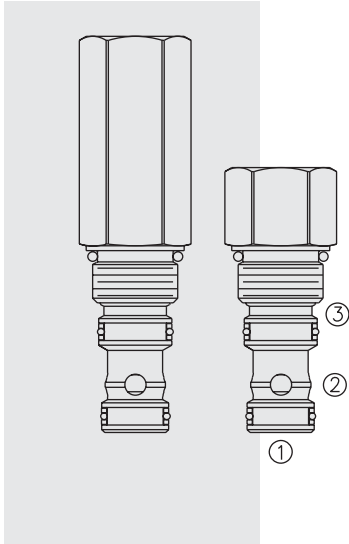
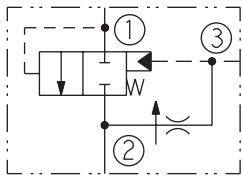


# DIRECTIONAL VALVES

## EPFR50-S35 Pressure Compensator with Internal



### SYMBOL



### DESCRIPTION

A screw-in, cartridge-style, bypass-type, pressure-compensating element, with integral flow regulator for load sense signal drain. The internal pressure-compensated flow regulator restricts the load signal bleed flow in order to minimize system losses even at high operating pressures. The main compensator element holds the valves primary flow constant regardless of load pressure changes.

### OPERATION

The **EPFR50-S35** is a spring-biased spool-type valve with an internal pressure-compensated flow regulator between ② and ③. When used as a pump unloading compensator, this valve will bypass flow to tank at port ② when system pressure reaches the load pressure plus the bias spring value. When the system load is neutralized, the load signal is bled through the flow regulator bringing the valve to stand-by condition.

### FEATURES

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

### RATINGS

**Operating Pressure:** Cartridge only: 345 bar (5000 psi);  
Aluminum housing: 207 bar (3000 psi); Ductile iron housing: 345 bar (5000 psi).

**Flow:** See Performance Chart

**Maximum Flow Loss between ③ and ②:** 0.95 lpm (0.25 gpm) at 345 bar (5000 psi)

**Bias Spring Pressure Options:**

- 5.5 bar (80 psi);
- 7.6 bar (110 psi)
- 11.0 bar (160 psi) Tall Cap Required
- 15.9 bar (230 psi) Tall Cap Required

**Temperature:** -40 to 120°C with standard Buna seals

**Filtration:** See page 9.010.1

**Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

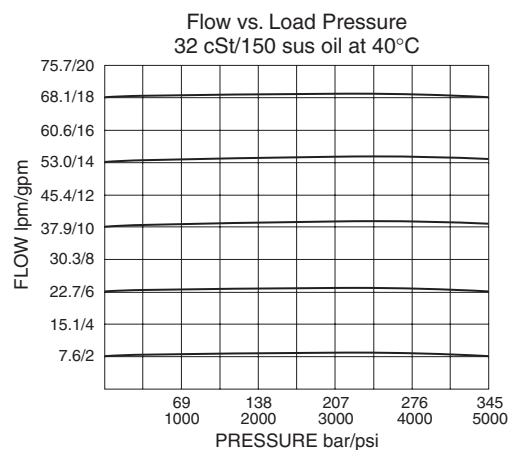
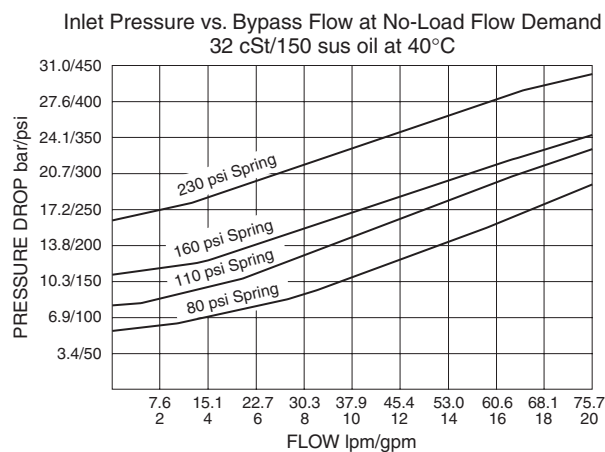
**Installation:** No restrictions; See page 9.020.1

