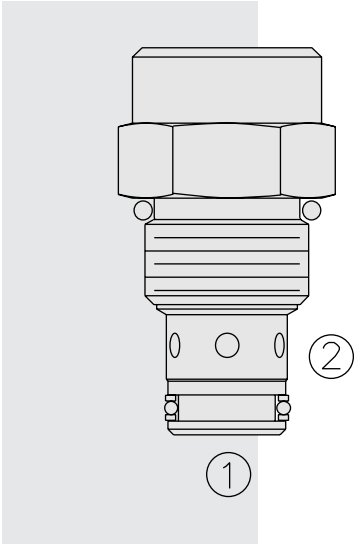


# FR10-20F Regulator, Pressure-Compensated



## DESCRIPTION

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

## OPERATION

The **FR10-20F** 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.
- Industry common cavity.

## RATINGS

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

**Flow Settings:** 0.4 lpm (0.1 gpm) min., 22.7 lpm (6.0 gpm) max.

**Flow Maintenance:** 0.37 to 1.85 lpm (0.1 to 0.49 gpm) settings  $\pm 20\%$

1.89 to 5.63 lpm (0.5 to 1.49 gpm) settings  $\pm 15\%$

5.68 to 22.71 lpm (1.5 to 6.00 gpm) settings  $\pm 10\%$

**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

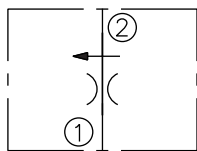
**Cavity:** VC10-2; See page 9.110.1

**Cavity Tool:** CT10-2XX; See page 8.600.1

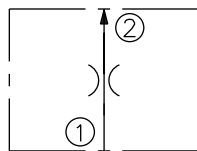
**Seal Kit:** SK10-2X-M; See page 8.650.1

## SYMBOLS

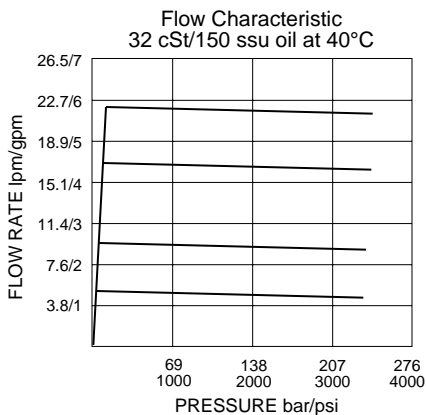
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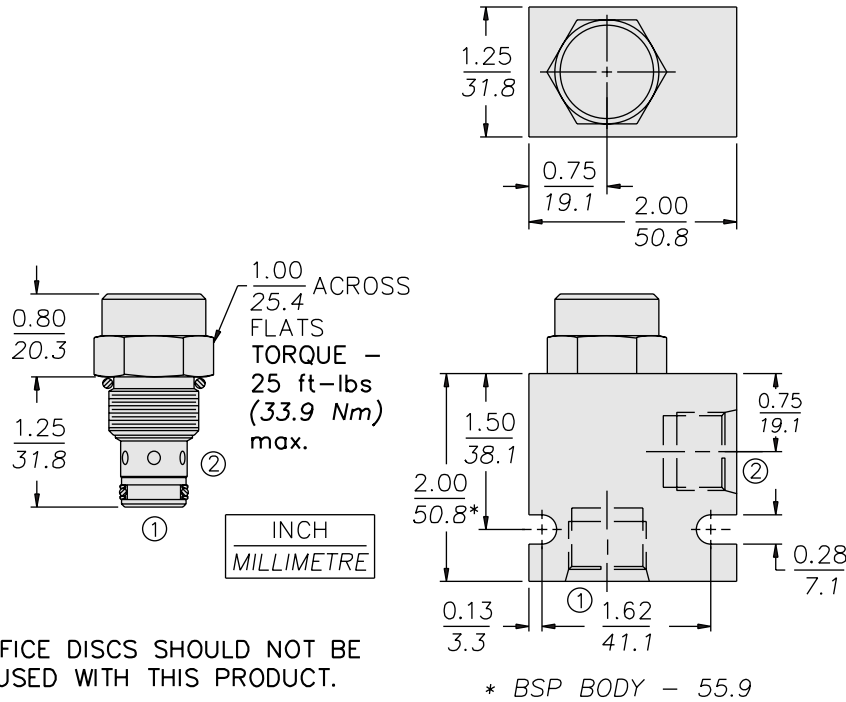
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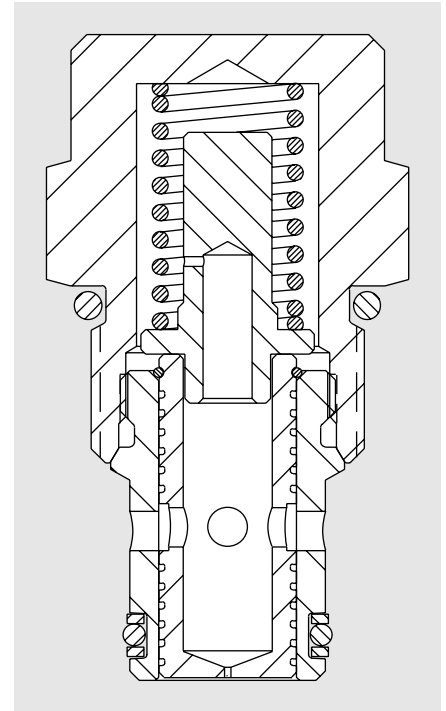
## PERFORMANCE (Cartridge Only)



**DIMENSIONS**



ORIFICE DISCS SHOULD NOT BE USED WITH THIS PRODUCT.

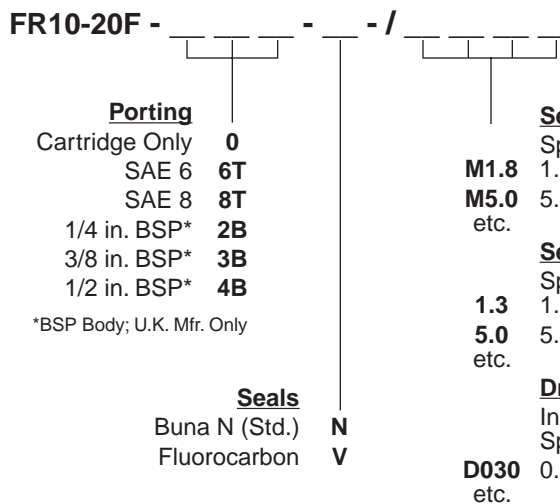


**MATERIALS**

**Cartridge:** Weight: 0.08 kg. (0.18 lbs.)  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces.  
Buna N O-rings and polyester elastomer back-ups standard.

**Standard Ported Body:** Weight:  
0.16 kg. (0.35 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi) Ductile iron bodies available; dimensions may differ. See page 8.010.1.

**TO ORDER**



**Setting in lpm**  
Specify, for example:  
**M1.8** 1.8 lpm  
**M5.0** 5.0 lpm  
etc.

**Setting in gpm**  
Specify, for example:  
**1.3** 1.3 gpm  
**5.0** 5.0 gpm  
etc.

**Drill Size Method**  
In thousandths of an inch.  
Specify, for example:  
**D030** 0.030 in. control orifice hole  
etc.

Note: Minimum drill diameter is 0.020 in. For smaller orifice sizes consult factory.