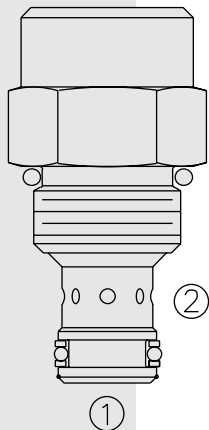


## FR08-20F Regulator, Pressure-Compensated



### DESCRIPTION

A screw-in, cartridge-style, fixed orifice, pressure-compensated, hydraulic flow regulating valve (restrictive type).

### OPERATION

The **FR08-20F** maintains a constant flow rate out of ② regardless of load pressure changes in the circuit downstream of ②.

The fixed control orifice is factory preset to customer flow specification. The valve begins to respond to load changes when the flow through the valve creates a pressure differential across the control orifice greater than 5.5 bar (80 psid), with accurate flow maintenance from 7.6 to 240 bar (110 to 3500 psid). Reverse flow (② to ①) returns through the control orifice and is non-compensated.

### FEATURES

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

### RATINGS

**Operating Pressure:** 240 bar (3500 psi)

**Flow Settings:** 0.4 lpm (0.1 gpm) min., 7.5 lpm (2.0 gpm) max.

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

**Flow Maintenance Setting Range:** 0.4 to 1.8 lpm (0.10 to 0.49 gpm) to accuracy of  $\pm 15\%$ ; 1.9 to 7.5 lpm (0.5 to 2.0 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 ssu)

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

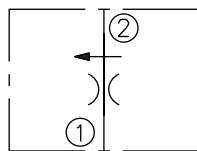
**Cavity:** VC08-2; See page 9.108.1

**Cavity Tool:** CT08-2XX; See page 8.600.1

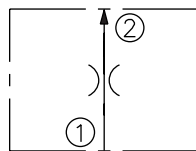
**Seal Kit:** SK08-2X-M; See page 8.650.1

### SYMBOLS

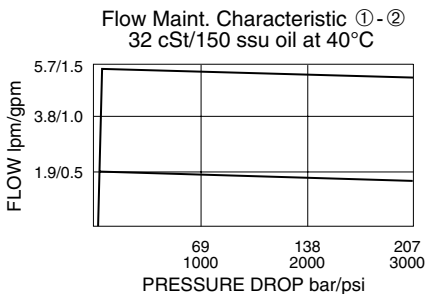
USASI:



ISO:

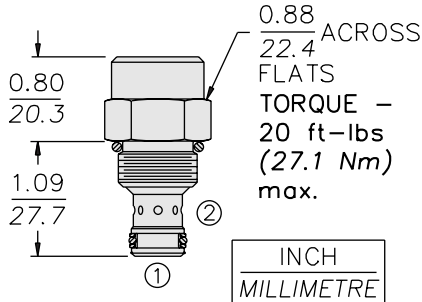


### PERFORMANCE (Cartridge Only)

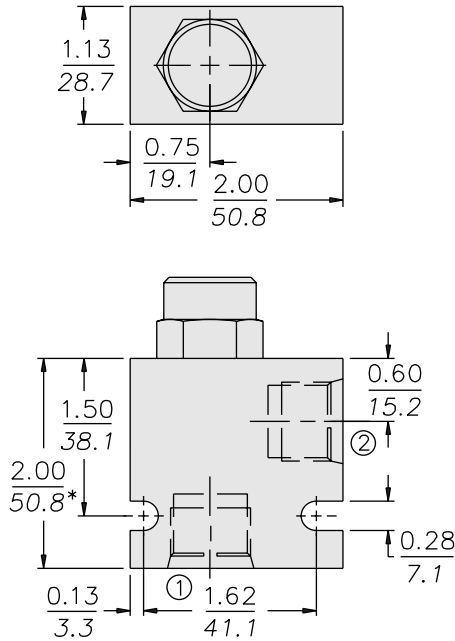


# FR08-20F

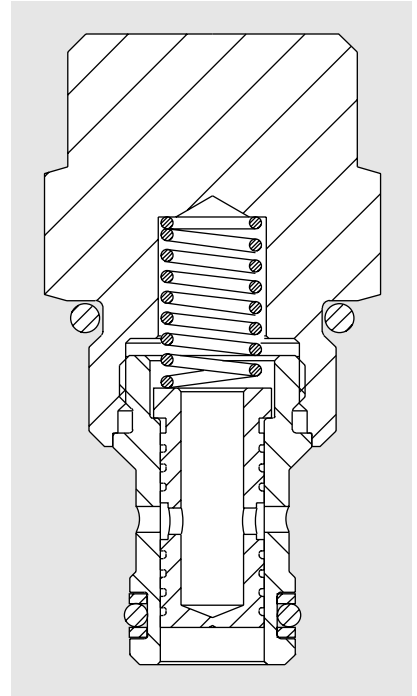
## DIMENSIONS



ORIFICE DISCS SHOULD NOT BE USED WITH THIS PRODUCT.



\* BSP BODY - 55.9



## MATERIALS

**Cartridge:** Weight: 0.07 kg. (0.15 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and fluorocarbon back-ups standard.

**Standard Ported Body:** Weight: 0.16 kg. (0.35 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); see page 8.008.1. Ductile iron and steel bodies available; consult factory.

## TO ORDER

### FR08-20F -

**Porting**

Cartridge Only **0**

SAE 4 **4T**

SAE 6 **6T**

SAE 8 **8T**

1/4 in. BSP\* **2B**

3/8 in. BSP\* **3B**

\*BSP Body;  
U.K. Mfr. Only

**Seals**

Buna N (Std.) **N**

Fluorocarbon **V**

### Setting in lpm

Range: 0.4 to 7.5 lpm  
Specify, for example:

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

### Setting in gpm

Range: 0.1 to 2.0 gpm  
Specify, for example:

**1.3** 1.3 gpm  
**2.0** 2.0 gpm  
etc.

### 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.