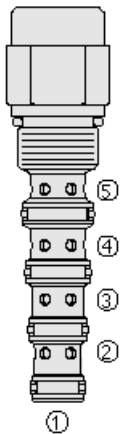




Overview



Description

The PD10-50 is a screw-in, cartridge style, pilot operated, spool-type hydraulic directional valve.

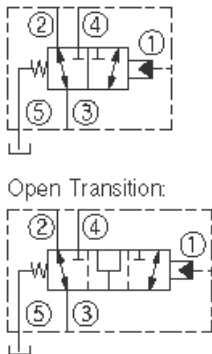
Operation

In neutral position flow is allowed between ports 2 and 3, while blocking flow at port 4. On remote pilot signal at port 1, the valve shifts to allow flow between ports 3 and 4, while blocking flow at port 2. The spring chamber is vented to the tank through port 5. The vented spring chamber allows the valve to be fully pressurized at ports 1, 2, 3, and 4 without affecting required pilot pressure. Pressure at port 5 will affect required pilot pressure.

Features

- Hardened spool and cage for long life.
- Industry common cavity.

Symbol



Ratings

Pressure Ratings

Pressure rating 350 bar (5075 psi)

Flow Ratings

Flow rating 37.9 lpm (10 gpm)

Maximum internal leakage 82 ml/min (5 in³) - **Note:** At 207 bar (3000 psi)
0 lpm (0 gpm) - **Note:** From port 1 to 2 with sealed spool

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

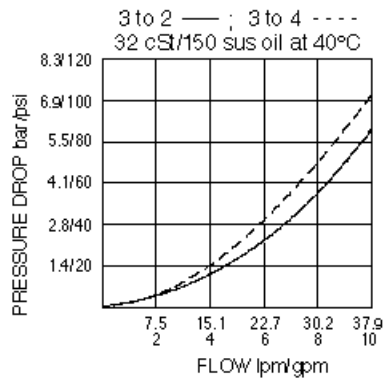
Operating Parameters

| | |
|---------------------------------------|--|
| Fluids | Mineral based or synthetic hydraulic fluid with lubricating properties |
| Fluid viscosity range | 7.4 to 420 cSt |
| Maximum operating contamination level | 20/18/14 per ISO 4406 |

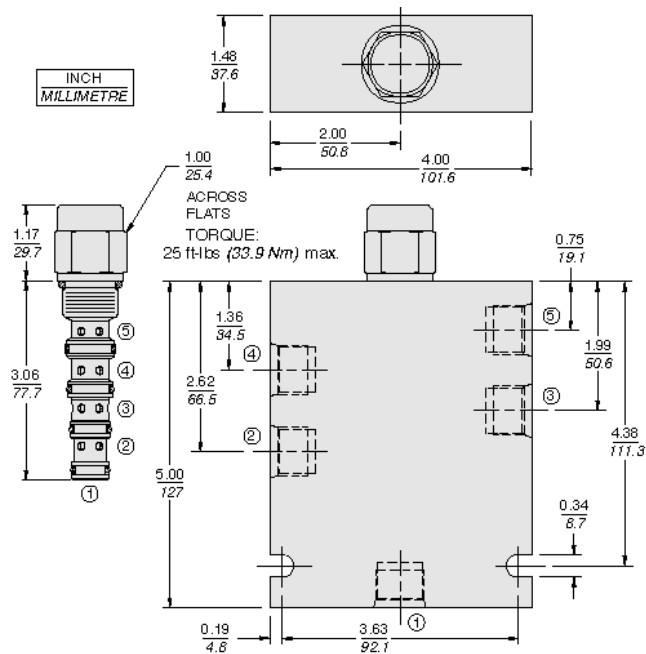
Properties

| | |
|------------------------------|---|
| Unit weight | 0.20 kg (0.45 lb) |
| Internal wetted surface area | 3355 mm ² (5.2 in ²) |

Performance



Dimensions



Installation Specifications

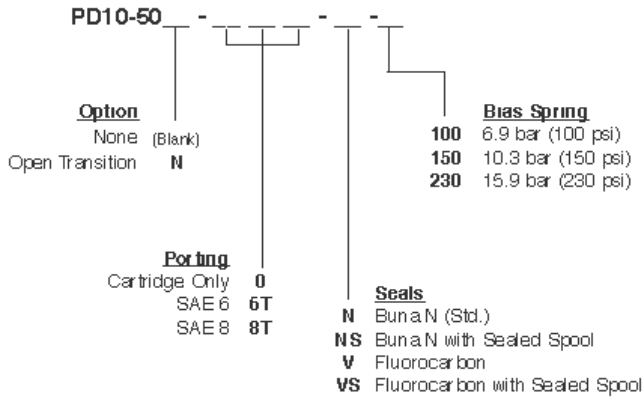
| | |
|-------------------------------|-----------------------------------|
| Cavity | VC10-5 |
| Cartridge installation torque | 32.5 to 35.3 N-m (24 to 26 ft-lb) |
| Orientation restriction | None |

Accessories

| | | |
|----------|--------------|---------------------------------|
| Seal kit | SK10-5X-MMMM | - Note: (x= seal option) |
|----------|--------------|---------------------------------|



Order Code



Model Options

PD10-50B-H-J-R

B Spool Option

| CODE | DESCRIPTION |
|-------|-----------------------------|
| BLANK | Standard |
| N | Normally Open in Transition |

H Line Body

| CODE | DESCRIPTION |
|------|----------------|
| 0 | No Body |
| 6T | Aluminum SAE 6 |
| 8T | Aluminum SAE 8 |

J Seal

| CODE | DESCRIPTION |
|------|-----------------------------------|
| N | Buna-N |
| NS | Buna-N with a Sealed Spool |
| V | Fluorocarbon |
| VS | Fluorocarbon with a Sealed Spool |
| P | Polyurethane |
| PS | Polyurethane with a Sealed Spool |
| U | PPDI Urethane |
| US | PPDI Urethane with a Sealed Spool |

R Spring

| CODE | DESCRIPTION |
|------|---------------------|
| 100 | 100 psi Bias Spring |
| 150 | 150 psi Bias Spring |
| 230 | 230 psi Bias Spring |