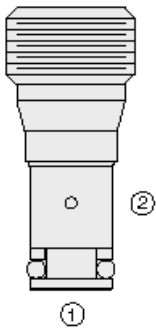




## Overview



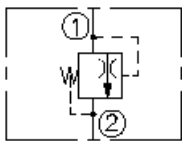
### Description

TR04-B20 is a screw-in, cartridge style, direct acting, poppet type, hydraulic thermal relief valve intended to prevent cylinder damage resulting from temperature induced pressure intensification. This valve is not intended to be used as a relief valve or as protection against load induced pressure spikes.

### Operation

The TR04-B20 blocks flow from port 1 to port 2 until sufficient pressure is present at port 1 to force the spring opposed poppet from its seat. Pressure at port 2 should not exceed 500 psi [34,5 bar] above the pressure at port 1. Pressure at port 2 is additive to pressure setting.

### Symbol



## Ratings

### Pressure Ratings

Pressure rating	427 bar (6200 psi)
Proof pressure	620.7 bar (9000 psi)
Burst pressure	1241 bar (18000 psi)

### Flow Ratings

Reseat characteristic	0.5 ml/min (10 drops/min)	- <b>Note:</b> Nominal 85% of crack pressure
Maximum internal leakage	0.15 ml/min (1 drops/min)	- <b>Note:</b> At 90% of nominal setting

### Temperature Ratings

Operating fluid temperature	-40 to 100 °C (-40 to 212 °F)	- <b>Note:</b> With buna N seals
	-26 to 204 °C (-15 to 400 °F)	- <b>Note:</b> With fluorocarbon seals
	-54 to 107 °C (-65 to 225 °F)	- <b>Note:</b> With polyurethane seals
Storage temperature	-40 to 71 °C (-40 to 160 °F)	
Ambient temperature	-40 to 71 °C (-40 to 160 °F)	

## Operating Parameters

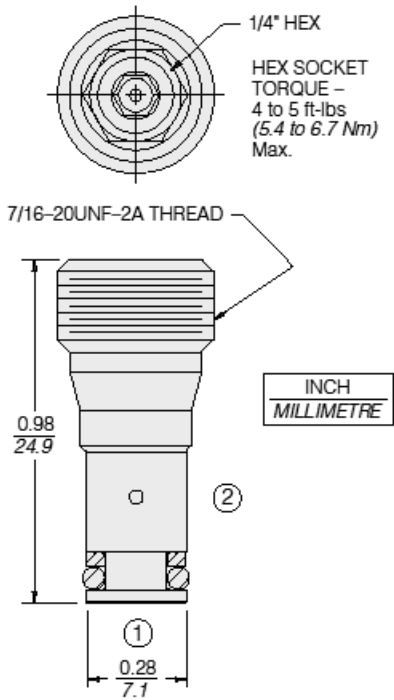
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

## Properties

Unit weight	0.09 kg (0.20 lb)
Internal wetted surface area	19 cm <sup>2</sup> (2.95 in <sup>2</sup> )



## Dimensions



## Installation Specifications

Cavity	VC04-B2
Cartridge installation torque	5.4 to 6.8 N-m (4 to 5 ft-lb)
Orientation restriction	None

## Accessories

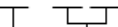
Seal kit	SK04-B2X-B SK04-B2X-M	- <b>Note:</b> X = seal option
Housings		



Order Code

TR04-B20 - 0 - -

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



**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)

**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)

POSITION	CODE	DESCRIPTION
		TR04-B20-H-J-R/S
H		Line Body
H	0	No Body
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	P	Polyurethane
J	U	PPDI Urethane
R		Spring
R	10	68.9 to 75.8 bar (1000 to 1100 psi) Spring Range
R	20	137.9 to 144.8 bar (2000 to 2100 psi) Spring Range
R	30	206.8 to 213.7 bar (3000 to 3100 psi) Spring Range
R	40	275.8 to 286.1 bar (4000 to 4150 psi) Spring Range
R	52	358.5 to 368.9 bar (5200 to 5350 psi) Spring Range
R	60	413.7 to 424 bar (6000 to 6150 psi) Spring Range
S		Setting
S	MXXX	Spring Setting in XXX bar
S	XX	Spring Setting in XX psi (x 100)