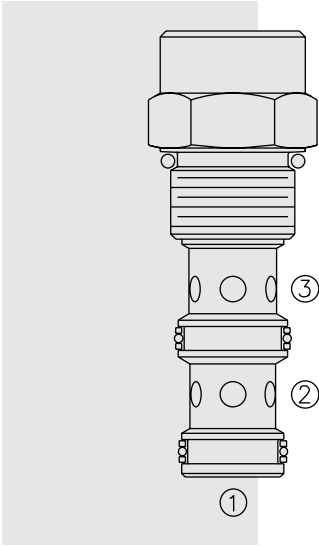


FR12-30F Regulator, Pressure-Compensated



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 **FR12-30F** 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 FR12-30F is a priority type regulator, delivering the pump flow to ③ first, then bypassing excess to ②. All ports may be fully pressurized.

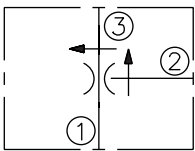
Flow out of priority port ③ may vary based on input flow amount, particularly with lower temperatures and increased fluid viscosities. Settings may need to be established through correlation study. Consult factory.

FEATURES

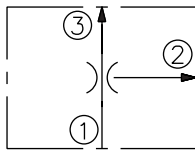
- Hardened parts for long life.
- Quiet, modulated response.
- Cost effective cavity.

SYMBOLS

USASI:

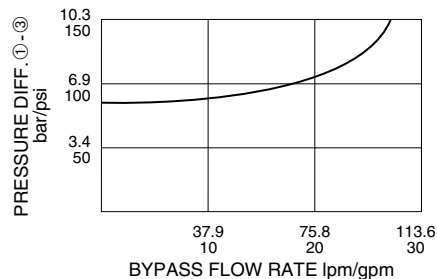
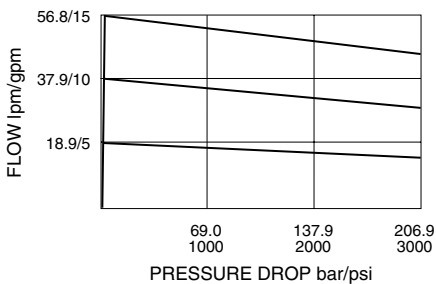


ISO:



PERFORMANCE (Cartridge Only)

Flow Maint. Characteristic ① to ③
32 cSt/150 ssu oil at 40°C



RATINGS

Operating Pressure: 240 bar (3500 psi)

Flow Rate: 49.2 lpm (13.0 gpm) max. regulated; 94.6 lpm (25.0 gpm) max. input

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

Flow Maintenance Setting Range: 3.8 to 11.4 lpm (1.0 to 3.0 gpm) to accuracy of ±15%; 11.4 to 45.4 lpm (3.0 to 12.0 gpm) to accuracy of ±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 ssu)

