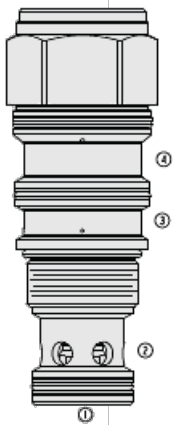




## Overview



### 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

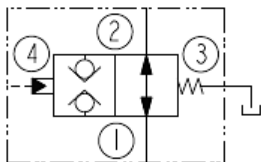
### Operation

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)	<b>- Note:</b> 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 <b>- Note:</b> 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)	<b>- Note:</b> With buna N seals
	-26 to 204 °C (-15 to 400 °F)	<b>- Note:</b> With fluorocarbon seals
	-54 to 107 °C (-65 to 225 °F)	<b>- Note:</b> 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

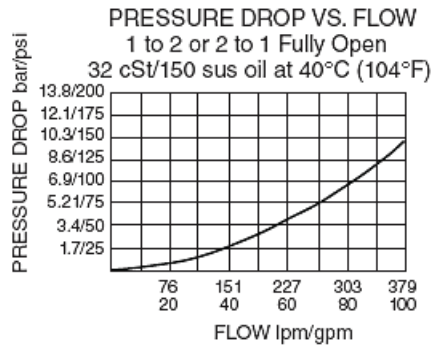
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

## Properties

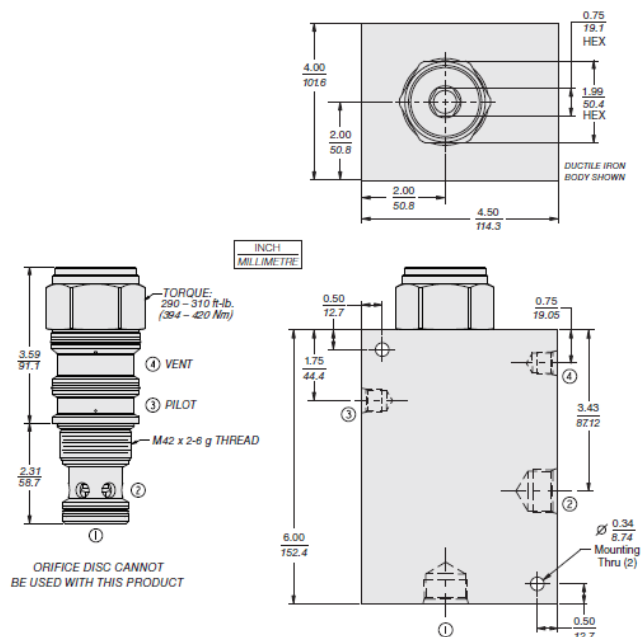
Unit weight	1.50 kg (3.30 lb)
Internal wetted surface area	450 cm <sup>2</sup> (70 in <sup>2</sup> )



## Performance



## Dimensions



## Materials

### Materials

**Cartridge:** Weight: 1.5 kg (3.3 lb) Steel with hardened work surfaces. Zinc-nickel plated exposed surfaces. PPD urethane seals without back-up rings standard. Buna N and fluorocarbon seals also available.

**Standard Ported Body:** Weight: 10.6 kg (23.3xx lb) H-series ductile iron standard. Rated to 345 bar (5000 psi).

## Installation Specifications

Cavity	Hvc42-j4	
Cartridge installation torque	394 to 420 N-m (290 to 310 ft-lb)	- <b>Note:</b> Steel/ductile iron cavity
Orientation restriction	None	

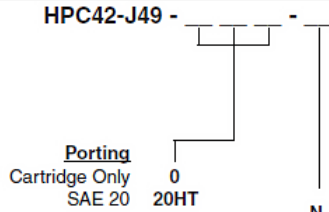
## Accessories

Seal kit	SK42-J4N-BTM SK42-J4V-BTM SK42-J4U-OOO	- <b>Note:</b> Buna N - <b>Note:</b> Fluorocarbon - <b>Note:</b> 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



- Seals**
- N Buna N
  - V Fluorocarbon
  - \* U PPDI Urethane
- \* Urethane seals recommended for operating pressures above 241 bar (3500 psi).