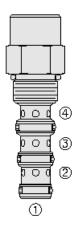
Overview



Description

The PD10-45 is a screw-in, cartridge style, pilot-operated, spool type, hydraulic directional valve.

Operation

In neutral position the valve allows flow from port 2 to 3 bidirectionally. On remote pilot signal at port 1, the valve's spool shifts to block flow from port 2 to 3. The spring chamber is vented to port 4 which is internally o-ring sealed from the cartridge flow paths. 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



Ratings

Pressure Ratings

241 bar (3500 psi) Pressure rating

Flow Ratings

- Note: See performance graph Flow rating

82 ml/min (5 in³/min) - Note: From port 1 to 2 or port 2 to 3 (when shifted) Maximum internal leakage

at 207 bar (3500 psi)

0 lpm (0 gpm) - Note: From port 1 to 2 with sealed spool

Temperature Ratings

-40 to 100 °C (-40 to 212 °F) - Note: With buna N seals Operating fluid temperature - Note: With viton seals

-26 to 204 °C (-15 to 400 °F) -54 to 107 °C (-65 to 225 °F)

- Note: With polyurethane) seals

-40 to 70 °C (-40 to 160 °F) Storage temperature

Ambient temperature -40 to 70 °C (-40 to 160 °F)

Operating Parameters

Mineral based or synthetic hydraulic fluid with lubricating properties Fluids

7.4 to 420 cSt Fluid viscosity range

Maximum operating contamination 20/18/14 per ISO 4406

level

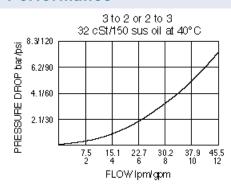
Properties

Unit weight 0.20 kg (0.43 lb) 191 cm² (29.6 in²) Internal wetted surface area

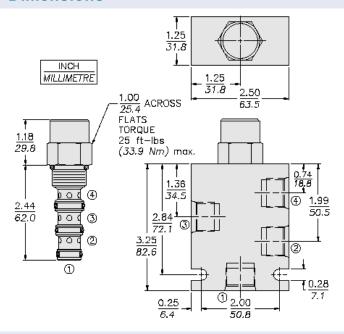
PD10-45 25SEP2024 16:39 hydraforce.com



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

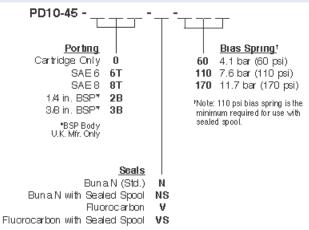
Seal kit SK10-4N-MMM - Note: Buna N
SK10-4V-MMM - Note: Viton
SK10-4HV-MMM - Note: Viton

SK10-4P-MMM - Note: Polyurethane

hydraforce.com 25SEP2024 16:39 PD10-45



Order Code



Model Options

PD10-45-H-J-R

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
Р	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

hydraforce.com 25SEP2024 16:39 PD10-45