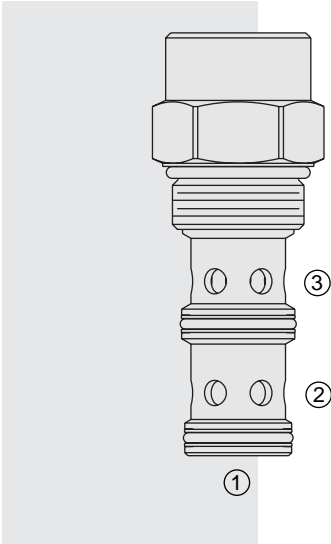


# FR16-30F Regulator, Pressure-Compensated



## 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.

## 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 ±10%;  
76 to 114 lpm (20 to 30 gpm) to accuracy of ±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 sus); See Temperature and Oil Viscosity, page 9.060.1

**Installation:** No restrictions; See page 9.020.1

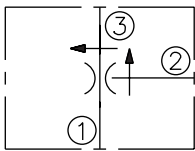
**Cavity:** VC16-3; See page 9.116.1

**Cavity Tool:** CT16-3XX; See page 8.600.1

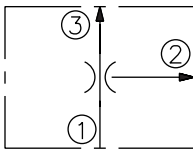
**Seal Kit:** SK16-3X-MM; See page 8.650.1

## SYMBOLS

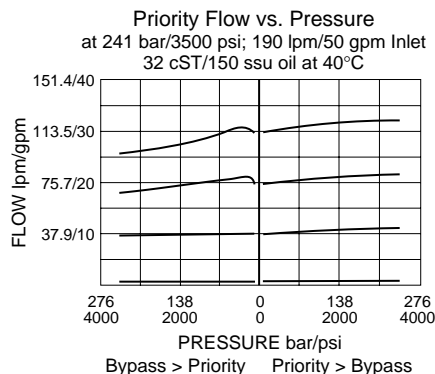
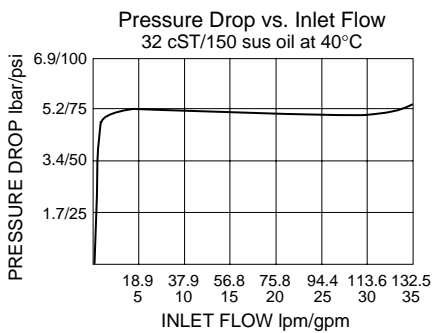
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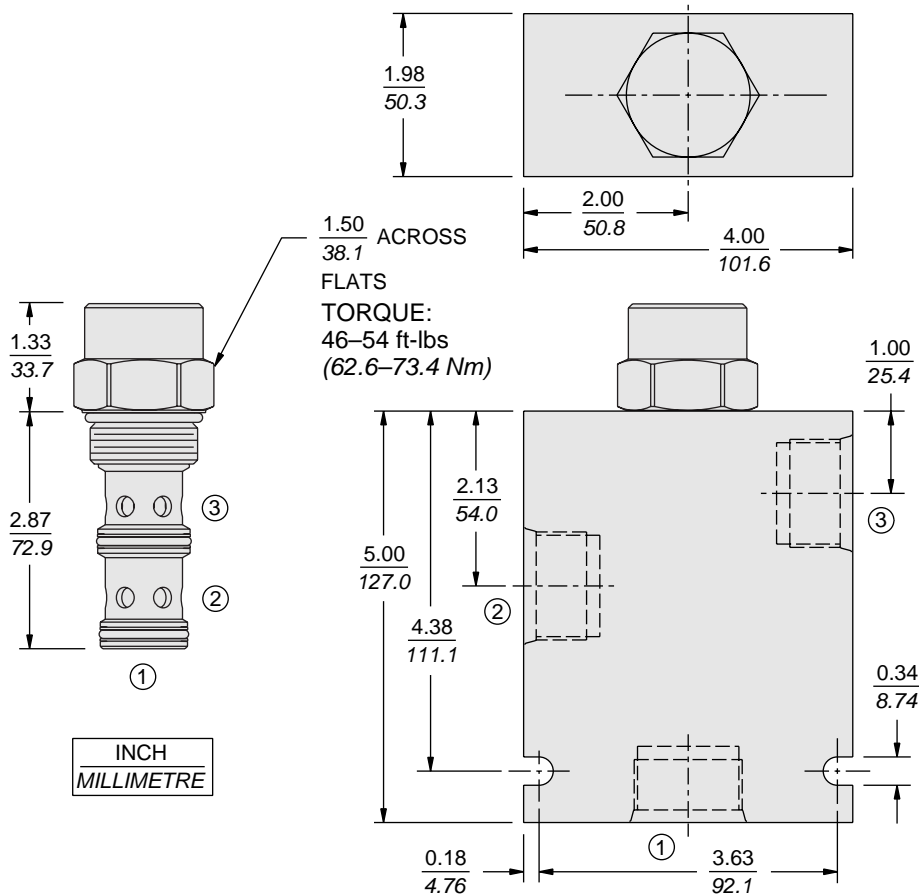
### ISO:



## PERFORMANCE (Cartridge Only)



**DIMENSIONS**

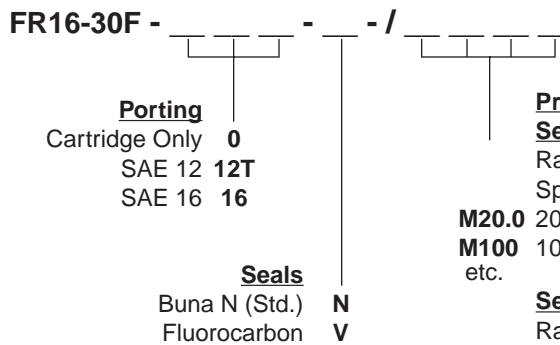


**MATERIALS**

**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 207 bar (3-00 psi). Ductile  
iron bodies available; dimensions  
may differ. See page 8.012.1.

**TO ORDER**



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.

**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.