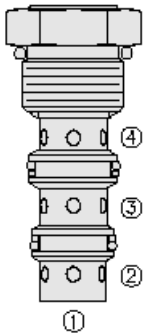




Overview



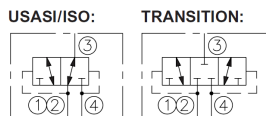
Description

The HS50-42 is a screw-in, cartridge style, spool type, closed in transition, 2-position, 3-way hot oil shuttle valve for use with general purpose hydraulic fluids. The valve CAN be utilized on hydrostatic transmissions to direct charge pump oil to a heat exchanger or to tank.

Operation

With internal piloting at port 1, 2 or 4, the s50-42 will direct oil flow from the port opposite of the port piloted to port 3, thus removing oil from the low-pressure side for cooling or filtration purposes. The valve is springless, relying solely on the internal pilot pressure signal to shift to either side. Flow paths are closed in transition.

Symbol



Ratings

Pressure Ratings

Pressure rating 245 bar (5000 psi)

Flow Ratings

Flow rating See graph
Maximum internal leakage 115 ml/min (7 in³/min) - **Note:** At 207 bar (3000 psi)

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 polyurethane and urethane seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 90 °C (-40 to 194 °F)	

Operating Parameters

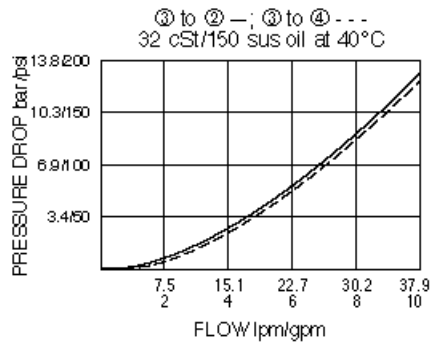
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

Properties

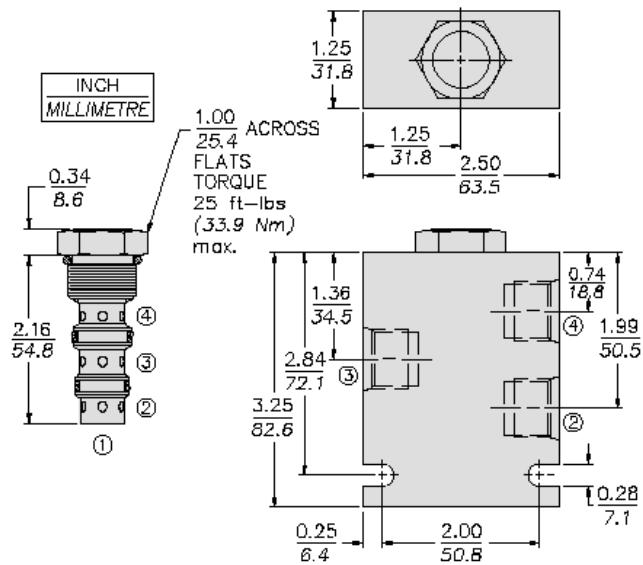
Unit weight	0.11 kg (0.25 lb)
Internal wetted surface area	106 cm ² (16.4 in ²)



Performance



Dimensions



Installation Specifications

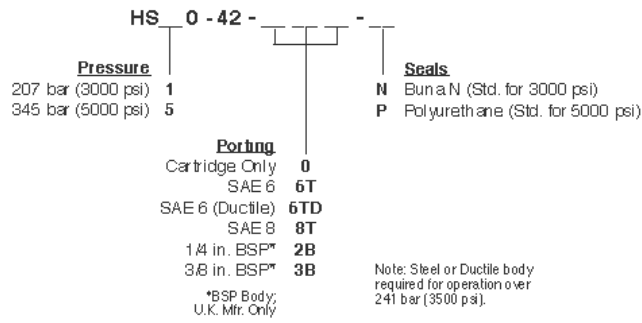
Cavity	VC10-4
Cartridge installation torque	32.5 to 35.3 N-m (24 to 26 ft-lb)
Maximum allowable torque	67.8 N-m (50 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK10-4N-MM	- Note: Buna N
	SK10-4V-MM	- Note: Fluorocarbon
	Sp10-4p-mm	- Note: Polyurethane
	SK10-4U-O0	- Note: Urethane
Housings		



Order Code



POSITION	CODE	DESCRIPTION
		HS50-42-H-J
H		Line Body
H	0	No Body
H	6T	Aluminum SAE 6
H	8T	Aluminum SAE 8
H	6TD	Ductile Iron SAE 6
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	P	Polyurethane