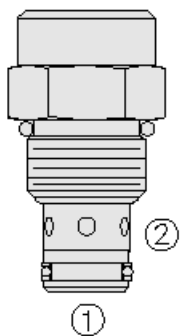




## Overview



### Description

FR10-20F is a screw-in, cartridge style, fixed orifice, pressure compensated, hydraulic flow regulator valve (restrictive type).

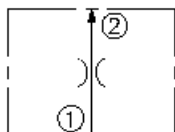
### Operation

The valve maintains a constant flow rate from port 1 to port 2 regardless of load pressure changes. Reverse flow returns through the control orifice and is non-compensated.

### Features

- Hardened parts for long life.
- Quiet, modulated response.
- Industry-common cavity.

### Symbol



## Ratings

### Pressure Ratings

Pressure rating 240 bar (3500 psi)

### Flow Ratings

Flow rating 0.4 to 22.7 lpm (0.1 to 6.0 gpm)

### Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- <b>Note:</b> With buna N seals
	-26 to 204 °C (-15 to 400 °F)	- <b>Note:</b> With fluorocarbon seals
	-54 to 107 °C (-65 to 225 °F)	- <b>Note:</b> With polyurethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 160 °F)	

### Other Ratings

Corrosion protection 960 hr salt spray per ASTM b117 (model number gfr10-20f)

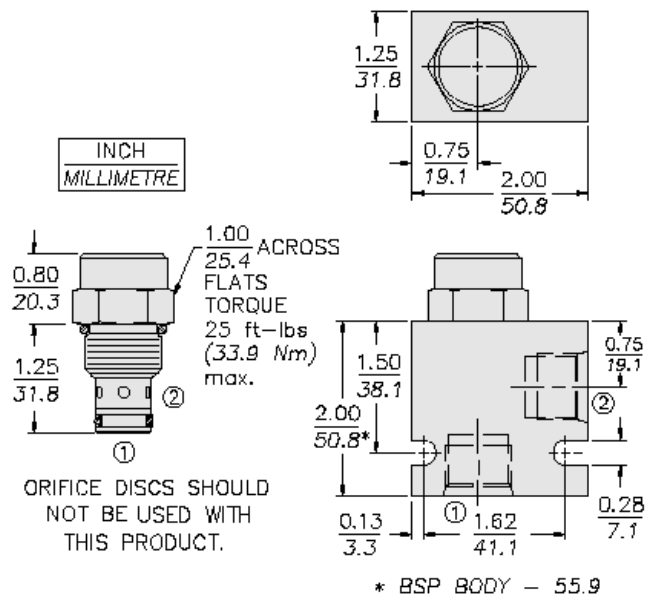
## Operating Parameters

Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

## Properties

Unit weight	0.11 kg (0.25 lb)
Internal wetted surface area	108 cm <sup>2</sup> (16.8 in <sup>2</sup> )

## Dimensions



## Installation Specifications

Cavity	VC10-2
Cartridge installation torque	34 to 37 N-m (25 to 27 ft-lb)
Maximum allowable torque	68 N-m (50 ft-lb)
Orientation restriction	None

## Accessories

Seal kit	SK10-2X-M	- <b>Note:</b> X = seal option
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**Setting in lpm**  
Range: 0.4 to 22.7 lpm  
Specify, for example:  
1.8 lpm  
5.0 lpm

**Setting in gpm**  
Range: 0.1 to 6.0 gpm  
Specify, for example:  
1.3 gpm  
5.0 gpm

**Drill Size Method**  
In thousandths of an inch.  
Range: 0.014 to 0.159 in.  
Specify, for example:  
0.030 in. control orifice hole

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