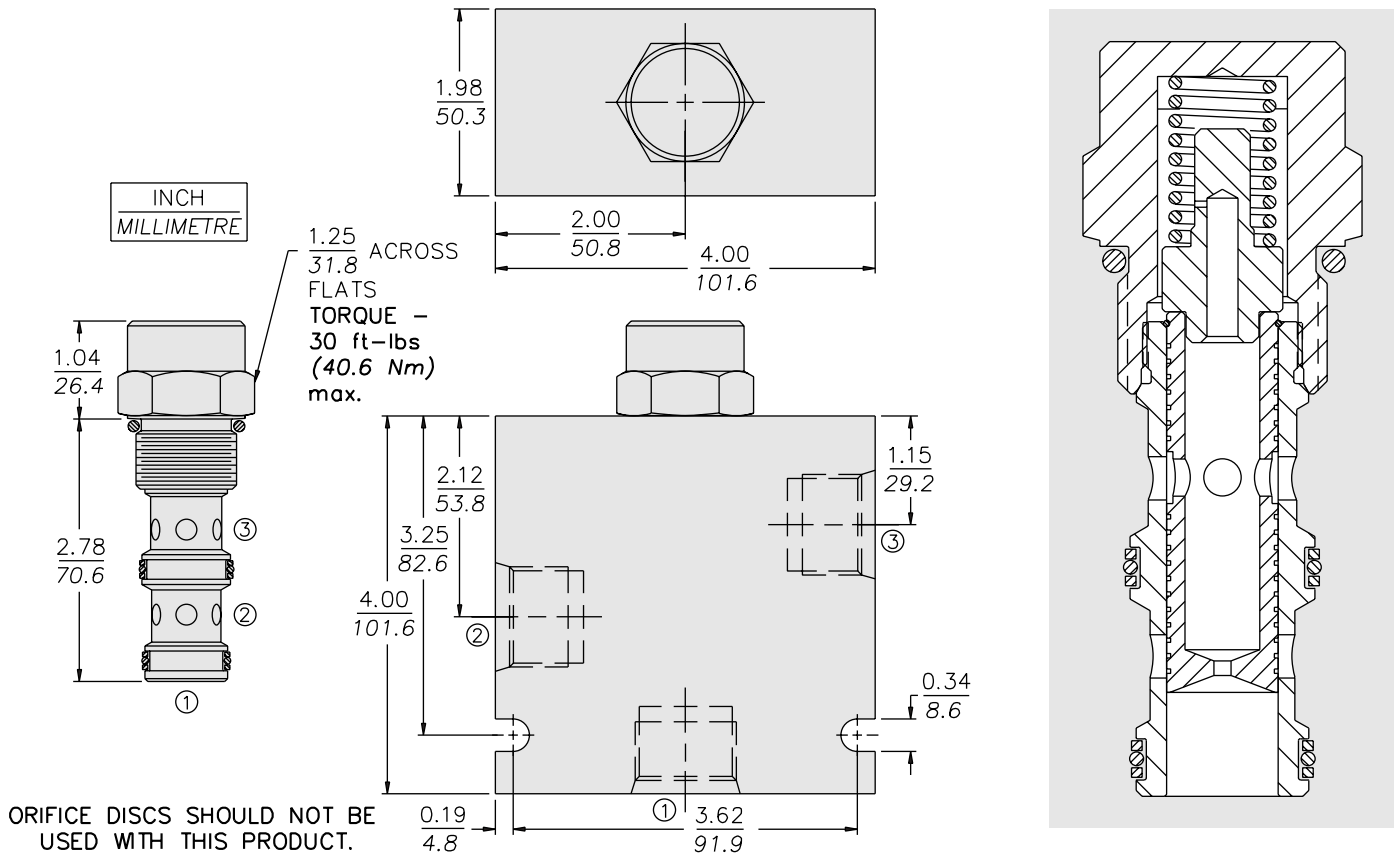
Installation: No restrictions; See page 9.020.1

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

DIMENSIONS



MATERIALS

Cartridge: Weight: 0.30 kg. (0.68 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 240 bar (3500 psi); see page 8.012.1. Ductile iron and steel bodies available; dimensions may differ; consult factory.

TO ORDER

FR12-30F - - - /

Porting
 Cartridge Only **0**
 SAE 8 **8T**
 SAE 10 **10T**
 SAE 12 **12T**
 1/2 in. BSP* **4B**
 3/4 in. BSP* **6B**

*BSP Body;
 U.K. Mfr. Only

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

Priority Setting
Setting in LPM
 Range: 4 to 50 lpm
 Specify, for example:

M4.0 4.0 lpm
M8.0 8.0 lpm
 etc.

Setting in GPM
 Range: 1 to 13 gpm
 Specify, for example:

1.5 1.5 gpm
5.0 5.0 gpm
 etc.

Drill Size Method

In thousandths of an inch.
 Specify, for example:

D050 0.050 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.