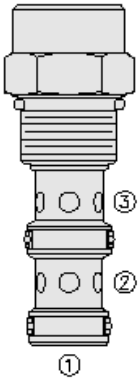




Overview



Description

The FR12-30F is a screw-in, cartridge style, pressure compensated, non-adjustable hydraulic flow regulator valve. It CAN be used as a priority type flow regulator, delivering the pump flow to priority port 3 first, then bypassing excess to port 2; or a restrictive type, 2-way flow regulator when the bypass port 2 is blocked.

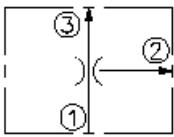
Operation

The valve maintains a constant flow rate from port 3 regardless of pressure variations in the system downstream of priority port 3 or in bypass leg at port 2. All ports may be fully pressurized.

Features

- Hardened parts for long life.
- Quiet, modulated response.
- Cost-effective cavity.

Symbol



Ratings

Pressure Ratings

Pressure rating	241 bar (3500 psi)
Proof pressure	345 bar (5000 psi)
Burst pressure	896 bar (13000 psi)

Flow Ratings

Priority flow rating	0.4 to 49.2 lpm (0.1 to 13.0 gpm)
Inlet flow rating	94.6 lpm (25.0 gpm) - Note: Maximum

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)	

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

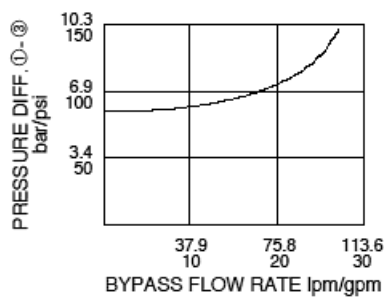
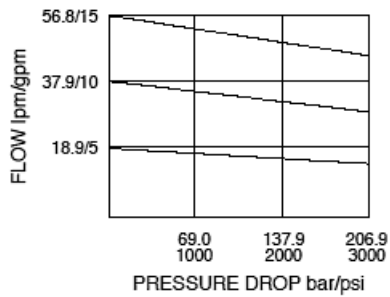
Properties

Unit weight	0.29 kg (0.64 lb)
Internal wetted surface area	221 cm ² (34.3 in ²)

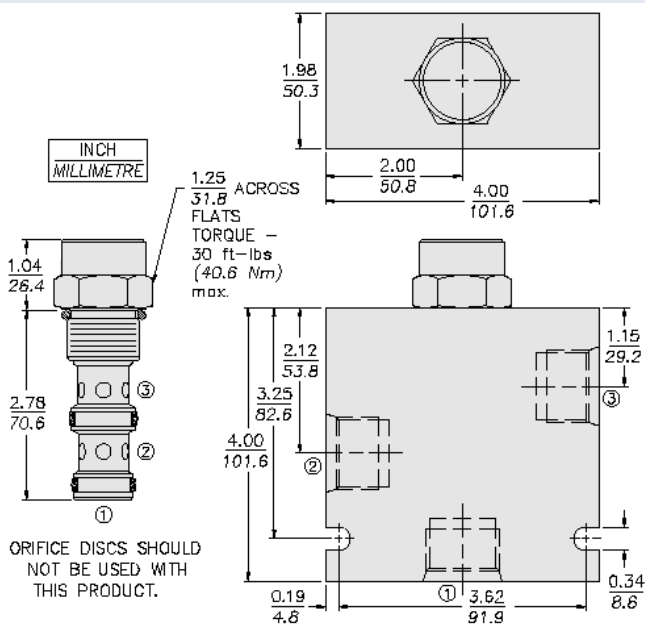


Performance

Flow Maint. Characteristic ① to ③
32 cSt/150 sus oil at 40°C



Dimensions



Installation Specifications

Cavity	VC12-3
Cartridge installation torque	45 to 50 N-m (33 to 37 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK12-3X-MM	- Note: X = seal option
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Order Code

FR12-30F -		- /	
Porting		Priority Setting	
Cartridge Only	0	Setting in LPM	
SAE 8	8T	Range: 4 to 50 lpm	
SAE 10	10T	Specify, for example:	
SAE 12	12T	M4.0	4.0 lpm
1/2 in. BSP*	4B	M8.0	8.0 lpm
3/4 in. BSP*	6B	etc.	
*BSP Body; U.K. Mfr. Only		Setting in GPM	
		Range: 1 to 13 gpm	
		Specify, for example:	
Seals		1.5	1.5 gpm
Buna N (Std.)	N	5.0	5.0 gpm
Fluorocarbon	V	etc.	
		Drill Size Method	
		In thousandths of an inch.	
		Specify, for example:	
		D050	0.050 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.

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

Model Options

FR12-30F-G-H-J-/T

F Adjustment Option

CODE	DESCRIPTION
F	Factory Preset Non-Adjustable

G Guide Option

CODE	DESCRIPTION
BLANK	Standard Spring Guide
D	Damped Spring Guide

H Line Body

CODE	DESCRIPTION
0	No Body
8T	Aluminum SAE 8
10T	Aluminum SAE 10
12T	Aluminum SAE 12
12TD	Ductile Iron SAE 12
6B	Aluminum BSPP 3/4" (6)

J Seal

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

T Flow setting

CODE	DESCRIPTION
XX	Flow setting