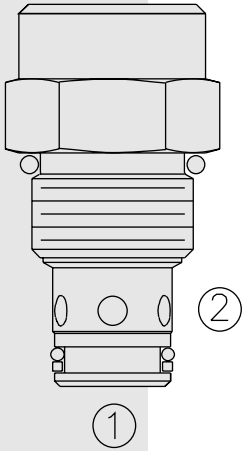


# DIRECTIONAL VALVES

## CV10-28 Check Valve with Thermal Relief



### DESCRIPTION

A screw-in, cartridge-style, hydraulic check valve for use as a blocking or load-holding device. The cartridge incorporates a low flow thermal relief valve intended to prevent cylinder damage resulting from temperature-induced pressure intensification.

### OPERATION

The CV10-28 allows flow from ① to ②, while blocking oil flow in the opposite direction. If the pressure at ② exceeds the thermal relief valve setting, a small amount of oil will be allowed to pass from ② to ①, preventing cylinder damage from pressure intensification.

NOTE: The relief valve feature is not intended for use in dynamic pressure limiting applications. Consult factory.

### FEATURES

- Hardened seats for long life and low leakage.
- Industry common cavity.

### RATINGS

**Thermal Relief Factory Setting:** 324 ± 28 bar (4700 ± 400 psi)

**Formula for Thermal Expansion:**  $\Delta P = 57.7 \times \Delta T$  (where  $\Delta P$  is in psi;  $\Delta T$  is in °F)

**Proof Pressure:** 390 bar (5700 psi)

**Thermal Relief Setting:** 348 ± 38 bar (5050 ± 550 psi)

**Thermal Relief Reseat:** 276 bar (4000 psi)

**Flow:** See Performance Chart

**Internal Leakage:** 0.25 cc/minute (5 drops/minute) max. at 240 bar (3500 psi)

**Standard Check Bias Spring at Crack:** 4.5 bar (65 psi)

**Check ① to ② Crack Pressure Defined:** Gauge bar (psi) evident at ① at 16.4 cc/minute (1 cu. in./minute) attained at ②

**Temperature:** -40 to 120°C

**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 ssu)

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

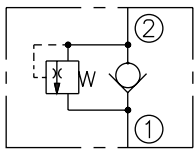
**Cavity:** VC10-2; See page 9.110.1

**Cavity Tool:** CT10-2XX; See page 8.600.1

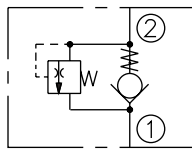
**Seal Kit:** SK10-2X-T; See page 8.650.1

### SYMBOLS

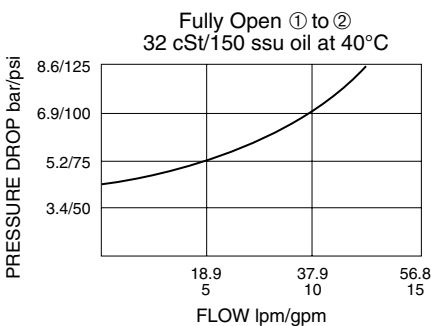
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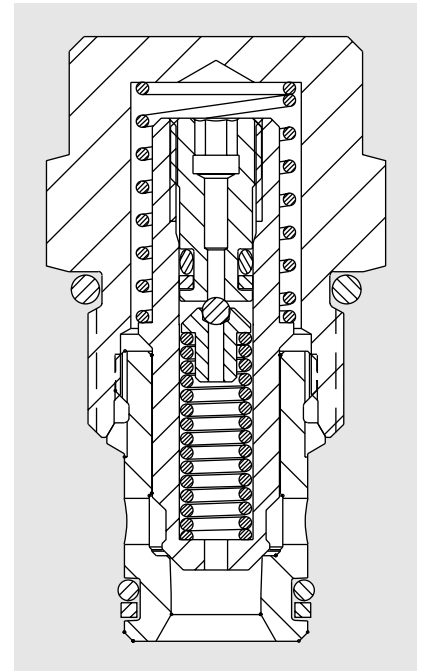
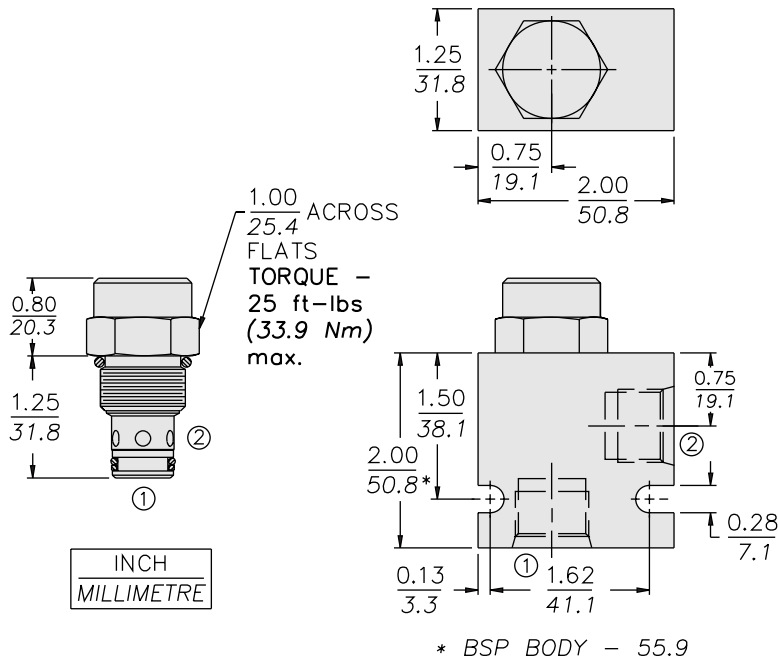
#### ISO:



### PERFORMANCE (Cartridge Only)



## DIMENSIONS



## MATERIALS

**Cartridge:** Weight: 0.08 kg. (0.18 lbs.); Steel with hardened work surfaces; Zinc-plated exposed surfaces; Buna N O-rings and polyester elastomer back-ups standard.

**Standard Ported Body:** Weight: 0.16 kg. (0.35 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); See page 8.010.1. Ductile iron and steel bodies available; dimensions may differ; consult factory.

## TO ORDER

