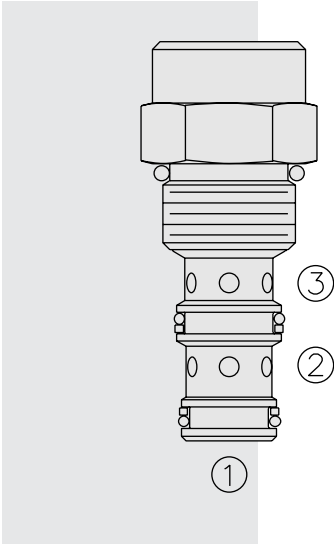


FR10-30F Regulator, Pressure-Compensated



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 **FR10-30F** 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 6.5 bar (95 psi) across a fixed internal orifice, thereby regulating the hydraulic flow rate from ① to ③.

The FR10-30F 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.
- Industry common cavity.

RATINGS

Operating Pressure: 207 bar (3000 psi)

Flow Rate: 22.7 lpm (6.0 gpm) max. regulated; 37.8 lpm (10.0 gpm) max. input.
Pressure at ① begins to rise higher than compensating pressure differential when bypass flow exceeds 23 lpm (6 gpm).

Standard Compensator Bias Spring: 6.5 bar (95 psid) differential

Flow Maintenance Setting Range: 0.4 to 5.9 lpm (0.10 to 1.5 gpm) to accuracy of $\pm 15\%$; 6 to 22.7 lpm (1.6 to 6.0 gpm) to accuracy of $\pm 10\%$

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 sus); See Temperature and Oil Viscosity, page 9.060.1

Installation: No restrictions; See page 9.020.1

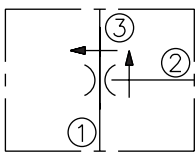
Cavity: VC10-3; See page 9.110.1

Cavity Tool: CT10-3XX; See page 8.600.1

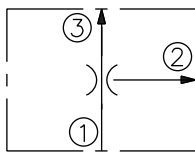
Seal Kit: SK10-3X-TB; See page 8.650.1

SYMBOLS

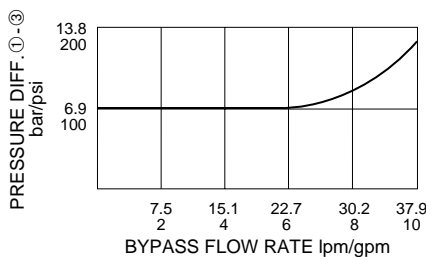
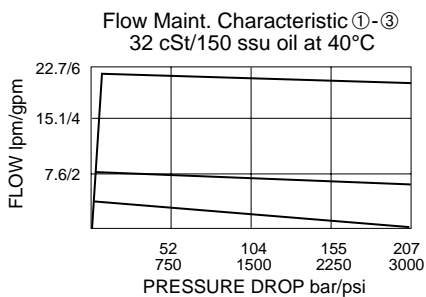
USASI:



