PD16-S51   Piloted 3-Way Spool

HydraForce.com
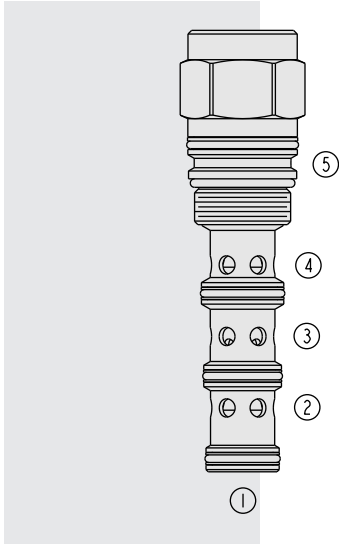
DESCRIPTION

A screw-in, cartridge-style, pilot-operated, spool-type, hydraulic directional valve.

OPERATION

When in neutral the **PD16-S51** allows flow between ports 2, 3 and 4. On remote pilot signal at 1, the valve's spool shifts to block all ports. 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.
• 70, 90 and 140 psi bias springs available.

RATINGS

Operating Pressure: 240 bar (3500 psi)

Flow: 0–151 lpm (0–40 gpm); See Performance Chart

Internal Leakage at 207 bar (3000 psi): 410 ml/minute (25 cu. in./minute) between ports 3 and 2. 820 ml/minute (50 cu. in./minute) between ports 3 and 4.

Pilot Pressure Required: 4.1 bar (60 psi) mimimum

Oil Volume Required to Full Shift: 1.83 cc (0.11 cu. in.)

Temperature: -40 to 120°C

Filtration: See page 9.010.1

Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

Installation: No restrictions; See page 9.020.1 A 6-way body can be used for this valve by plugging body port 2 and using body ports 3, 4, 5 and 6 as ports 2, 3, 4 and 5 for the valve.
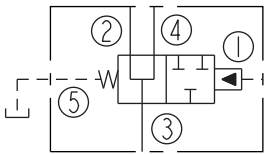
Cavity: VC16-S5; See page 9.116.1
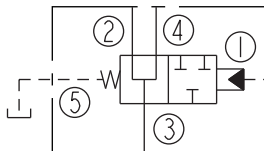
Cavity Tool: CT16-S5XX; See page 8.600.1
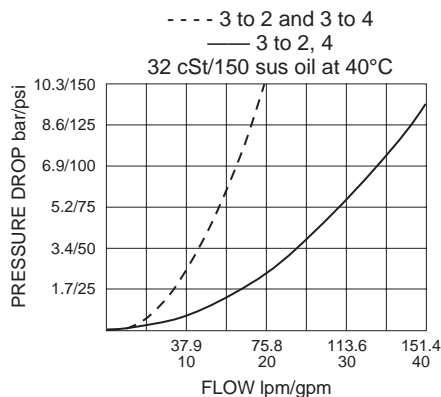
Seal Kit: SK16-S5X-BMMM; See page 8.650.1
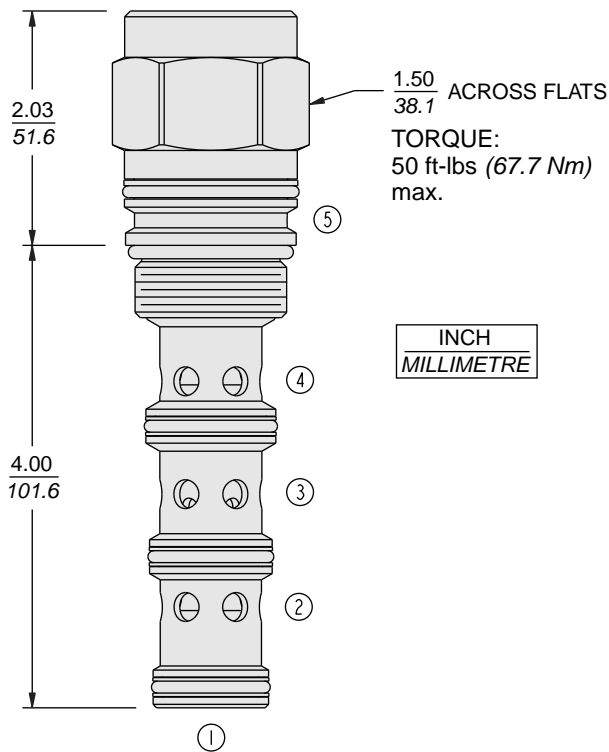
SYMBOLS

USASI:

ISO:

PERFORMANCE (Cartridge Only)

- - - - 3 to 2 and 3 to 4
—— 3 to 2, 4
32 cSt/150 sus oil at 40°C

DIMENSIONS

2.03
51.6

$\frac{1.50}{38.1}$ ACROSS FLATS

TORQUE:
50 ft-lbs *(67.7 Nm)*
max.

⑤

INCH
MILLIMETRE

④

4.00
101.6

③

②

①

MATERIALS

Cartridge: Weight: 0.25 kg. (0.55 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and polyester
elastomer back-ups standard.

Ported Body: Consult factory. A 6-way
body can be used for this valve by
plugging body port 2 and using body
ports 3, 4, 5 and 6 as ports 2, 3, 4
and 5 for the valve.

TO ORDER

PD16-S51 - ___ ___ ___ **-** ___ **-** ___ ___ ___

Bias Spring†
70 4.8 bar (70 psi)
90 6.2 bar (90 psi)
140 9.7 bar (140 psi)
Optional bias springs considered
on OEM request.

†Note: 90 psi bias spring is the
minimum required for use with
sealed spool.

Porting
Cartridge Only **0**

Seals
N Buna N (Std.)
V Fluorocarbon
NS Buna N w/Sealed Spool 1 to 2 only
VS Fluorocarbon w/Sealed Spool 1 to 2 only