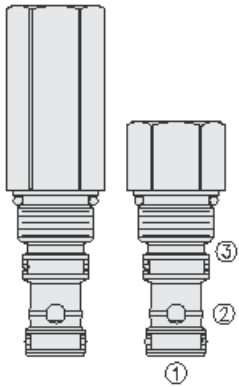




Overview



Description

EPFR50-S35 is a screw-in, cartridge style, bypass type pressure compensating element intended for use with remote fixed or variable orifice to provide a constant flow regardless of load pressure changes.

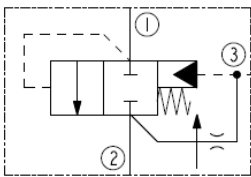
Operation

It is spring biased spool type valve provided with a small internal orifice between ports 2 and 3 so that the valve would bypass all flow to tank at bias spring pressure value plus pressure rise at no load flow demand. The orifice is pressure compensated to restrict flow loss through it at load flow demand.

Features

- Multiple function in a single cavity.
- Low bleed flow throughout the operating pressure range.
- High system efficiency.
- Industry-common cavity.

Symbol



Ratings

Pressure Ratings

Pressure rating 345 bar (5000 psi)

Flow Ratings

Flow rating See performance graph

Maximum flow loss 0.76 lpm (0.20 gpm) - **Note:** Between ports 2 and 3 at 345 bar (5000 psi)

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 90 °C (-40 to 194 °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	20/18/14 per ISO 4406	

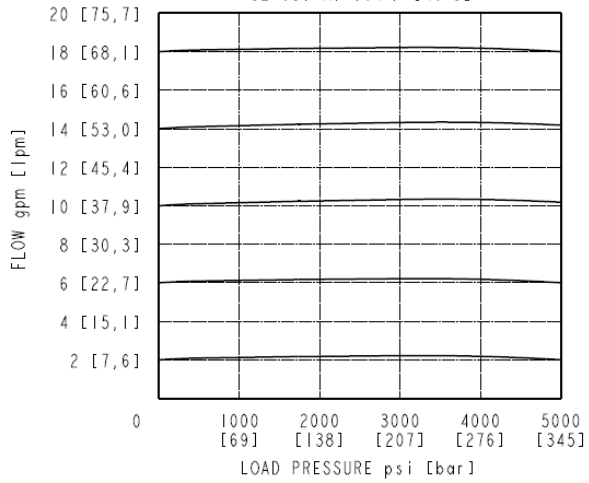
Properties

Unit weight	0.15 kg (0.32 lb)	- Note: Standard
	0.28 kg (0.62 lb)	- Note: Tall adaptor
Internal wetted surface area	124 cm ² (19.2 in ²)	- Note: Standard
	192 cm ² (29.7 in ²)	- Note: Tall adaptor

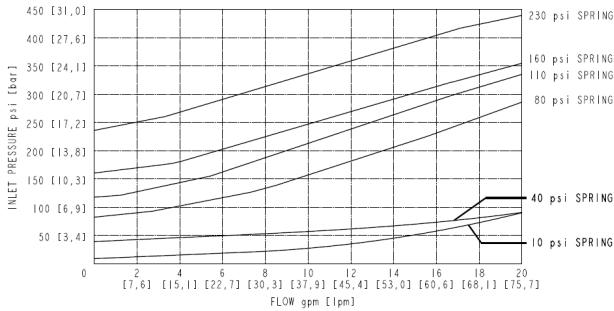


Performance

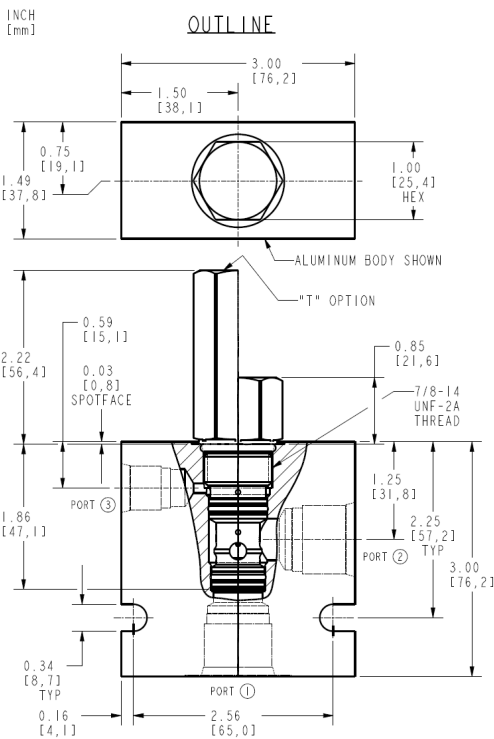
FLOW VS. LOAD PRESSURE
32 cSt AT 104°F [40°C]



INLET PRESSURE VS. BYPASS FLOW AT NO LOAD FLOW DEMAND
32 cSt AT 104°F [40°C]



Dimensions



ALL DIMENSIONS ARE FOR REFERENCE ONLY.

Installation Specifications

Cavity	VC10-S3
Cartridge installation torque	32.5 to 35.3 N-m (24 to 26 ft-lb)
Maximum allowable torque	67.8 N-m (50 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK10-S3N-MM	- Note: BUNA N
	SK10-S3V-MM	- Note: Fluorocarbon
	SK10-S3P-MM	- Note: Polyurethane



Order Code

ORDERING INFORMATION:

EPFR50-S35 X-X-X-XXX

BASE MODEL
NUMBER

OPTIONS:

NONE - (BLANK)

* TALL ADAPTOR - T

PORTING:

CARTRIDGE ONLY - 0

SEALS:

BUNA N - N

FLUOROCARBON - V

POLYURETHANE - P

BIAS SPRING VALUE:

10 psi [0,7 bar] - 10

40 psi [2,8 bar] - 40

80 psi [5,5 bar] - 80

110 psi [7,6 bar] - 110

160 psi [11,0 bar] - 160

230 psi [15,9 bar] - 230

* "T" TALL ADAPTOR OPTION
REQUIRED FOR 160 psi AND
230 psi BIAS SPRINGS.

Model Options

EPFR50-S35C-H-J-R

C Tall Cap

CODE	DESCRIPTION
BLANK	Standard Cap
T	Tall Cap

H Line Body

CODE	DESCRIPTION
0	No Body

J Seal

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

R Spring

CODE	DESCRIPTION
10	10 psi Bias Spring
40	40 psi Bias Spring
80	80 psi Bias Spring
110	110 psi Bias Spring
160	160 psi Bias Spring
230	230 psi Bias Spring

