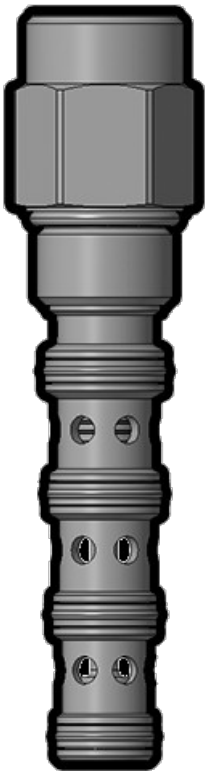


Overview



Description

The PD12-S50X is a screw-in, cartridge style, pilot operated, spool type, hydraulic directional valve.

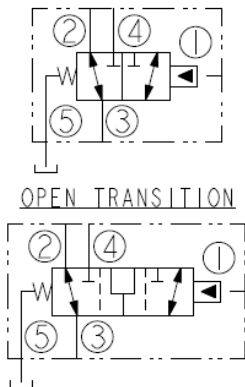
Operation

In the 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.
- Optional sealed pilot and spring chamber.

Symbol





Ratings

Pressure Ratings

Pressure rating 241 bar (3500 psi)

Flow Ratings

Flow rating - **Note:** See performance graph
Maximum internal leakage 328 ml/min (20 in³/min) - **Note:** At 207 bar (3000 bar). Zero leakage 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 fluorocarbon 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)

Other Ratings

Corrosion protection 960 hr salt spray per ASTM B117 (GPD12-S50X)

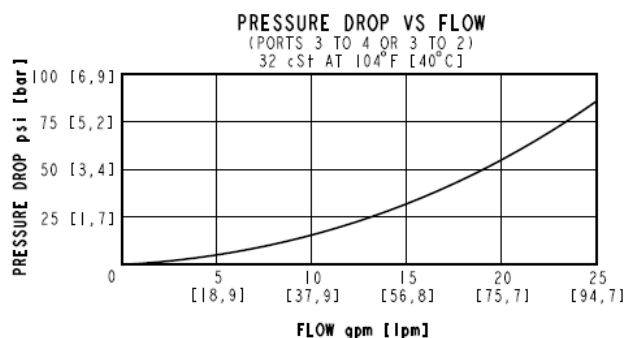
Operating Parameters

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

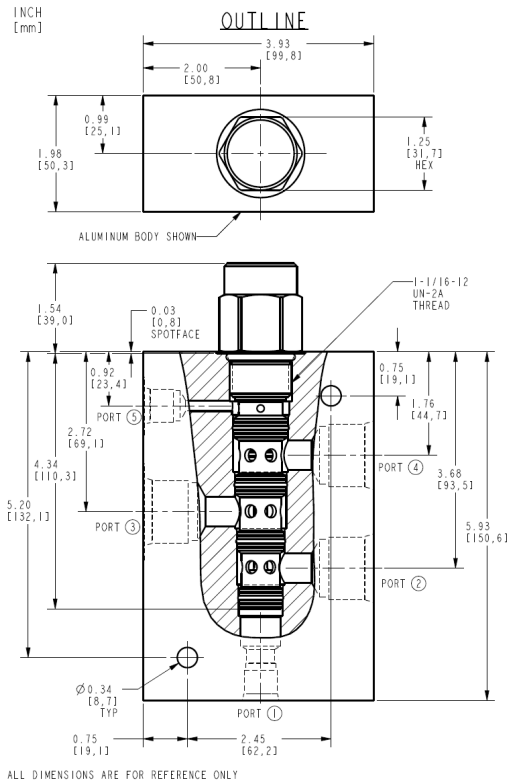
Properties

Unit weight 0.44 kg (0.97 lb)
Internal wetted surface area 335.5 cm² (52 in²)

Performance



Dimensions



Installation Specifications

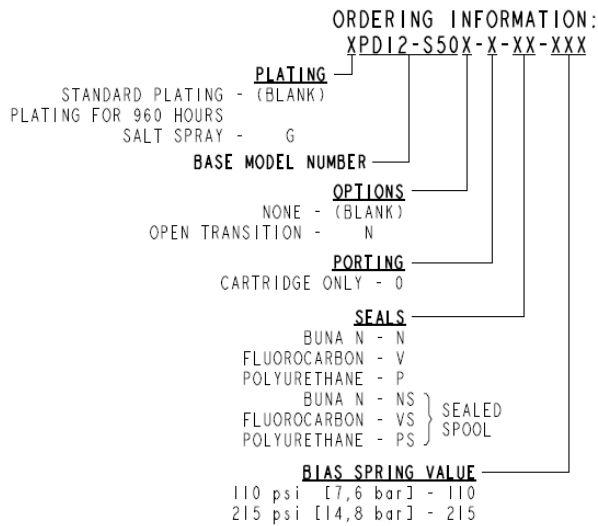
Cavity	VC12-5
Cartridge installation torque	44.7 to 50.2 N-m (33 to 37 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK12-S5X-MMMM	- Note: (X = seal option)
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Order Code



Model Options

PD12-S50B-H-J-R

B Spool Option

CODE	DESCRIPTION
BLANK	Standard
N	Normally Open in Transition

H Line Body

CODE	DESCRIPTION
0	No Body
10T	Aluminum SAE 10

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
110	110 psi Bias Spring
215	215 psi Bias Spring