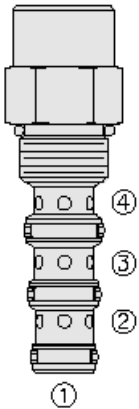




Overview



Description

The pd10-42xx is a screw-in, cartridge style, pilot operated, spool-type hydraulic directional valve.

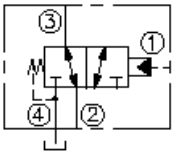
Operation

In neutral position the valve allows flow from port 3 to 2, while port 4 is blocked. On remote pilot signal at port 1 the valve shifts to open from 3 to 4, while blocking flow to port 2. Since port 4 is common to the spring chamber, pressure on port 4 will directly (1:1) affect the pilot pressure required and must be added to the bias spring value.

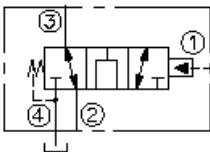
Features

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

Symbol



Open Transition:



Ratings

Pressure Ratings

Pressure rating 241 bar (3500 psi)

Flow Ratings

Maximum internal leakage 82 ml/min (5 in³/min) - **Note:** At from port 1 to 2 or port 2 to 3; zero leakage from port 1 to 2 with sealed spool 207 bar (3000 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 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

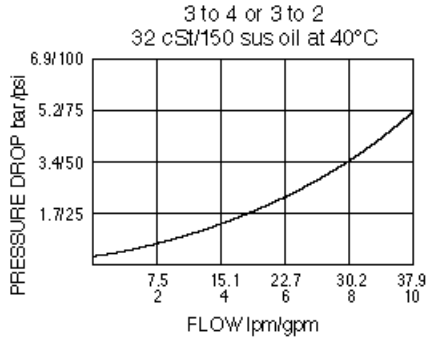
| | | |
|---------------------------------------|--|--|
| Fluids | Mineral based or synthetic hydraulic fluid with lubricating properties | |
| Fluid viscosity range | 7.4 to 420 cSt | |
| Maximum operating contamination level | 20/18/14 per ISO 4406 | |

Properties

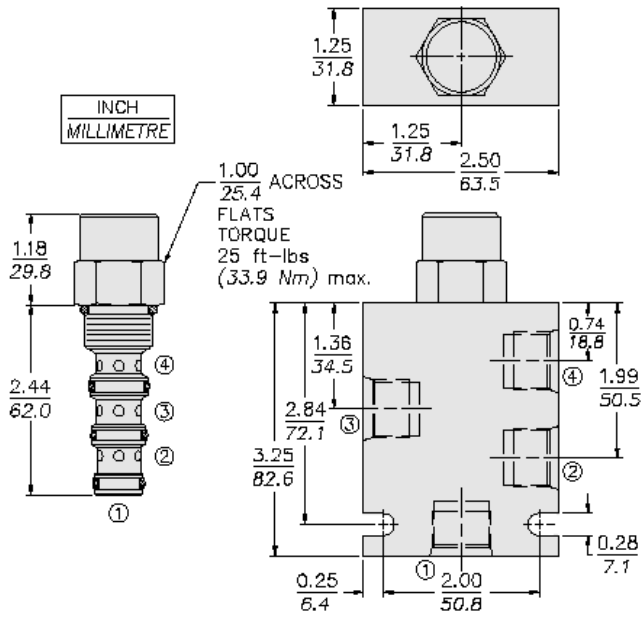
| | | |
|------------------------------|---|------------------------------|
| Unit weight | 0.19 kg (0.42 lb) | - Note: Pd10-42/42n |
| | 0.27 kg (0.60 lb) | - Note: Pd10-42t/42nt |
| Internal wetted surface area | 190 cm ² (29.5 in ²) | - Note: Pd1042/42n |
| | 226 cm ² (35.0 in ²) | - Note: Pd1042t/42nt |



Performance



Dimensions



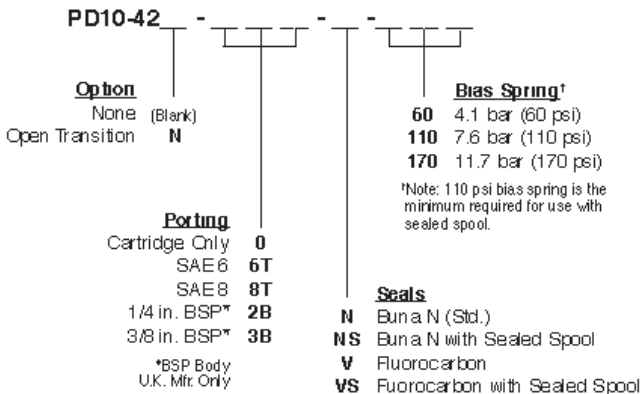
Installation Specifications

| | |
|-------------------------------|-----------------------------------|
| Cavity | VC10-4 |
| Cartridge installation torque | 32.5 to 35.3 N-m (24 to 26 ft-lb) |
| Orientation restriction | None |

Accessories

Seal kit SK10-4X-MMM - Note: X = seal option

Order Code



Model Options

PD10-42BC-H-J-R



B Spool Option

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

C Tall Cap

| CODE | DESCRIPTION |
|-------|--------------|
| BLANK | Standard Cap |
| T | Tall Cap |

H Line Body

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

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 |
|------|---------------------|
| 60 | 60 psi Bias Spring |
| 110 | 110 psi Bias Spring |
| 130 | 130 psi Bias Spring |
| 170 | 170 psi Bias Spring |
| 200 | 200 psi Bias Spring |