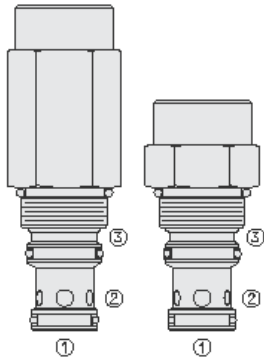




Overview



Description

EPFR16-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.

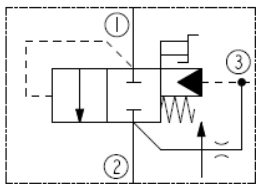
Operation

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

- o Multiple function in a single cavity.
- o Low bleed flow throughout the operating pressure range.
- o Range of bias spring options; tall adaptor required for higher pressures. An extra tall adaptor is required for the 240 psi bias spring option.
- o High system efficiency.
- o Industry-common cavity.

Symbol



Ratings

Pressure Ratings

Pressure rating 241 bar (3500 psi)

Flow Ratings

Flow rating See performance graph
 Maximum flow loss 0.6 lpm (0.15 gpm) - **Note:** Between ports 3 and 2 at 241 bar (3500 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

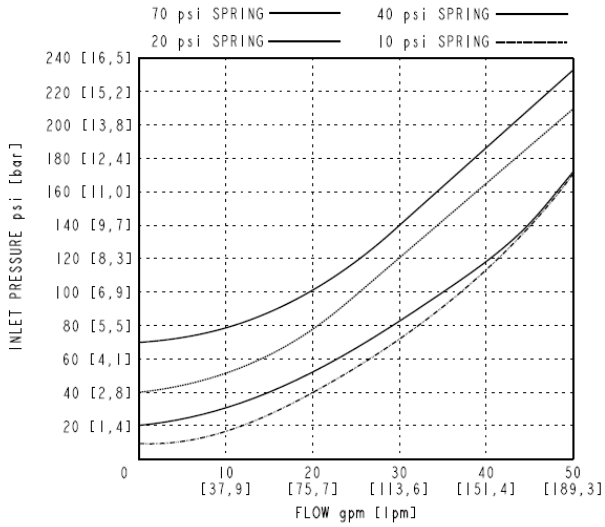
Properties

Unit weight	0.29 kg (0.64 lb)	- Note: EPFR16-S35
	0.42 kg (0.92 lb)	- Note: EPFR16-S35T
	0.72 kg (1.59 lb)	- Note: EPFR16-S35T-X-X-240
	0.57 kg (1.26 lb)	- Note: EPFR16-S35TM
	0.87 kg (1.91 lb)	- Note: EPFR16-S35TM-X-X-240
	0.62 kg (1.36 lb)	- Note: EPFR16-S35TMC
	0.91 kg (2.01 lb)	- Note: EPFR16-S35TMC-X-X-240
Internal wetted surface area	223 cm ² (34.5 in ²)	- Note: EPFR16-S35
	295 cm ² (45.7 in ²)	- Note: EPFR16-S35T
	375 cm ² (58.2 in ²)	- Note: EPFR-S35T-X-X-240
	296 cm ² (45.9 in ²)	- Note: EPFR16-S35TM
	372 cm ² (57.7 in ²)	- Note: EPFR-S35TM-X-X-240
	296 cm ² (45.9 in ²)	- Note: EPFR16-S35TMC
	372 cm ² (57.7 in ²)	- Note: EPFR-S35TMC-X-X-240

