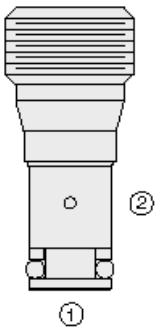




Overview



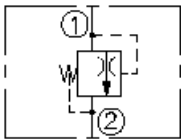
Description

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) | - Note: Nominal 85% of crack pressure |
| Maximum internal leakage | 0.15 ml/min (1 drops/min) | - Note: At 90% of nominal setting |

Temperature Ratings

| | | |
|-----------------------------|-------------------------------|----------------------------------------|
| Operating fluid temperature | -40 to 100 °C (-40 to 212 °F) | - Note: With buna N seals |
| | -26 to 204 °C (-15 to 400 °F) | - Note: With fluorocarbon seals |
| | -54 to 107 °C (-65 to 225 °F) | - Note: 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

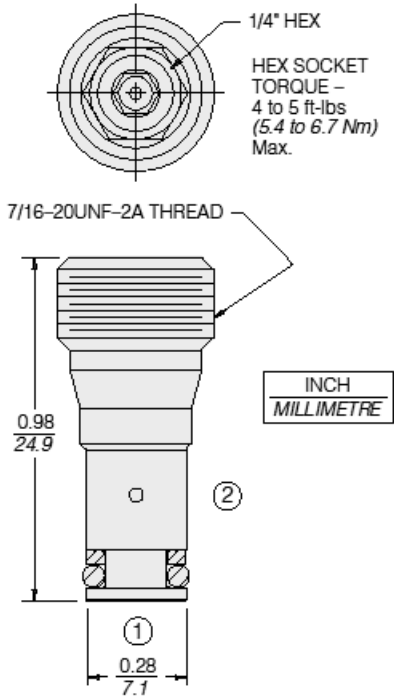
| | |
|---------------------------------------|------------------------------------------------------------------------|
| Fluids | Mineral based or synthetic hydraulic fluid with lubricating properties |
| Fluid viscosity range | 7.4 to 420 cSt |
| Maximum operating contamination level | 18/16/13 per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

Properties

| | |
|------------------------------|--------------------------------------------|
| Unit weight | 0.09 kg (0.20 lb) |
| Internal wetted surface area | 19 cm ² (2.95 in ²) |



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

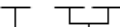
| | | |
|----------|-----------------------|--------------------------------|
| Seal kit | SK04-B2X-B SK04-B2X-M | - Note: X = seal option |
|----------|-----------------------|--------------------------------|



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)

Model Options

TR04-B20-H-J-R/S

H Line Body

| CODE | DESCRIPTION |
|------|-------------|
| 0 | No Body |

J Seal

| CODE | DESCRIPTION |
|------|---------------|
| N | Buna-N |
| V | Fluorocarbon |
| P | Polyurethane |
| U | PPDI Urethane |

R Spring

| CODE | DESCRIPTION |
|------|----------------------------------------------------|
| 10 | 68.9 to 75.8 bar (1000 to 1100 psi) Spring Range |
| 20 | 137.9 to 144.8 bar (2000 to 2100 psi) Spring Range |
| 30 | 206.8 to 213.7 bar (3000 to 3100 psi) Spring Range |
| 40 | 275.8 to 286.1 bar (4000 to 4150 psi) Spring Range |
| 52 | 358.5 to 368.9 bar (5200 to 5350 psi) Spring Range |
| 60 | 413.7 to 424 bar (6000 to 6150 psi) Spring Range |

S Setting

| CODE | DESCRIPTION |
|------|----------------------------------|
| MXXX | Spring Setting in XXX bar |
| XX | Spring Setting in XX psi (x 100) |