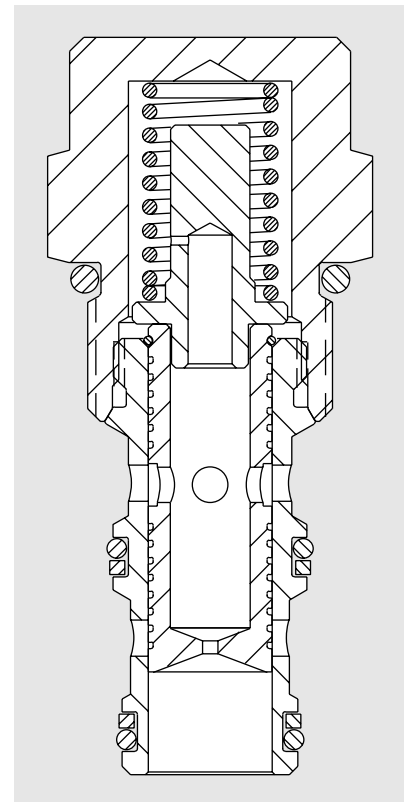
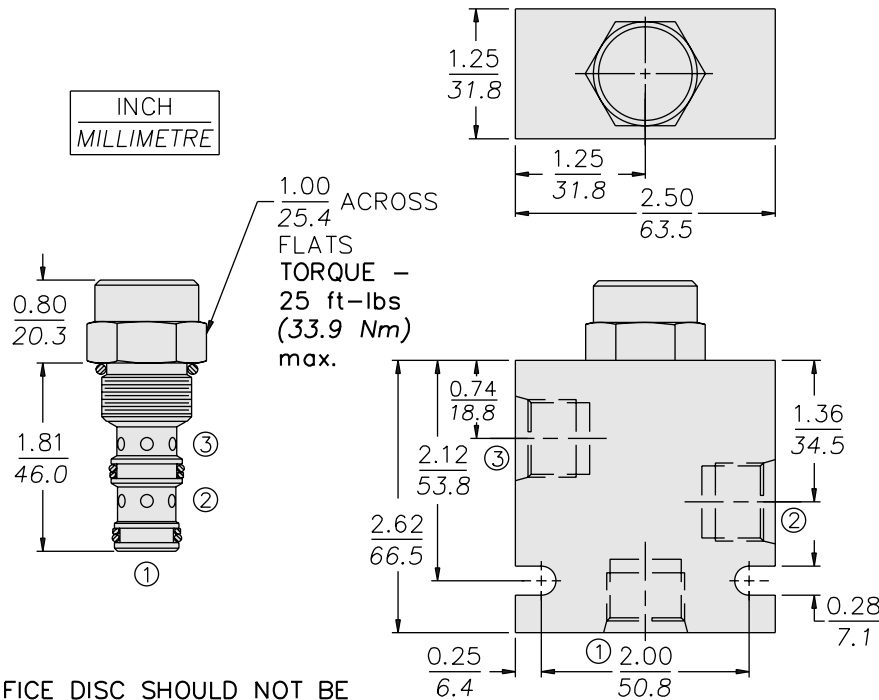
ISO:



PERFORMANCE (Cartridge Only)



DIMENSIONS



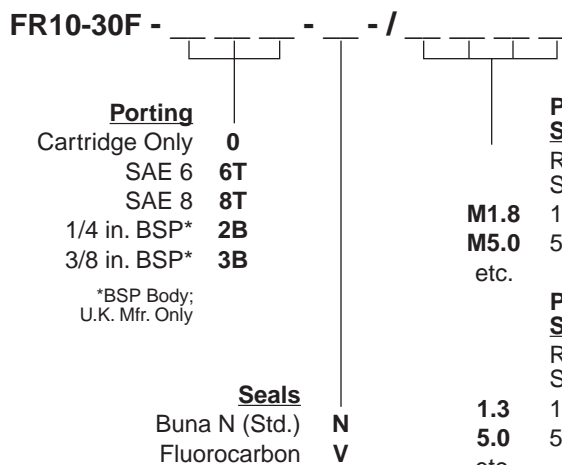
ORIFICE DISC SHOULD NOT BE USED WITH THIS PRODUCT.

MATERIALS

Cartridge: Weight: 0.16 kg. (0.35 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester elastomer back-ups standard.

Standard Ported Body: Weight: 0.36 kg. (0.80 lbs.)
Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi). Ductile iron bodies available; dimensions may differ. See page 8.010.1

TO ORDER



Priority Flow Setting in lpm
Range: 0.38 to 22.7 lpm;
Specify, for example:

- M1.8** 1.8 lpm
- M5.0** 5.0 lpm
- etc.

Priority Flow Setting in gpm
Range: 0.1 to 6.0 gpm
Specify, for example:

- 1.3** 1.3 gpm
- 5.0** 5.0 gpm
- etc.

Priority Flow Drill Size Method
In thousandths of an inch;
Specify, for example:
D030 0.030 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.