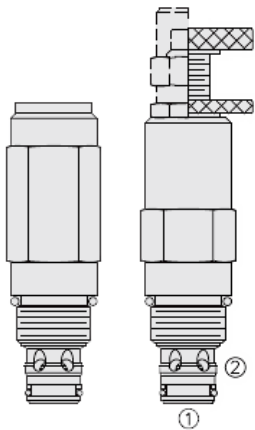




Overview



Description

RV50-26X is a screw in, cartridge style, pilot operated (two stage), spool type hydraulic relief valve, intended for use as a pressure limiting device in demanding hydraulic circuits which require fast response and low hysteresis.

Operation

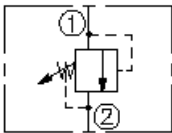
The RV50-26X blocks flow from port 1 to port 2 until sufficient pressure is present at port 1 to force the piloting relief off its seat, allowing the main (second stage) spool to shift, opening port 1 to port 2.

note: this valve cannot be used in cross-over relief applications.

Features

- Adjustments cannot be backed out of the valve.
- Adjustments prohibit springs from going solid.
- Hardened spool and cage for long life.
- Rapid, smooth response to pressure changes.
- Industry-common size.

Symbol



Ratings

Pressure Ratings

| | | |
|-------------------------|--------------------------------------|---|
| Pressure rating | 344.7 bar (5000 psi) | |
| Proof pressure | 517.1 bar (7500 psi) | |
| Burst pressure | 1037.7 bar (15050 psi) | |
| Relief pressure defined | Pressure evident at 7.57 lpm (2 gpm) | |
| Reseat pressure | Nominal 90% of crack | |
| Relief pressure range | 20.7 to 344.7 bar (300 to 5000 psi) | - Note: From zero to maximum control current |

Flow Ratings

| | | |
|--------------------------|-------------------------------------|--|
| Flow rating | 113.6 lpm (30 gpm) | - Note: At max pressure |
| Maximum internal leakage | 147 ml/min (9 in ³ /min) | - Note: Port 2, at 85% of max crack |

Other Ratings

| | |
|------------|---------------------------------------|
| Cycle life | 500000 cycles at 241.3 bar (3500 psi) |
|------------|---------------------------------------|

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 |
| | -54 to 107 °C (-65 to 225 °F) | - Note: With urethane seals |
| Storage temperature | -40 to 70 °C (-40 to 160 °F) | |
| Ambient temperature | -40 to 70 °C (-40 to 160 °F) | |

Operating Parameters

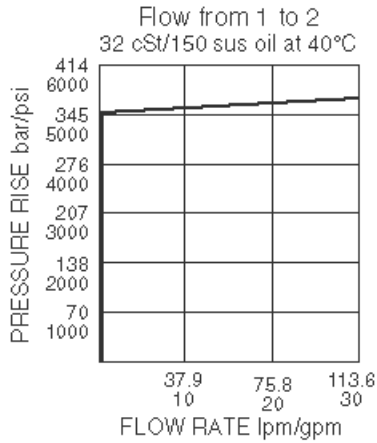
| | |
|---------------------------------------|--|
| Fluids | Mineral based or synthetic with lubricating properties |
| Fluid viscosity range | 7.4 to 420 cSt |
| Maximum operating contamination level | 18/16/13 per ISO 4406 |



