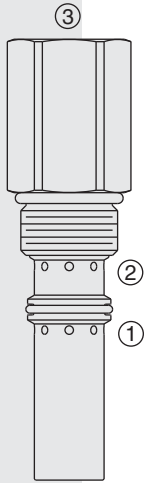


# PRESSURE CONTROLS

## PRES50-30 Pressure Reducing/Relieving



### DESCRIPTION

A screw-in, cartridge-style, direct-acting, spool-type reducing/relieving valve designed to act as a pressure regulating device for secondary circuits. It is intended for use in stable-input flow circuits.

### OPERATION

In its steady state, the **PRES50-30** allows bidirectional flow from ③ to ② with the spring chamber constantly drained at ①. Upon attainment of a predetermined pressure at ②, the valve will shift to block flow at ③, thereby regulating pressure at ②. In this mode, the valve will also relieve port ② to port ① at a variable value over the set reducing pressure.

The tank port pressure is additive to the pressure setting at a ratio of 1:1.

### FEATURES

- High Pressure steel adapter on inlet port ③ withstands up to 345 bar (5000 psi).
- Hardened spool and cage for long life.

### RATINGS

**Maximum Rated Pressure at Supply Port:** 345 bar (5000 psi)

**Regulated Pressure Range:** 31 to 55.2 bar (450 to 800 psi) at no-flow

**Maximum Tank Port Pressure:** 68.9 bar (1000 psi)

**Rated Flow:** 11.4 lpm (3 gpm) maximum

**Maximum Internal Leakage:** 131 ml/minute (8 cu. in./minute)

**Temperature:** -40 to 100°C with Buna N seals

-26°C to 204°C with Fluorocarbon seals

-54°C to 107°C with Polyurethane 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

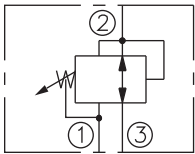
**Cavity:** VC98-3; See page 9.110.1

**Cavity Tool:** CT98-3XX; See page 8.600.1

**Seal Kit:** SK10-2X-0\_SPL; See page 8.650.1

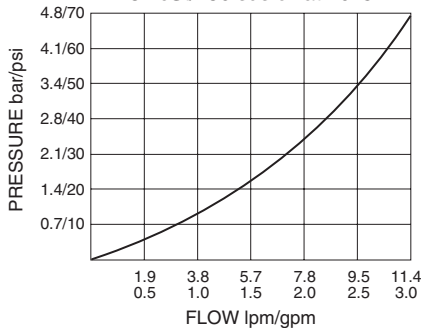
### SYMBOLS

#### USASI/ISO:

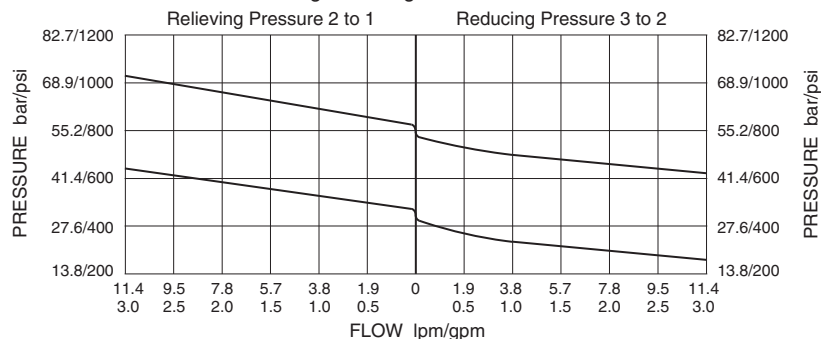


### PERFORMANCE (Cartridge Only)

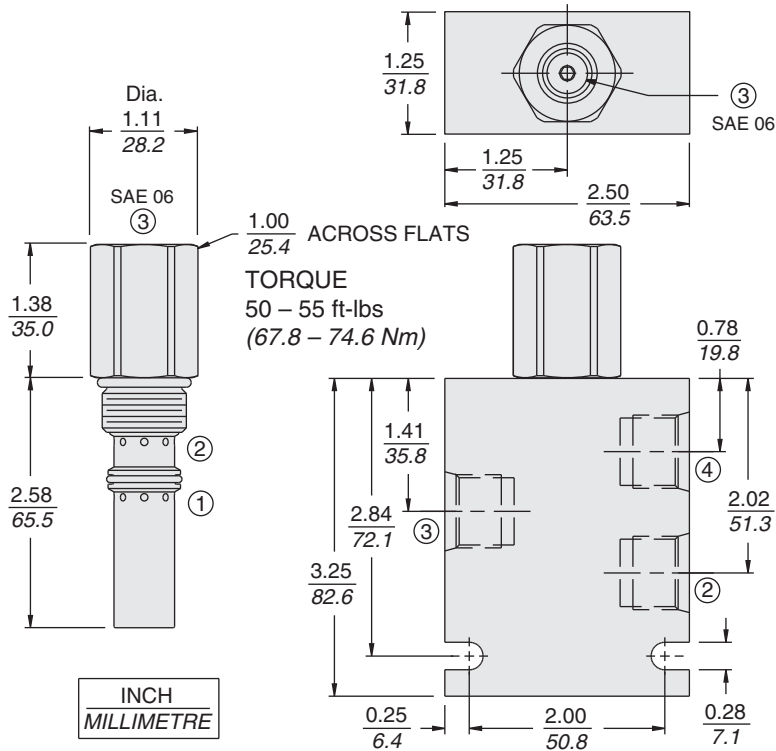
Pressure Drop vs. Flow; 3 to 2  
32 cSt/150 sus oil at 40°C



Reducing/Relieving Pressure vs. Flow



**DIMENSIONS**



Note: Either body port 2 or body port 3 can be blocked.

**MATERIALS**

**Cartridge:** Weight: 0.22 kg. (0.49 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. O-rings standard.

**Standard Ported Body:** Weight: 0.34 kg. (0.75 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.010.1.

**TO ORDER**

PRES50-30 - - 08 / 04.5

**Porting**  
 Cartridge Only 0  
 SAE 6 6T  
 SAE 8 8T

**Seals**  
 Buna N N  
 Fluourocarbon V  
 Polyurethane P

**Pressure Setting**  
 04.5 31.0 bar (450 psi)

**Spring Range**  
 08 31.0 to 55.2 bar (450 to 800 psi)

Polyurethane seals are required for operation over 241 bar/3500 psi.