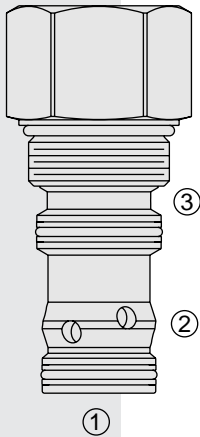


# DIRECTIONAL VALVES

## EP20-S39 Vented Poppet-Type Logic Element



### DESCRIPTION

A poppet-type, screw-in, cartridge-style, spring-biased, bi-directional blocking-type hydraulic valve with two built-in checks. When used in conjunction with a small pilot solenoid valve, the EP20-S39 is ideal for either high-flow double-blocking circuits or selector circuits. The integral two-check system prevents leakage, maintaining the pilot signal regardless of the transition or the work-port pressure changes.

### OPERATION

The EP20-S39 will allow flow from ① to ② or ② to ① only when ③ is vented to create a pressure drop across the internal orifice which exceeds the pressure value of the bias spring. When the element is in the neutral (closed) state, the ratio of areas ① and ② is 1:1, and the ratio of areas ① or ② to ③ is 1:2.

### FEATURES

- Multiple function/application potential.
- Low pressure drop.
- Industry common cavity.

### RATINGS

**Maximum Operating Pressure:** Cartridge Only: Ports ① & ②, 241 bar (3500 psi)

**Flow:** See Performance Chart

**Internal Leakage:** 0.6 ml/minute (12 drops/minute) max. at 241 bar (3500 psi)

**Internal Orifice:** 0.79 mm (0.031 in.)

**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

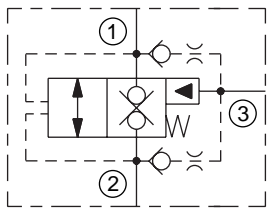
**Cavity:** VC20-S3; See page 9.120.1

**Cavity Tool:** CT20-S3xx; See page 8.600.1

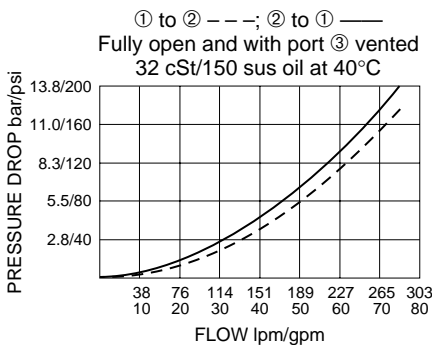
**Seal Kit:** SK20-S3x-MM; See page 8.650.1

### SYMBOL

#### USASI/ISO:



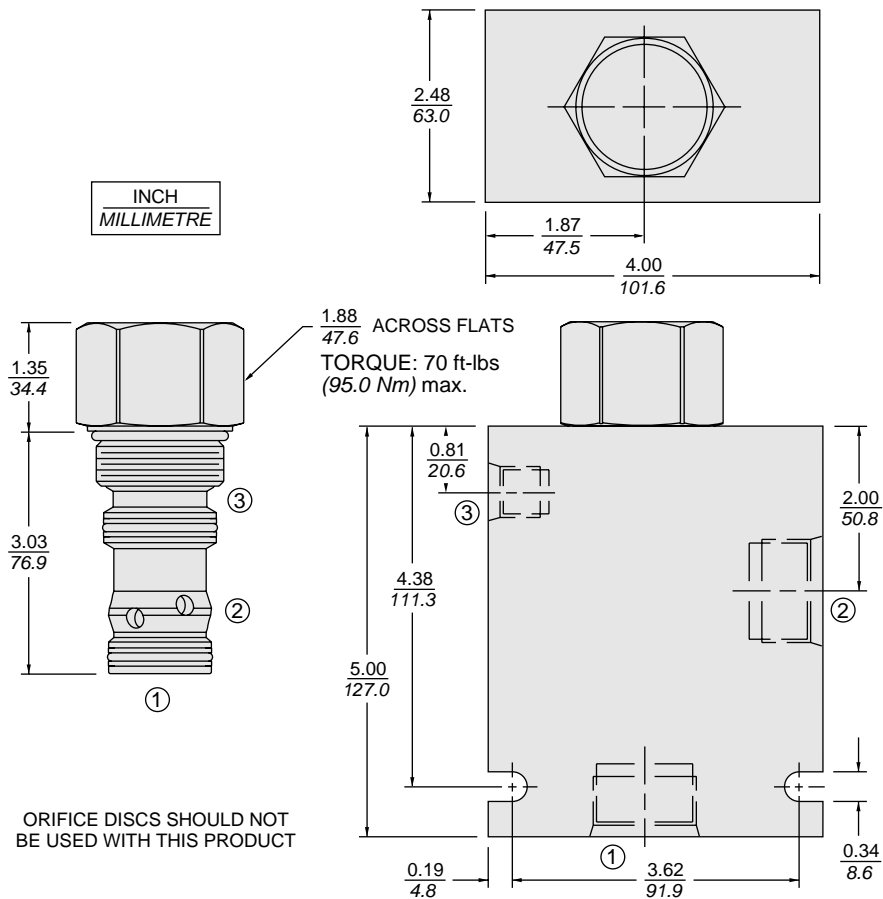
### PERFORMANCE (Cartridge Only)



# with Two Built-In Checks

# EP20-S39

## DIMENSIONS



## MATERIALS

**Cartridge:** Weight: 0.84 kg. (1.85 lbs.)  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces.  
Buna N O-rings and polyester elastomer back-ups standard.

**Standard Ported Body:** Weight:  
1.65 kg. (3.65 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron can be made available; dimensions may differ. See page 8.020.1.

## TO ORDER

