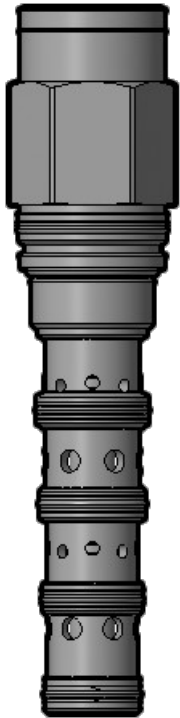




Overview



Description

The HPE42-S63 is a high pressure, screw-in, cartridge-style, pilot-operated, normally closed, proportional, spool-type, hydraulic directional valve.

Operation

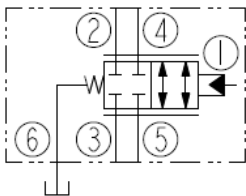
In neutral position (unpiloted) the spool blocks all flow paths. On remote pilot signal at port 1 the spool shifts proportionally to the applied pilot pressure to gradually opens flow paths from port 2 and 3 and from port 4 to 5 bidirectionally until spool is fully shifted. The spring chamber is vented to port 6. Pressure at port 6 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%.

NOTE: Orifice disc should not be used with this product.

Symbol





Ratings

Pressure Ratings

Pressure rating	350 bar (5075 psi)	- Note: (10% duty cycle)
	420 bar (6090 psi)	
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)
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Flow ratings

Maximum internal leakage	980 ml/min (60 in ³ /min)	- Note: At 350 bar (5075 psi) at 32 cSt
	1300 ml/min (80 in ³ /min)	- Note: Outlet at port 3, inlet at port 2 and 4, test conducted with valve in unpiloted state
	500 ml/min (30 in ³ /min)	- Note: Outlet at port 5, inlet at port 4, test conducted with valve in unpiloted state

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)	

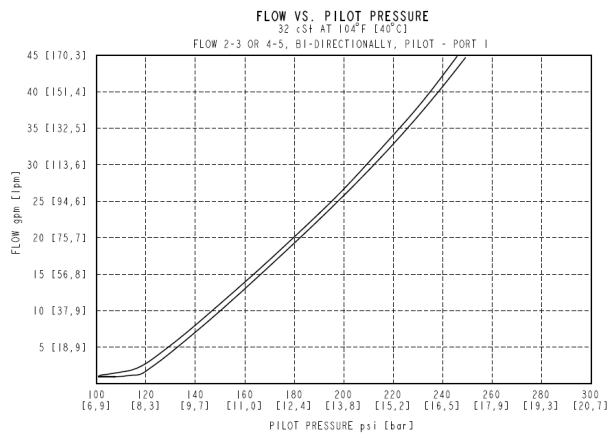
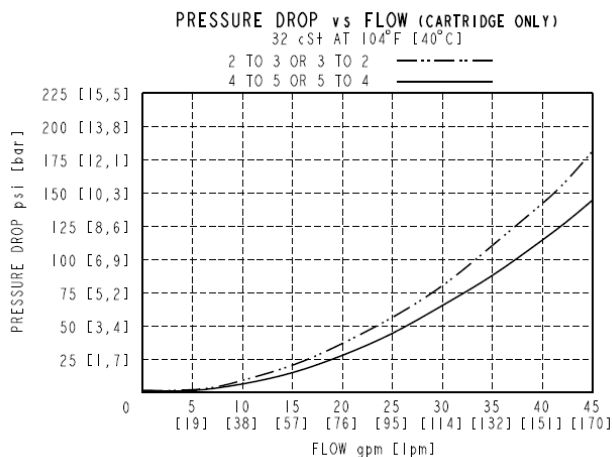
Operating Parameters

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

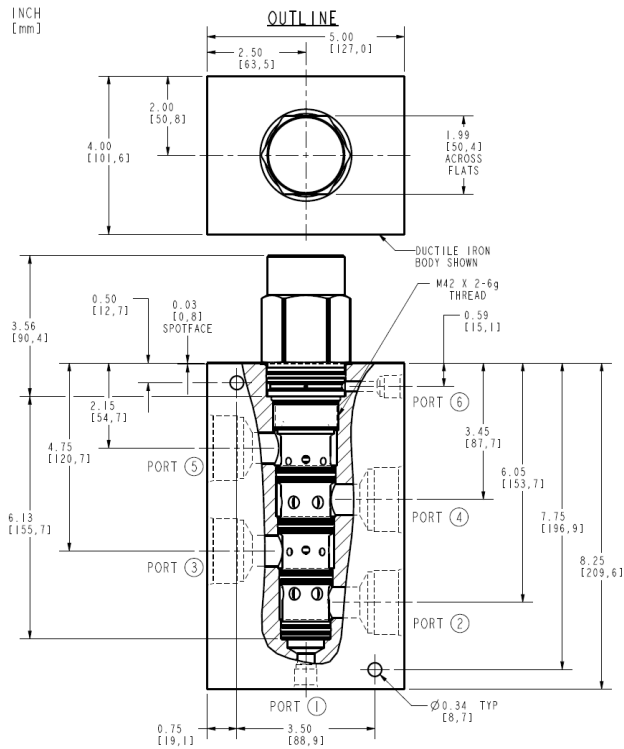
Unit weight	2.1 kg (4.7 lb)
Internal wetted surface area	870 cm ² (135 in ²)

Performance





Dimensions



ALL DIMENSIONS ARE FOR REFERENCE ONLY.

Installation Specifications

Cavity	HVC42-S6	
Cartridge installation torque	394 to 420 N-m (290 to 310 ft-lb) 298 to 311 N-m (220 to 230 ft-lb)	- Note: Steel/ductile iron cavity - Note: Aluminum cavity
Orientation restriction	None	

Accessories

Seal kit	HSK42-S6N-BMMMM	- Note: Buna N
	HSK42-S6V-BMMMM	- Note: fluorocarbon
	HSK42-S6U-OOOOO	- Note: urethane
Housings		



Order Code

ORDERING INFORMATION

HPE42-S63-0-X

BASE MODEL
NUMBERPORTING

CARTRIDGE ONLY - 0

SEALS

BUNA N - N

FLUOROCARBON - V

* PPDI URETHANE - U

* URETHANE SEALS RECOMMENDED
FOR OPERATING PRESSURES
ABOVE 3500 psi [241 bar].

POSITION	CODE	DESCRIPTION
		HPE42-S63-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