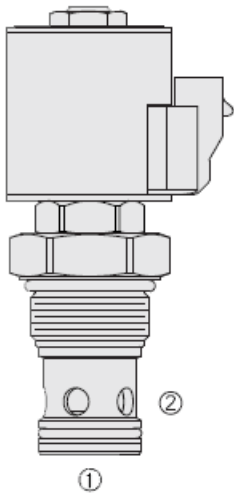




Overview



Description

The HSP16-20X is a high pressure 2-way, piloted, poppet-type, proportional, normally closed screw-in hydraulic cartridge valve designed for low leakage blocking in load holding applications

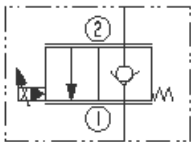
Operation

When de-energized, the HSP16-20X blocks flow from ports 2 to 1. In this mode the cartridge will allow flow from ports 1 to 2 after overcoming the spring forces (see performance graph). When energized, the valve will allow flow from ports 2 to 1 while severely restricting flow from ports 1 to 2

Features

- Continuous-duty rated coil.
- Manual override option.
- Linear metering option.
- Industry-common cavity.
- Waterproof E-Coils rated up to IP69K.
- All HyPerformance[®] products are tested to NFPA specification T2.6.1.
- and 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	61 lpm (16 gpm)	- Note: With compensation 5.5 bar (80 psi)
	102 lpm (27 gpm)	- Note: With compensation 11.0 bar (160 psi)
Maximum internal leakage	7 drops/min	- Note: With 350 bar (5075 psi) at port 2

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

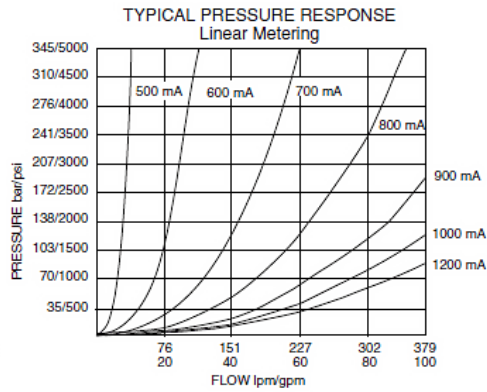
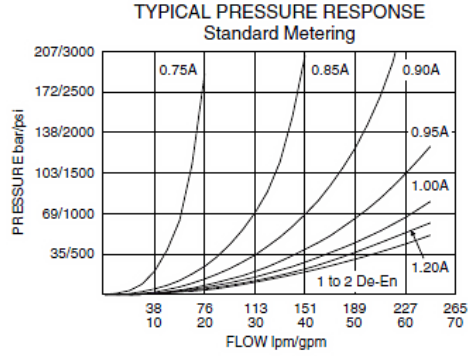
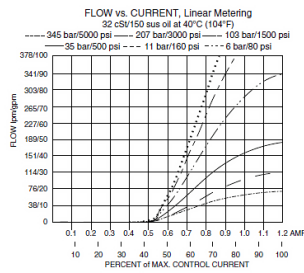
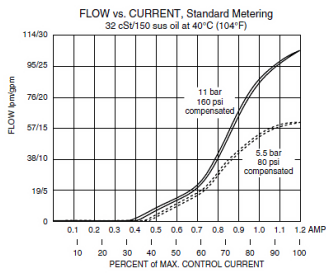
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406



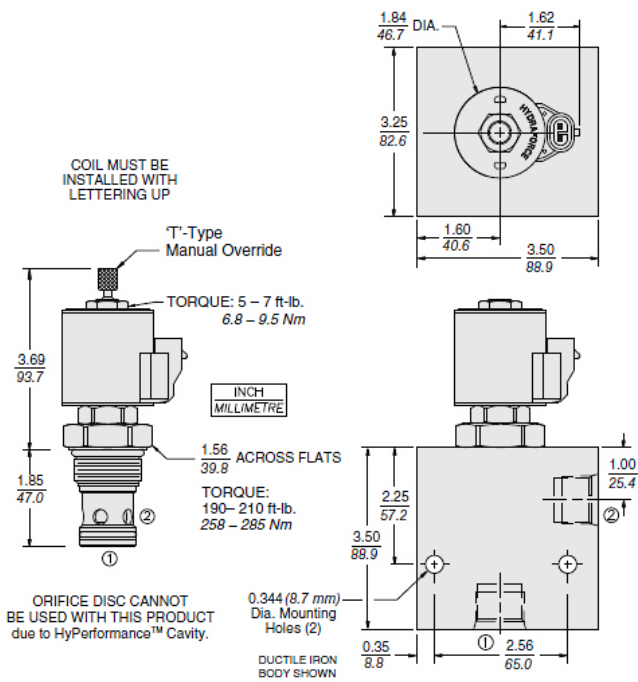
Properties

Unit weight	0.55 kg (1.22 lb) 0.56 kg (1.24 lb)	- Note: HSP16-20 without coil and nut
Internal wetted surface area	292 cm ² (45.3 in ²) 289 cm ² (44.8 in ²)	- Note: HSP16-20T - Note: HSP16-20T

Performance



Dimensions





Materials

Materials

Cartridge: Weight (without Manual Override, Coil or Nut): 0.55 kg (1.22 lb); (with Manual Override, without Coil or Nut) 0.56 kg (1.24 lb). Steel with hardened work surfaces. Zinc-plated exposed surfaces. Urethane seals without back-up rings standard.

Ported Body: Weight: 3.96 kg (8.75 lb); H-Series ductile iron standard. Rated to 345 bar (5000 psi).

E-Coil: Weight: 0.41 kg (0.9 lb); Perfect wound, fully encapsulated with rugged external metal shell; Rated up to IP69K with integral connectors.

Installation Specifications

Cavity	Hvc16-2	
Cartridge installation torque	258 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	SK16-2N-M SK16-2V-M SK16-2U-O	- Note: Buna N - Note: Fluorocarbon - Note: Urethane
Housings		
Coils		



Order Code

POSITION	CODE	DESCRIPTION
		HSP16-20DE-H-J-L
D		Poppet Metering
D	A	Linear Poppet Metering
D	BLANK	Standard Poppet Metering
E		Manual Override
E	BLANK	NONE
E	T	Variable Position Override, Red Knurled Knob
H		Line Body
H	0	No Body
J		Seal
J	N	Buna-N
J	V	Fluorocarbon
J	U	PPDI Urethane
L		Coil
L	0	No Coil
L	10EL	10 VDC, E-Coil, Dual Lead Wires
L	10ER	10 VDC, E-Coil, Deutsch
L	12EG	12 VDC, E-Coil, DIN 43650
L	12EJ	12 VDC, E-Coil, AMP Jr.
L	12EL	12 VDC, E-Coil, Dual Lead Wires, 18 inches long
L	12EL/36	12 VDC, E-Coil, Dual Lead Wires, 36 inches long
L	12ER	12 VDC, E-Coil, Deutsch
L	12EY	12 VDC, E-Coil, Metri-Pack 150
L	20ER	20 VDC, E-Coil, Deutsch
L	24EG	24 VDC, E-Coil, DIN 43650
L	24EJ	24 VDC, E-Coil, AMP Jr.
L	24EL	24 VDC, E-Coil, Dual Lead Wires, 18 inches long
L	24EL/36	24 VDC, E-Coil, Dual Lead Wires, 36 inches long
L	24ER	24 VDC, E-Coil, Deutsch
L	24EY	24 VDC, E-Coil, Metri-Pack 150

