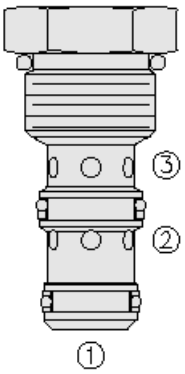
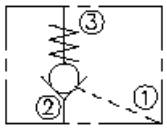
PILOT OPERATED CHECK VALVE

Overview



SYMBOL



Description

The PC10-30 is a screw-in, cartridge style, pilot operated, hydraulic check valve.

Operation

The cartridge valve allows free flow from ports 2 to 3, while normally blocking flow from ports 3 to 2. Flow will be allowed from ports 3 to 2 when pressure is applied at port 1. The pilot ratio is 4 to 1.

Features

- Hardened seat for long life and low leakage.
- Optional sealed piston.
- Optional spring ranges.
- Industry common cavity.

Ratings

Pressure Ratings

Pressure rating: 241 bar (3500 psi)

Flow Ratings

Maximum internal leakage: 0.10 ml/min (2 drops/min) note: At 207 bar (3000 psi)between ports 3 and 2

115 ml/min (7 in^3/min) note: At 207 bar (3000 psi)between ports 2 and 1

0 ml/min (0 in^3/min) note: Between ports 2 and 1 with sealed piston

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 and urethane seals

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

Ambient temperature: -40 to 90 °C (-40 to 194 °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

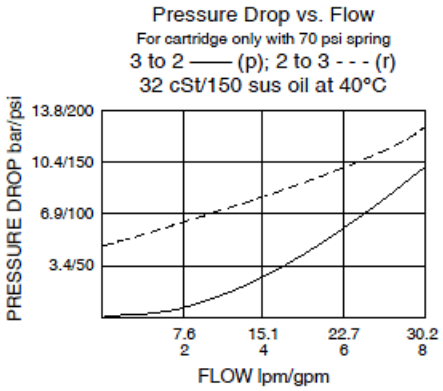
Properties

Unit weight: 0.10 kg (0.21 lb)

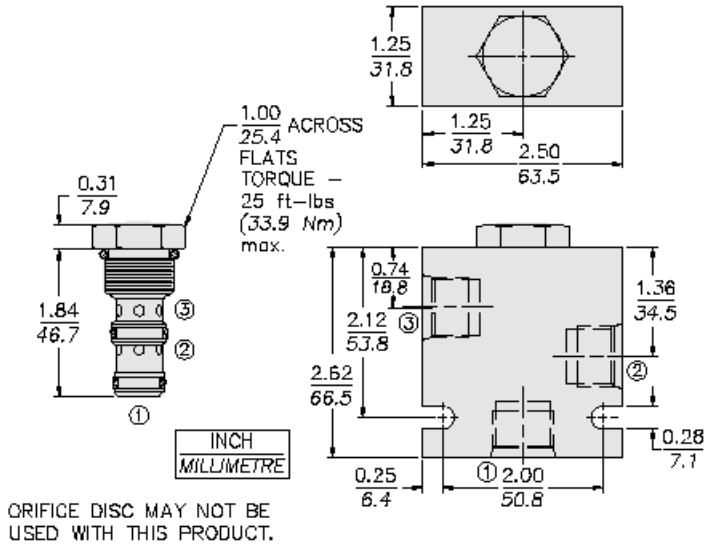
Internal wetted surface area: 104 cm^2 (16.2 in^2)

PILOT OPERATED CHECK VALVE

Performance



Dimensions



Installation Specifications

Cavity: VC10-3

10-size-3-way Cavities

Cartridge installation torque: 32.6 to 35.4 N-m (24 to 26 ft-lb)

Maximum allowable torque: 67.8 N-m (50 ft-lb)

Orientation restriction: None

Accessories

Seal kit: SK10-3N-TM note: Buna N

SK10-3V-TM note: Fluorocarbon

SK10-3P-TM note: Polyurethane

SK10-3U-00 note: Urethane

Seal kit installation instructions

PILOT OPERATED CHECK VALVE

Housings: Available 10-3w valve bodies

Order Code

PC10-30- ___ - ___ - ___

Porting

Cartridge Only	0
SAE 6	6T
SAE 8	8T
1/4 in. BSP*	2B
3/8 in. BSP*	3B

*BSP Body; U.K. Mfr. Only

Seals

N	Buna N (Std.)
NS	Buna N with Sealed Piston: 6.2 bar (90 psi) minimum spring
V	Fluorocarbon
VS	Fluorocarbon with Sealed Piston: 6.2 bar (90 psi) minimum spring
P	Polyurethane
PS	Polyurethane with Sealed Piston: 6.2 bar (90 psi) minimum spring

Bias Spring

(Blank)	2.1 bar/30 psi (Std.)*
70	4.8 bar/70 psi
90	6.2 bar/90 psi
120	8.3 bar/120 psi
270	18.6 bar/270 psi

Note: Other bias spring pressures available for OEM applications. Consult factory.

* PC10-30 valves built with standard 30 psi spring are not stamped with spring rating. Other spring ratings are stamped on valve.

Model Options

PC10-30-H-J-R

H Line Body

CODE	DESCRIPTION
0	No Body
6T	Aluminum SAE 6
8T	Aluminum SAE 8
6TD	Ductile Iron SAE 6
8TD	Ductile Iron SAE 8
3B	Aluminum BSPP 3/8" (3)
3BD	Ductile Iron BSPP 3/8" (3)

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
70	70 psi Bias Spring
90	90 psi Bias Spring
120	120 psi Bias Spring
270	270 psi Bias Spring
BLANK	30 psi Bias Spring