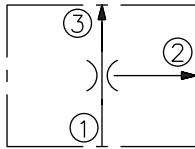
- Hardened parts for long life.
- Quiet, modulated response.

SYMBOLS

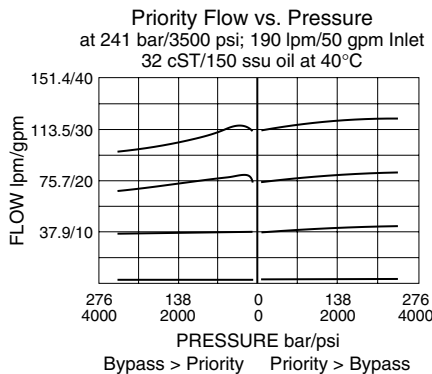
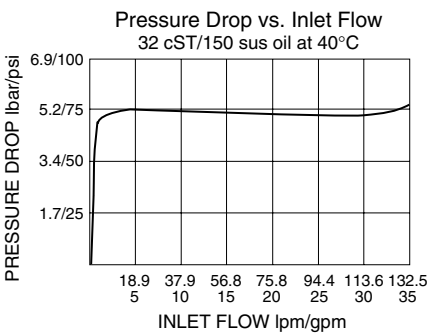
USASI:



ISO:



PERFORMANCE (Cartridge Only)



RATINGS

Operating Pressure: 241 bar (3500 psi)

Flow Rate: 113 lpm (30.0 gpm) max. priority; 190 lpm (50.0 gpm) max. input

Standard Compensator Bias Spring: 5.5 bar (80 psid) differential

Flow Maintenance Setting Range: up to 76 lpm (20 gpm) to accuracy of $\pm 10\%$;
76 to 114 lpm (20 to 30 gpm) to accuracy of $\pm 15\%$

Temperature: -40 to 120°C

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)

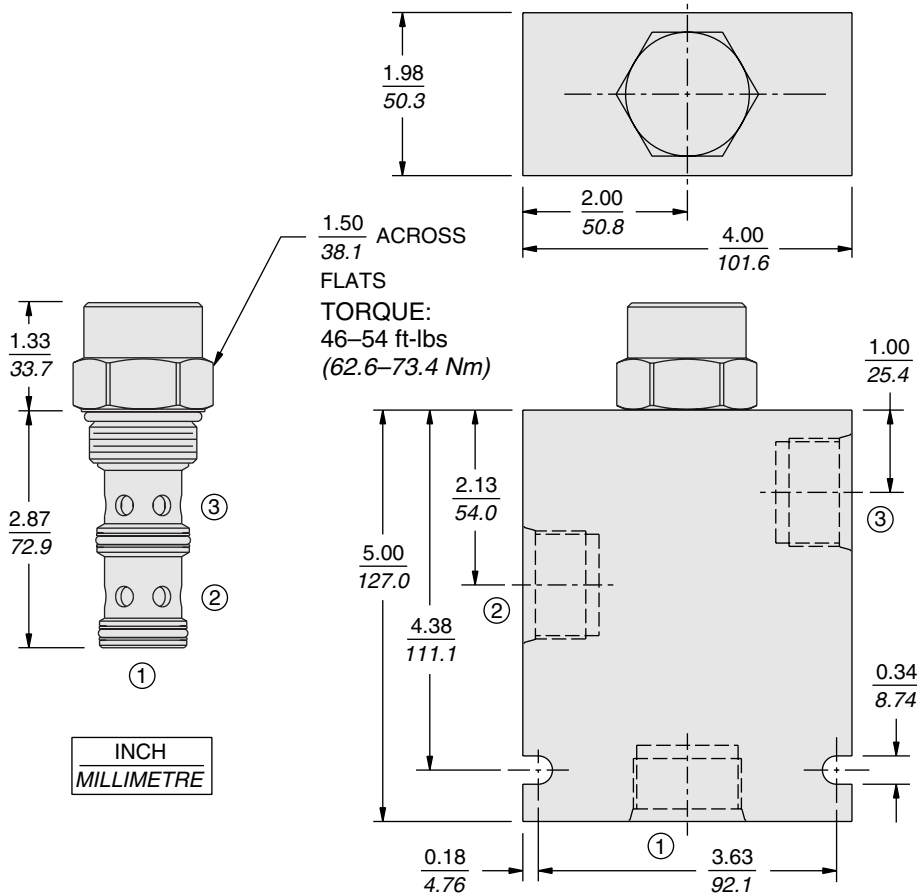
Installation: No restrictions; See page 9.020.1

Cavity: VC16-3; See page 9.116.1

Cavity Tool: CT16-3XX; See page 8.600.1

Seal Kit: SK16-3X-MM; See page 8.650.1

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.49 kg. (1.07 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

Standard Ported Body: Weight: 1.5 kg. (3.35 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); see page 8.012.1. Ductile iron and steel bodies available; dimensions may differ; consult factory.

TO ORDER

FR16-30F - - /

Porting

Cartridge Only 0
SAE 12 12T
SAE 16 16

Seals

Buna N (Std.) N
Fluorocarbon V

Priority Setting Setting in LPM

Range: 4 to 113 lpm
Specify, for example:

M20.0 20.0 lpm
M100 100 lpm
etc.

Setting in GPM

Range: 1 to 30 gpm
Specify, for example:

15.0 15 gpm
22.0 22 gpm
etc.

Drill Size Method

In thousandths of an inch.
Range: 0.63 to 0.302
Specify, for example:

D150 0.150 in. control orifice hole
etc.

Note: Compensator spring values may be varied for OEM application to provide changed differential pressure/output flow relationships. Consult factory.

Note: Minimum drill diameter is 0.020 in. For smaller orifice sizes consult factory.