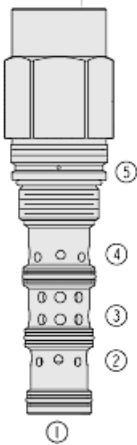




Overview



Description

The HPE42-S51 is a high pressure, spool type, screw-in, cartridge style, pilot operated, proportional, hydraulic directional valve.

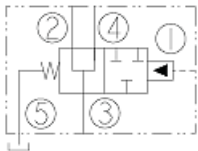
Operation

In the neutral position (unpiloted) flow is allowed between ports 2, 3 and 4. On remote pilot signal at port 1 the spool shifts proportionally to the applied pilot pressure to gradually close flow paths until spool is fully shifted blocking all ports. The spring chamber is vented to the tank through port 5. Pressure at port 5 will directly (1:1) affect the pilot pressure required and must be added to bias spring value.

Features

- Hardened spool and cage for long life.
- 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)	
Pilot pressure required	27 bar (400 psi)	- Note: Minimum to fully shift

Flow Ratings

Flow rating	170 lpm (45 gpm)	
Maximum internal leakage	740 ml/min (45 in ³ /min)	- Note: At 350 bar (5075 psi) at 32 cSt

Other Ratings

Cycle life	One million cycles
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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

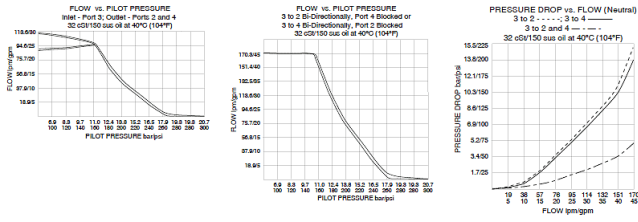
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

Properties

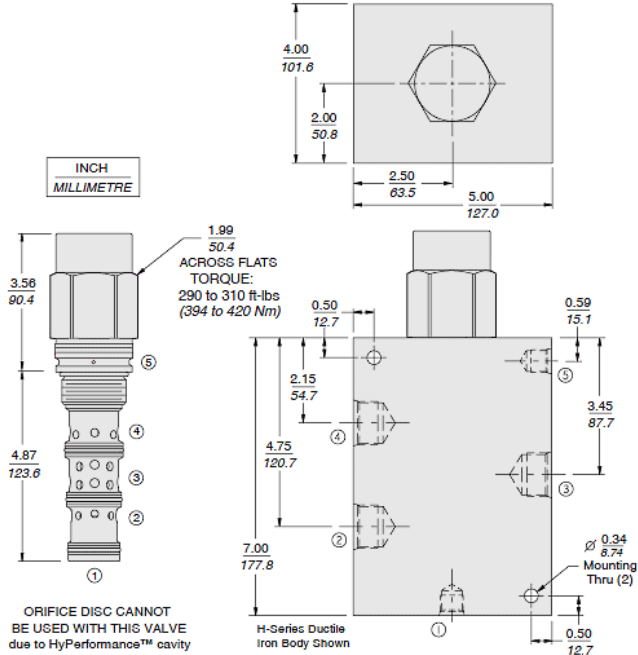
Unit weight	2.0 kg (4.4 lb)
Internal wetted surface area	816 cm ² (126.5 in ²)



Performance



Dimensions



Installation Specifications

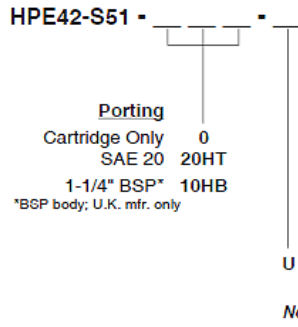
Cavity	HVC42-s5	
Cartridge installation torque	394 to 420 N-m (290 to 310 ft-lb)	- Note: Steel/ductile iron cavity
	298 to 311 N-m (220 to 230 ft-lb)	- Note: Aluminum cavity
Orientation restriction	None	

Accessories

Seal kit	Hsk42-s5n-bmmm	- Note: Buna N
	Hsk42-s5v-bmmm	- Note: Fluorocarbon
	Hsk42-s5u-oooo	- Note: Urethane
Housings		



Order Code



POSITION	CODE	DESCRIPTION
		HPE42-S51-H-J
H		Line Body
H	0	No Body
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	U	PPDI Urethane