**Cavity:** VC10-S3; See page 9.110.1

**Cavity Tool:** CT10-S3xx; See page 8.600.1

**Seal Kit:** SK10-S3x-MM; See page 8.650.1

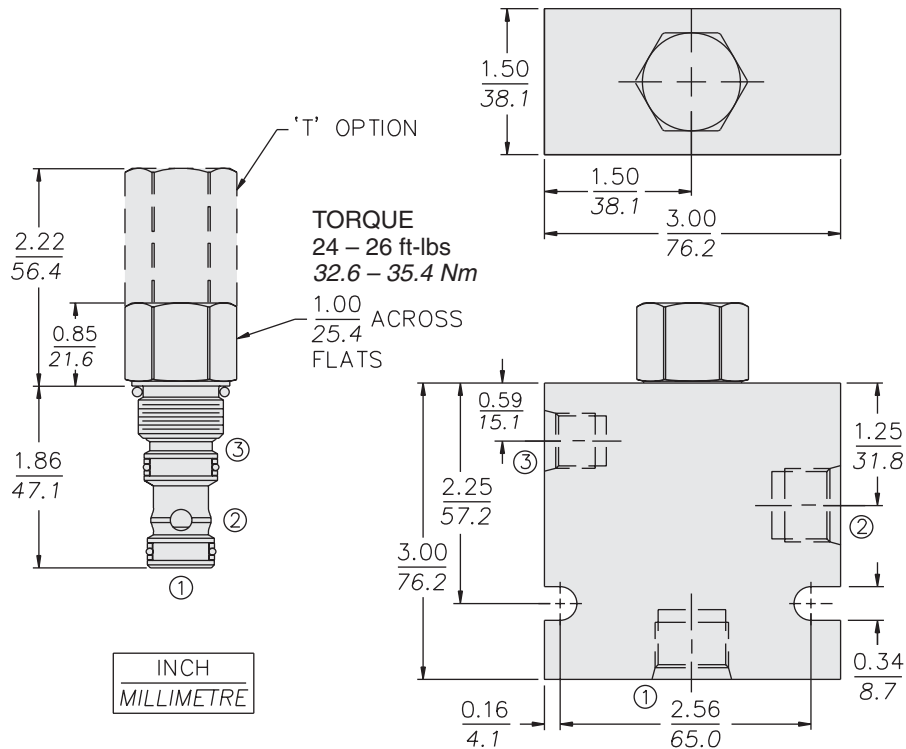
### PERFORMANCE (Cartridge Only)



# Load-Sense Drain Flow Control

# EPFR50-S35

## DIMENSIONS



## MATERIALS

**Cartridge:** Weight: 0.15 kg. (0.32 lbs.) with standard. short cap; 0.28 kg. (0.62 lbs.) with tall cap. Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

**Standard Ported Body:** Weight: 0.32 kg. (0.70 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron (8TD) bodies are available for pressures up to 350 bar (5000 psi); Weight and dimensions may differ. See page 8.010.1

## TO ORDER

### EPFR50-S35

**Option**  
None (Blank)  
Tall Cap **T**

**Porting**  
Cartridge Only **0**  
SAE 8\* **8T**  
SAE 8\* **8TD**  
SAE 10\* **10T**  
SAE 12\* **12T**

\*SAE 6 pilot port

Ductile iron (8TD) bodies are available for pressures up to 350 bar (5000 psi).

### Bias Spring

**80** 5.52 bar (80 psi)  
**110** 7.6 bar (110 psi)  
‡**160** 11.0 bar (160 psi)  
‡**230** 15.9 bar (230 psi)

‡ T Option required

### Seals

**N** Buna N (Std.)  
**V** Fluorocarbon  
**P** Polyurethane (for pressures over 240 bar/3500 psi)