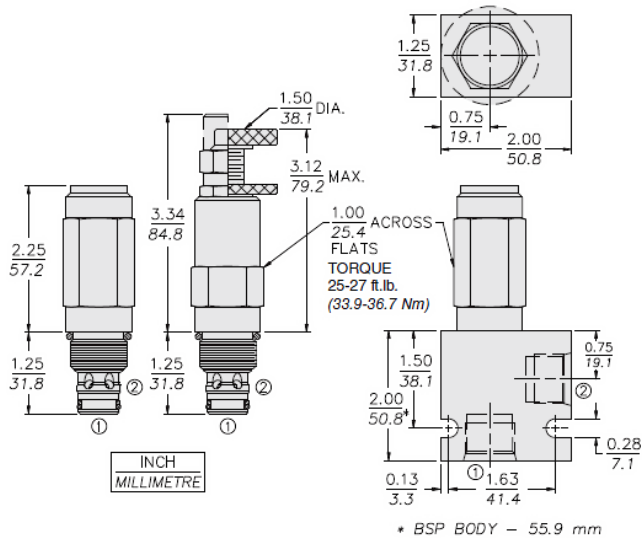
Properties

| | | |
|------------------------------|---|------------------------|
| Unit weight | 0.25 kg (0.55 lb) | - Note: A |
| | 0.27 kg (0.60 lb) | - Note: B |
| | 0.29 kg (0.65 lb) | - Note: C I |
| | 0.24 kg (0.53 lb) | - Note: F h |
| Internal wetted surface area | 141 cm ² (21.8 in ²) | - Note: A b c I |
| | 161 cm ² (24.9 in ²) | - Note: F h |

Performance



Dimensions



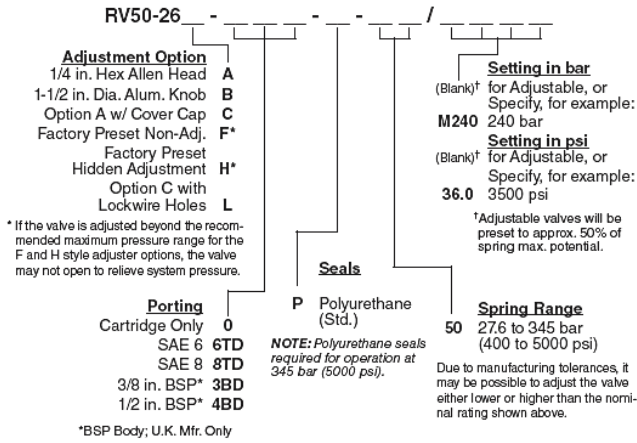
Installation Specifications

| | |
|-------------------------------|-----------------------------------|
| Cavity | VC10-2 |
| Cartridge installation torque | 47.6 to 50.2 N-m (35 to 37 ft-lb) |
| Maximum allowable torque | 67.8 N-m (50 ft-lb) |
| H style plug torque | 10.8 to 13.6 N-m (8 to 10 ft-lb) |
| Orientation restriction | None |

Accessories

| | | |
|----------|-----------|-------------------------|
| Seal kit | SK10-2X-B | - Note: X=n,v,p |
| | SK10-2U-O | - Note: Urethane |

Order Code



Model Options

RV50-26F-H-J-R/S

F Adjustment Option

| CODE | DESCRIPTION |
|------|---|
| A | 1/4" Hex Allen Head |
| B | 1-1/2" Diameter Aluminum Knob with Aluminum Lock Knob |
| C | 1/4" Hex Allen Head with Cover Cap |
| F | Factory Preset Non-Adjustable |
| H | Factory Preset Hidden Adjustment |
| L | 1/4" Hex Allen Head with Cover Cap and Lockwire Holes |

H Line Body

| CODE | DESCRIPTION |
|------|----------------------------|
| 0 | No Body |
| 6T | Aluminum SAE 6 |
| 8T | Aluminum SAE 8 |
| 6TD | Ductile Iron SAE 6 |
| 8TD | Ductile Iron SAE 8 |
| 2B | Aluminum BSPP 1/4" (2) |
| 3B | Aluminum BSPP 3/8" (3) |
| 4B | Aluminum BSPP 1/2" (4) |
| 4BD | Ductile Iron BSPP 1/2" (4) |

J Seal

| CODE | DESCRIPTION |
|------|--------------|
| N | Buna-N |
| V | Fluorocarbon |
| P | Polyurethane |

R Spring

| CODE | DESCRIPTION |
|------|--|
| 50 | 27.6 to 344.7 bar (300 to 5000 psi) Spring Range |

S Setting

| CODE | DESCRIPTION |
|------|---------------------------|
| MXXX | Spring Setting in XXX bar |

**CODE DESCRIPTION**

| | |
|----|----------------------------------|
| XX | Spring Setting in XX psi (x 100) |
|----|----------------------------------|