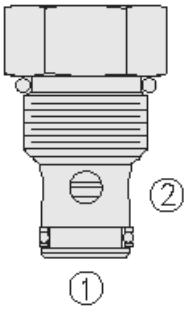




Overview



Description

The FR50-20F is a screw-in, cartridge style, fixed orifice, pressure compensated, hydraulic flow regulator valve (restrictive type).

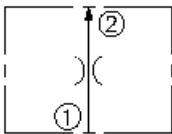
Operation

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	345 bar (5000 psi)
Proof pressure	690 bar (10000 psi)
Burst pressure	1379 bar (20000 psi)

Flow Ratings

Flow rating	0.4 to 22.7 lpm (0.1 to 6.0 gpm)
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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
	-54 to 107 °C (-65 to 225 °F)	- Note: With urethane 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 gfr50-20f)
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Operating Parameters

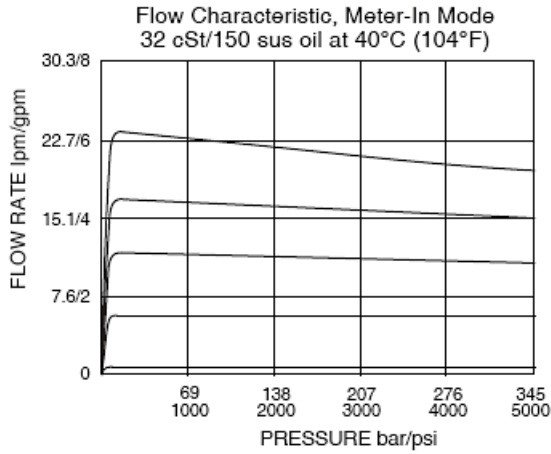
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

Properties

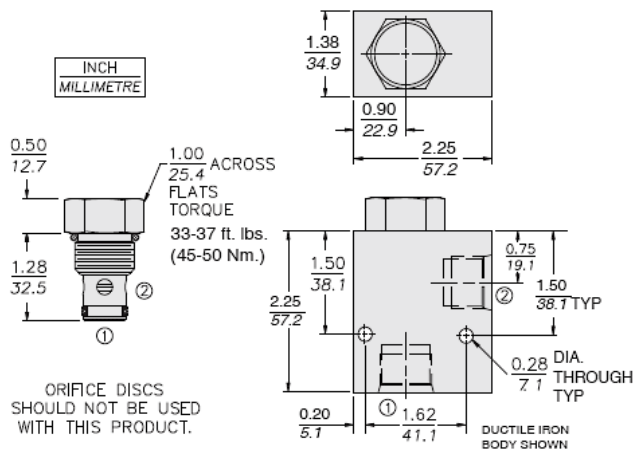
Unit weight	0.1 kg (0.21 lb)
Internal wetted surface area	8710 mm ² (13.5 in ²)



Performance



Dimensions



Installation Specifications

Cavity	VC10-2
Cartridge installation torque	45 to 50 N-m (33 to 37 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK10-2X-M	- Note: X = seal option
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Order Code

FR50-20F -		- /	
Porting		Setting in lpm	
Cartridge Only	0	Range: 0.4 to 22.7 lpm	
SAE 6	6T	Specify, for example:	
SAE 8	8T	M5.5	5.5 lpm
1/4 in. BSP*	2B	M20	20.0 lpm
3/8 in. BSP*	3B	etc.	
1/2 in. BSP*	4B	Setting in gpm	
*BSP Body; U.K. Mfr. Only		Range: 0.1 to 6.0 gpm	
Seals		Specify, for example:	
Polyurethane	P	1.5	1.5 gpm
PPDI Urethane	U	5.0	5.0 gpm
		etc.	
		Drill Size Method	
		Dia. in thousandths of an inch.	
		Range is 0.021 to 0.154 in.	
		Specify, for example:	
		D094	0.094 in. control orifice hole
		etc.	

Note: Polyurethane or PPDI Urethane seals are recommended for pressures over 241 bar (3500 psi).

Note: Consult factory for additional seal options.

Model Options

FR50-20F-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

T Flow setting

CODE	DESCRIPTION
XX	Flow setting