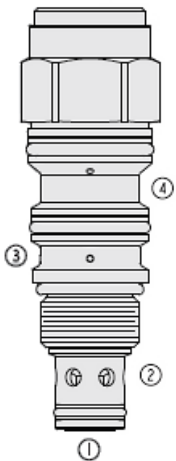




Overview



Description

The HPC10-J49 is a high pressure, 2-way, bi-directional, pilot-to-close, balanced poppet-type, screw-in, cartridge style, hydraulic directional element designed to function as a load holding or blocking valve in applications requiring low internal leakage.

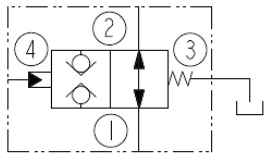
Operation

In the unpiloted state, the valve allows flow from ports 1 to 2 bi-directionally. On remote pilot signal at port 4, the valve shifts to block flow from ports 1 to 2 bi-directionally. The spring chamber is vented to port 3. Pressure at port 3 will directly affect the pilot pressure required to shift the valve and must be added. The hydraulically balanced poppet will allow ports 1 and 2 to be fully pressurized without affecting required pilot pressure to actuate the valve. With port 3 vented the valve will fully shift with a minimum pilot pressure of 250 psi [17 bar].

Features

- Bi-directional flow.
- Balanced poppet.
- Low internal leakage.
- All HyPerformance products are tested to the rigorous standards of the NFPA specification T2.6.1.
- All HyPerformance valves are tested at a verification level of 90% and an assurance of 99%.

Symbol



Ratings

Pressure Ratings

Pressure rating	350 bar (5075 psi)	- Note: Port 1 (work)
	420 bar (6090 psi)	- Note: 10% cycle life
	350 bar (5075 psi)	- Note: Port 2 (work)
	420 bar (6090 psi)	- Note: 10% cycle life
	207 bar (3000 psi)	- Note: Port 4 (pilot)
Proof pressure	69 bar (1000 psi)	- Note: Port 3 (tank)
	690 bar (10000 psi)	
Burst pressure	1380 bar (20000 psi)	

Flow Ratings

Flow rating	76 lpm (20 gpm)	
Maximum internal leakage	10 drops/min	- Note: At 500 psi [35 bar] and 5075 psi [350 bar] between ports 1 and 2

Other Ratings

Cycle life	Two million cycles (one million cycles in each flow direction)
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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 urethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 90 °C (-40 to 194 °F)	

Operating Parameters

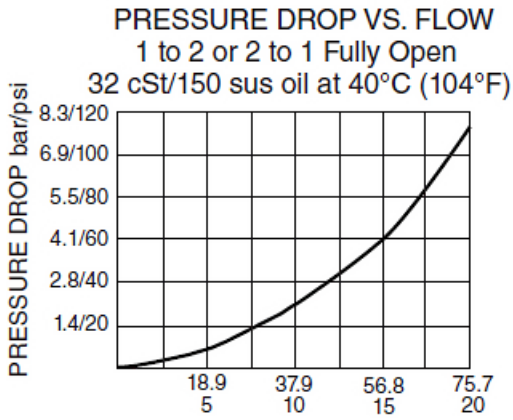
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406



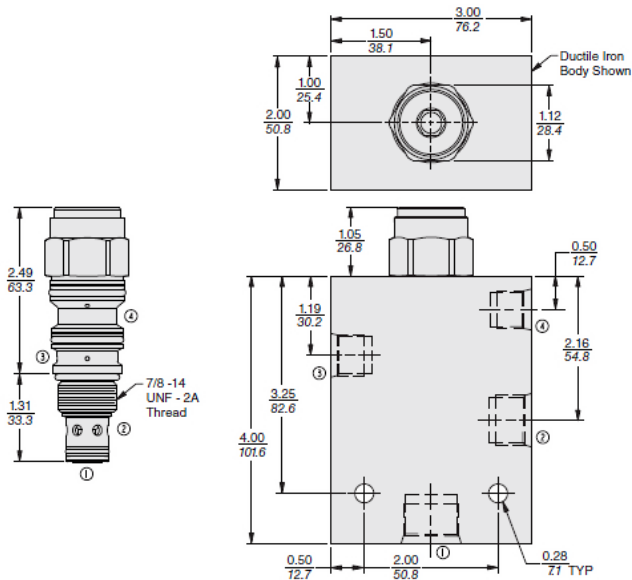
Properties

Unit weight	0.3 kg (0.65 lb)
Internal wetted surface area	282 cm ² (43.7 in ²)

Performance



Dimensions



Installation Specifications

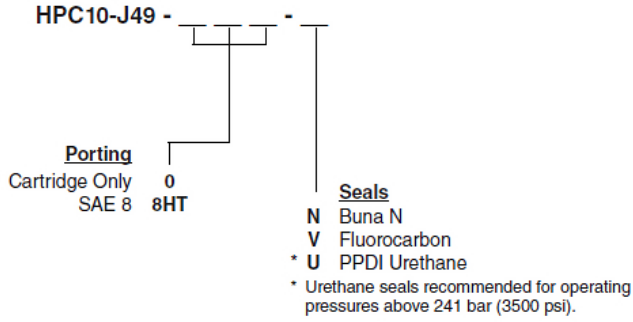
Cavity	HVC10-j4	
Cartridge installation torque	102 to 115 N-m (75 to 85 ft-lb)	- Note: Steel/ductile iron cavity
Orientation restriction	None	

Accessories

Seal kit	Hsk10-j4n-btm	- Note: Buna N
	Hsk10-j4v-btm	- Note: Fluorocarbon
	Hsk10-j4u-ooo	- Note: Urethane



Order Code



Model Options

HPC10-J49-H-J

H Line Body

CODE	DESCRIPTION
0	No Body
8HT	Ductile Iron SAE 8

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
U	PPDI Urethane