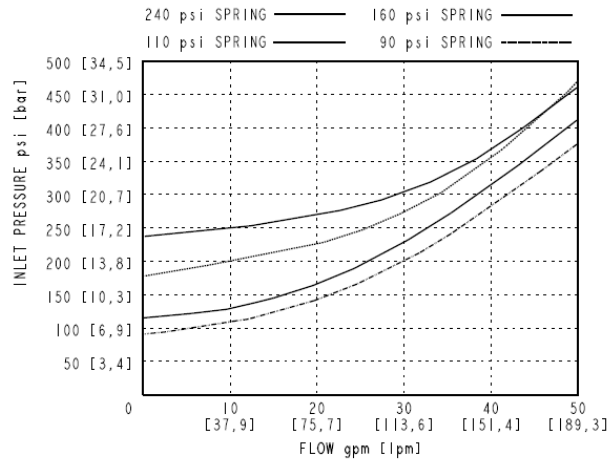


Performance

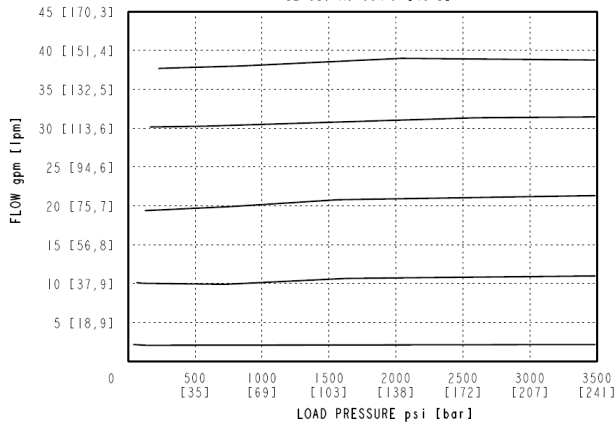
INLET PRESSURE VS BYPASS FLOW
(AT NO LOAD FLOW DEMAND)
32 cSt AT 104°F [40°C]



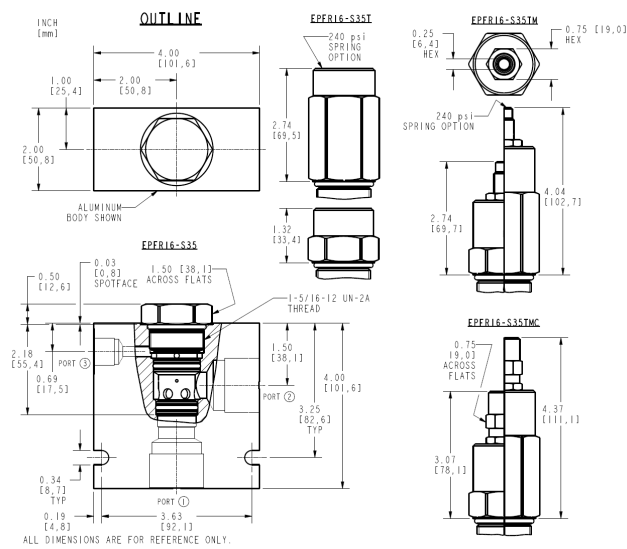
INLET PRESSURE VS BYPASS FLOW
(AT NO LOAD FLOW DEMAND)
32 cSt AT 104°F [40°C]



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



Dimensions





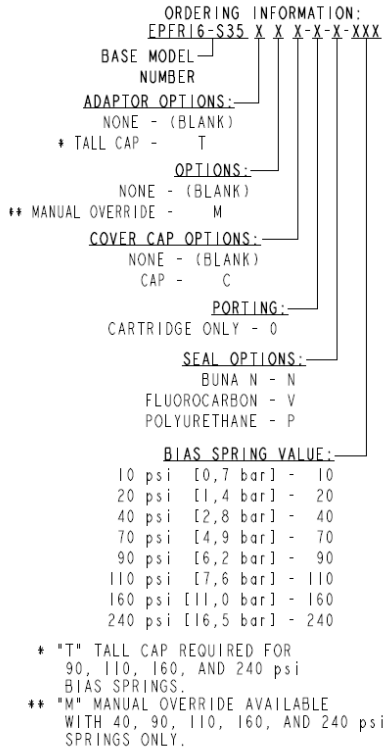
Installation Specifications

Cavity	VC16-S3
Cartridge installation torque	62.4 to 73.2 N-m (46 to 54 ft-lb)
Maximum allowable torque	136 N-m (100 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK16-S3X-MM	- Note: X = seal option
Housings		

Order Code



POSITION	CODE	DESCRIPTION
		EPFR16-S35CF-H-J-R
C		Tall Cap
C	BLANK	Standard Cap
C	T	Tall Cap
F		Stroke Limiter
F	BLANK	Standard
F	M	Stroke Limiter
F	MC	Stroke Limiter with Cover Cap
H		Line Body
H	0	No Body
H	16T	Aluminum SAE 16
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	P	Polyurethane
J	U	PPDI Urethane



POSITION	CODE	DESCRIPTION
R		Spring
R	10	10 psi Bias Spring
R	20	20 psi Bias Spring
R	40	40 psi Bias Spring
R	70	70 psi Bias Spring
R	90	90 psi Bias Spring
R	110	110 psi Bias Spring
R	160	160 psi Bias Spring
R	240	240 psi Bias Spring