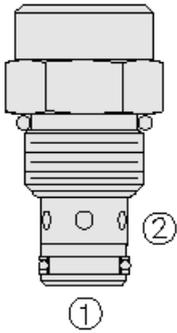




Overview



Description

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

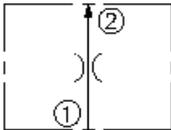
Operation

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)	- Note: With buna N seals
	-26 to 204 °C (-15 to 400 °F)	- Note: With fluorocarbon seals
	-54 to 107 °C (-65 to 225 °F)	- Note: 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

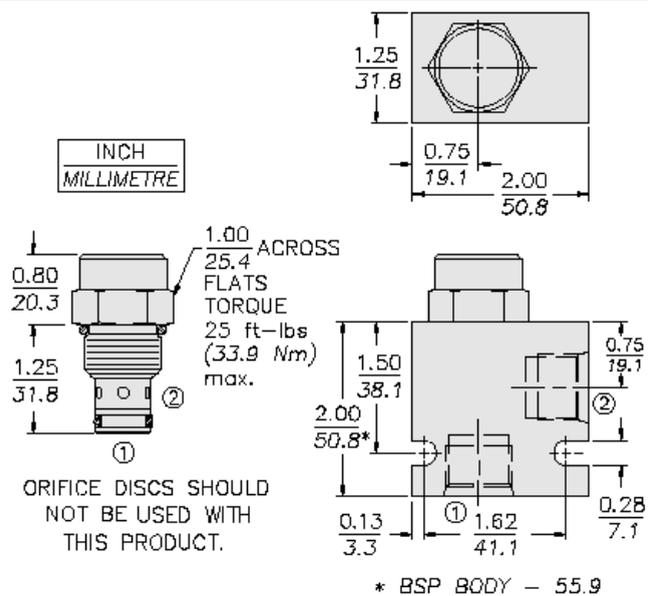
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

Properties

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



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	- Note: X = seal option
----------	-----------	-------------------------



Order Code

FR10-20F -

Porting			
Cartridge Only	0		
Aluminum			Setting in lpm
SAE 6	6T		Range: 0.4 to 22.7 lpm
SAE 8	8T		Specify, for example:
1/4 in. BSP*	2B	M1.8	1.8 lpm
3/8 in. BSP*	3B	M5.0	5.0 lpm
1/2 in. BSP*	4B	etc.	
Ductile Iron			Setting in gpm
1/2 in. BSP*	4BD		Range: 0.1 to 6.0 gpm
SAE 6	6TD	1.3	Specify, for example:
SAE 8	8TD	5.0	1.3 gpm
		etc.	5.0 gpm
			Drill Size Method
			In thousandths of an inch.
			Range: 0.014 to 0.159 in.
			Specify, for example:
		D030	0.030 in. control orifice hole
		etc.	

*BSP Body; U.K. Mfr. Only

Seals	
Buna N (Std.)	N
Fluorocarbon	V
Polyurethane	P

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

Model Options

FR10-20F-H-J-/T

F Adjustment Option

CODE	DESCRIPTION
F	Factory Preset Non-Adjustable

H Line Body

CODE	DESCRIPTION
0	No Body
6T	Aluminum SAE 6
8T	Aluminum SAE 8
6TD	Ductile Iron SAE 6
8TD	Ductile Iron SAE 8
2B	Aluminum BSPP 1/4" (2)
3B	Aluminum BSPP 3/8" (3)
4B	Aluminum BSPP 1/2" (4)
4BD	Ductile Iron BSPP 1/2" (4)

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
P	Polyurethane
U	PPDI Urethane

T Flow setting

CODE	DESCRIPTION
XX	Flow setting