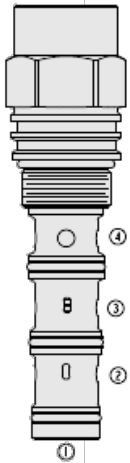




Overview



Description

The HPE16-44 is a high pressure, screw-in, cartridge-style, pilot-operated, proportional, spool-type, hydraulic directional valve

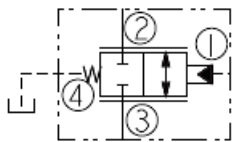
Operation

In neutral position (unpiloted) the valve blocks flow from ports 2 to 3. On remote pilot signal at port 1 the spool shifts proportionally to the applied pilot pressure to allow flow from port 2 to 3 bi-directionally. The spring chamber is vented to port 4. Pressure at port 4 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.
- Industry common cavity.
- 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: (10% cycle life)
	420 bar (6090 psi)	
Proof pressure	690 bar (10000 psi)	
Burst pressure	1380 bar (20000 psi)	

Flow Ratings

Flow rating	95 lpm (25 gpm)	
Maximum internal leakage	500 ml/min (30 in ³ /min)	- Note: At and 350 bar (5075 psi) 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

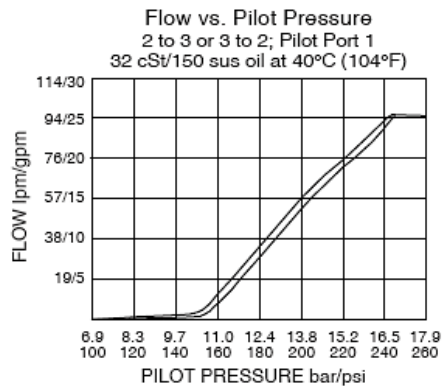
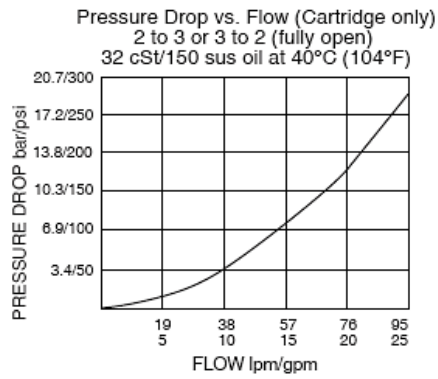
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

Properties

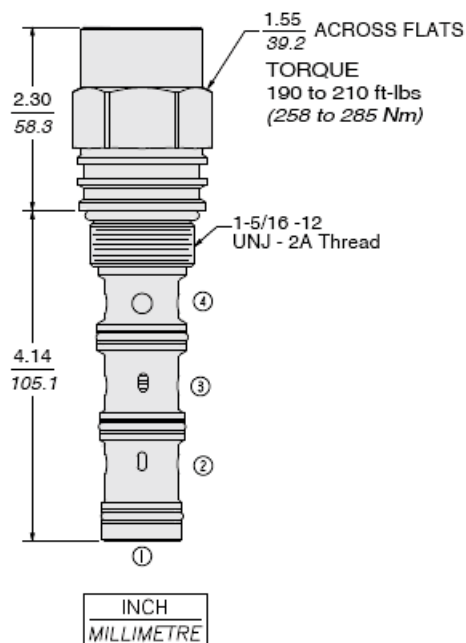
Unit weight	0.82 kg (1.8 lb)
Internal wetted surface area	450 cm ² (69.8 in ²)



Performance



Dimensions



Materials

Materials

Cartridge: Weight: 0.82 kg. (1.8 lbs.) Steel with hardened work surfaces. Zinc-plated exposed surfaces. Urethane seals without back-up rings standard.



Installation Specifications

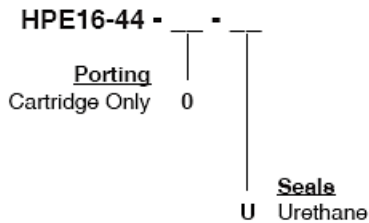
Cavity	Hvc16-4	
Cartridge installation torque	268 to 285 N-m (190 to 210 ft-lb) 237 to 250 N-m (175 to 185 ft-lb)	- Note: Steel/ductile iron cavity - Note: Aluminum cavity
Orientation restriction	None	

Accessories

Seal kit	SK16-4N-MMM SK16-4V-MMM SK16-4U-OOO	- Note: Buna N - Note: Fluorocarbon - Note: Urethane
Housings		

Order Code

POSITION	CODE	DESCRIPTION
		HPE16-44-H-J
H		Line Body
H	0	No Body
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	U	PPDI Urethane



Note: Urethane seals recommended for pressures above 241 bar (3500 psi). Contact factory for additional seal options.