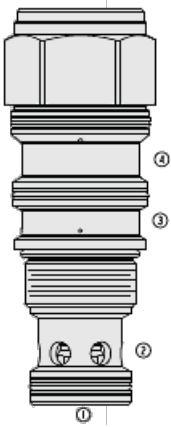




Overview



Description

The HPC42-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.

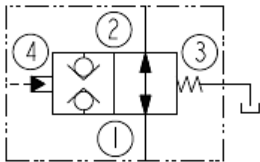
Operation

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 intended to be connected to tank for lubrication of internal parts. 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 zero pressure at port 3 the valve will fully shift with a minimum pilot pressure of 200 psi [14 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) 420 bar (6090 psi)	- Note: 10% cycle life
Proof pressure	690 bar (10000 psi)	
Burst pressure	1380 bar (20000 psi)	

Flow Ratings

Flow rating	380 lpm (100 gpm)
Maximum internal leakage	15 drops/min - Note: At 500 psi [35 bar] and 5075 psi [350 bar] between ports 1 and 2 zero from ports 3 and 4

Other Ratings

Cycle life	2.0 million cycles (1 million in each direction) - 35 bar (500 psi) 345 bar (5000 psi)
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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

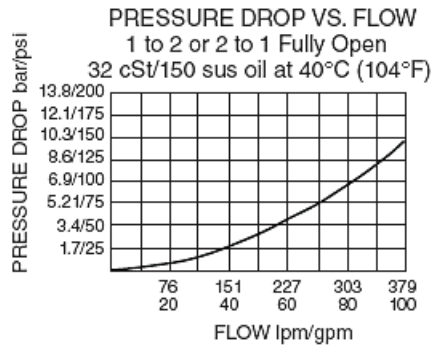
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

Properties

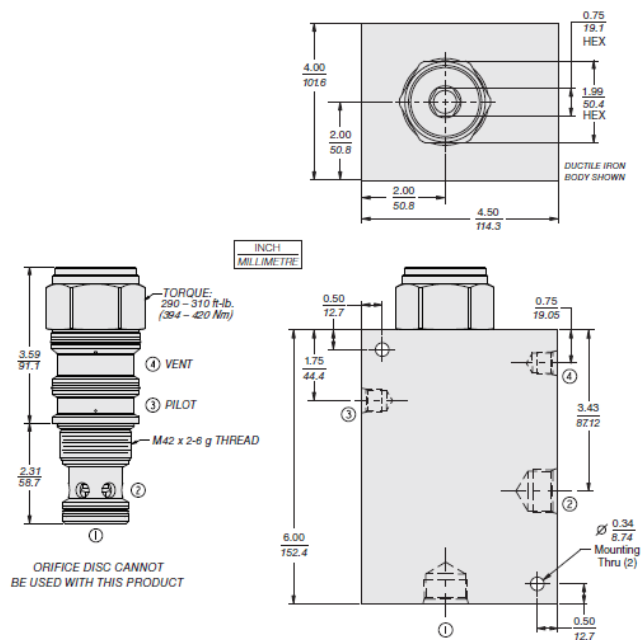
Unit weight	1.50 kg (3.30 lb)
Internal wetted surface area	450 cm ² (70 in ²)



Performance



Dimensions



Installation Specifications

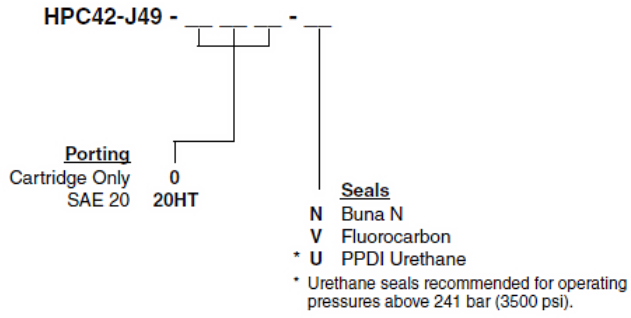
Cavity	HVC42-j4	
Cartridge installation torque	394 to 420 N-m (290 to 310 ft-lb)	- Note: Steel/ductile iron cavity
Orientation restriction	None	

Accessories

Seal kit	SK42-J4N-BTM	- Note: Buna N
	SK42-J4V-BTM	- Note: Fluorocarbon
	SK42-J4U-OOO	- Note: Urethane
Housings		



Order Code



POSITION	CODE	DESCRIPTION
		HPC42-J49-H-J
H		Line Body
H	0	No Body
H	20HT	Ductile Iron SAE 20
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	U	PPDI Urethane