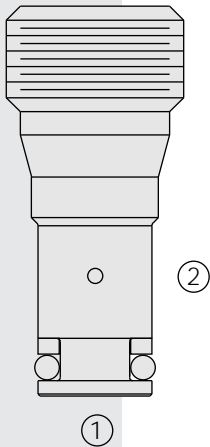


# TR04-B20 Thermal Relief Valve



**DESCRIPTION**

A screw-in, cartridge-style, poppet-type, thermal relief valve intended to prevent cylinder damage resulting from temperature induced pressure intensification. This valve is not intended to be used as a dynamic relief valve, or as protection against load-induced pressure spikes.

**OPERATION**

The **TR04-B20** blocks flow from ① to ② until sufficient pressure is present at ① to force the spring opposed poppet from its seat.

Pressure at port ② should not, at any time, be more than 500 psi above the pressure at port ①.

**FEATURES**

- Miniature size.
- Hardened parts for long life.
- Below surface mount.
- Low Leakage.

**RATINGS**

**Maximum Operating Pressure:** 414 bar (6000 psi)

**Leakage:** 1 drop/minute to 90% of crack setting

**Reseat Characteristic:** 10 drops/minute at 85% of pressure setting

**Temperature:** -40 to 120°C with Buna N 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

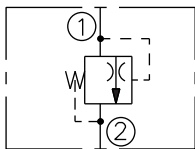
**Cavity:** VC04-B2; See page 9.104.1

**Cavity Tool:** CT04-B3xx; See page 8.600.1

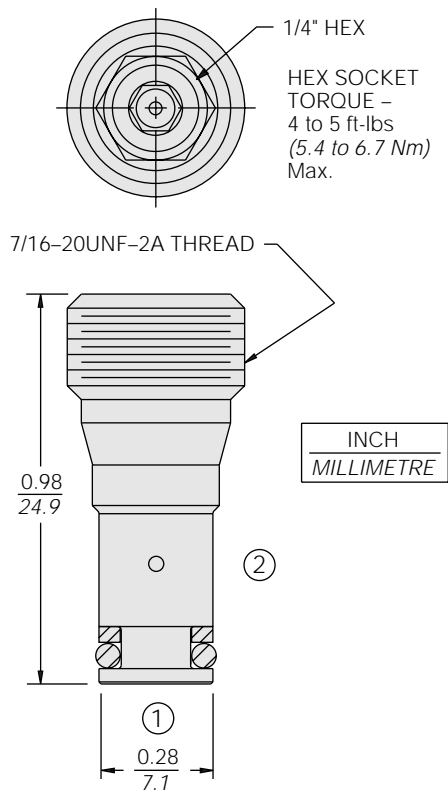
**Seal Kit:** SK04-B2x-B; See page 8.650.1

**SYMBOLS**

**USASI/ISO:**



**DIMENSIONS**



**MATERIALS**

**Cartridge:** Weight: 0.05 kg. (0.12 lbs.)  
 Steel with hardened work surfaces.  
 Zinc-plated exposed surfaces.  
 Buna N O-rings and TFE back-ups standard, Polyurethane optional.

**TO ORDER**

TR04-B20 - 0 - -

- Spring Setting**
- 40** 276 to 286 bar (4000 to 4150 psi)
  - 52** 359 to 369 bar (5200 to 5350 psi)
  - 60** 414 to 424 bar (6000 to 6150 psi)

Non-standard spring settings are available for OEM applications. Consult factory.

**Seals**

- N** Buna N (Standard for Spring Setting 40)
- V** Fluorocarbon (Optional for Spring Setting 40)
- P** Polyurethane (Standard for Spring Settings 52 and 60)