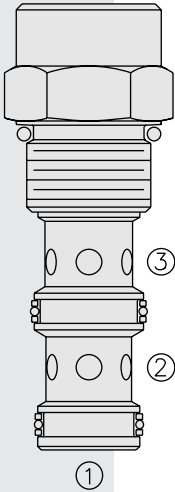


FR12-30F Regulator, Pressure-Compensated



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 ② 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.

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 $\pm 15\%$; 11.4 to 45.4 lpm (3.0 to 12.0 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

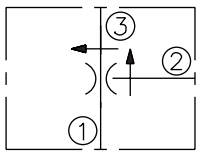
Cavity: VC12-3; See page 9.112.1

Cavity Tool: CT12-3XX; See page 8.600.1

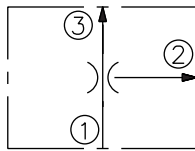
Seal Kit: SK12-3X-MM; See page 8.650.1

SYMBOLS

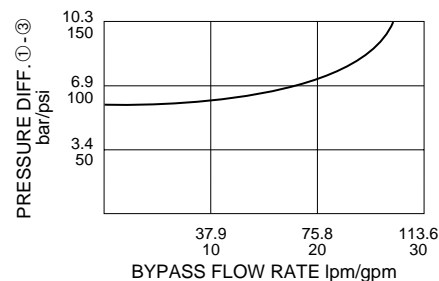
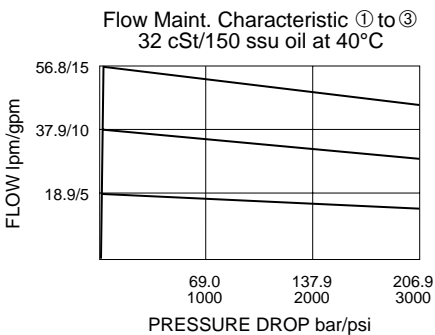
USASI:



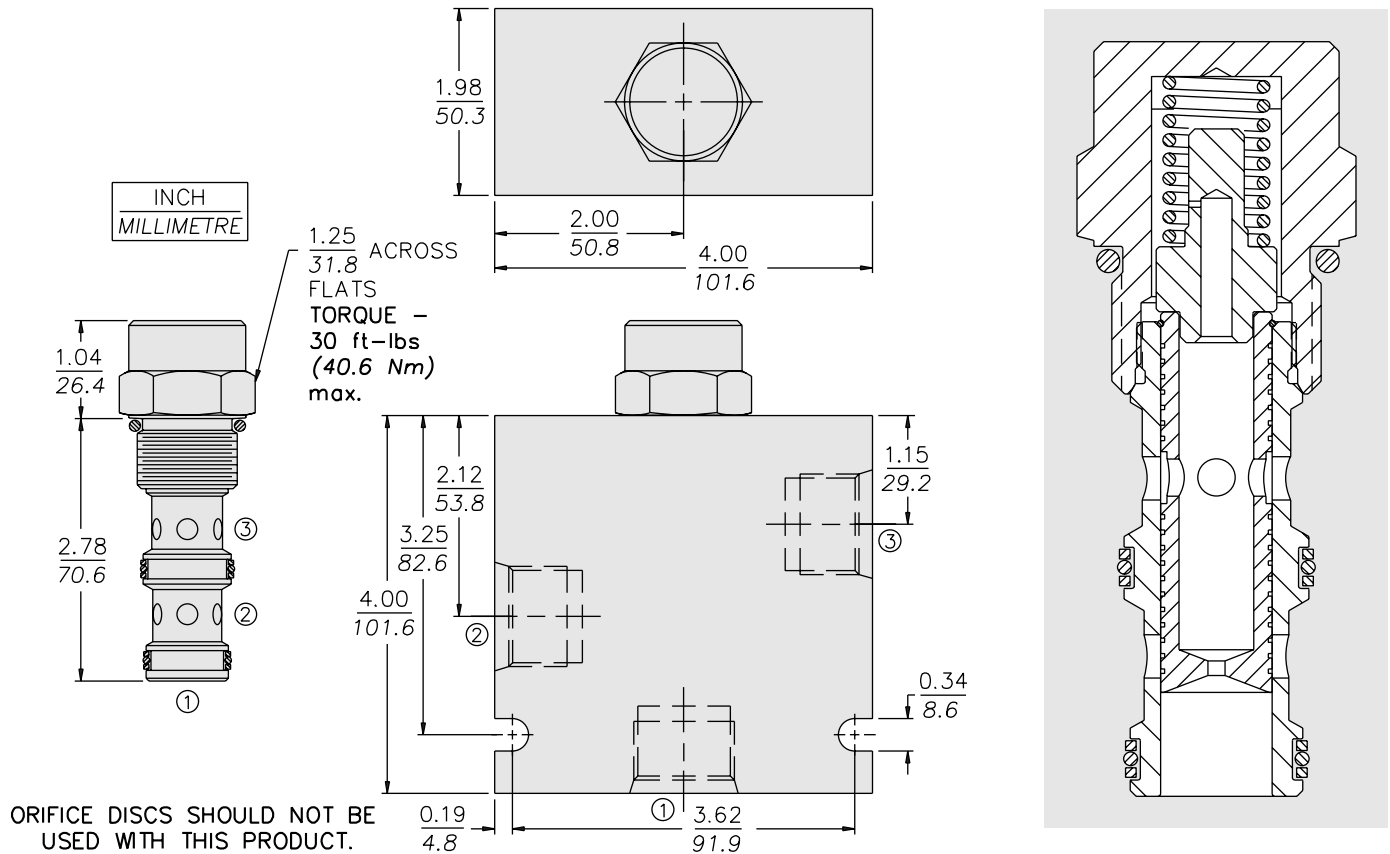
ISO:



PERFORMANCE (Cartridge Only)



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 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.012.1

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.