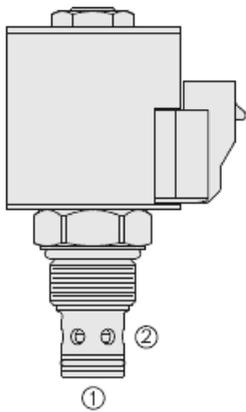




## Overview



### Description

The hsp12-20xx 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.

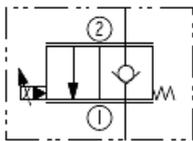
### Operation

When de-energized, the hsp12-20xx 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 proportional to the applied current from ports 2 to 1 while severely restricting flow from ports 1 to 2.

### Manual Override Operation

For normal operation (de-energized) the manual override button must be fully rotated clockwise. To shift the valve manually, rotate the manual override button counter-clockwise. The manual override features is intended for emergency use, not for continuous-duty operation.

### Symbol



### Features

- Continuous-duty rated coil.
- Efficient wet-armature construction.
- Waterproof E-Coils rated up to IP69K.
- Linear metering and manual override options.
- All HyPerformance<sup>®</sup> products are tested to NFPA specification T2.6.1.
- and are tested at a verification level of 90% and an assurance of 99%.

## Ratings

### Pressure Ratings

Pressure rating	350 bar (5075 psi) 420 bar (6090 psi)	- <b>Note:</b> (10% cycle life)
Proof pressure	690 bar (10000 psi)	
Burst pressure	1380 bar (20000 psi)	

### Flow Ratings

Flow rating	84.3 lpm (22.3 gpm) 60.7 lpm (16 gpm)	- <b>Note:</b> With compensation 11.0 bar (160 psi) - <b>Note:</b> With compensation 5.5 bar (80 psi)
Maximum internal leakage	7 drops/min	- <b>Note:</b> 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)	- <b>Note:</b> With buna N seals
	-26 to 204 °C (-15 to 400 °F)	- <b>Note:</b> With fluorocarbon seals
	-54 to 107 °C (-65 to 225 °F)	- <b>Note:</b> 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

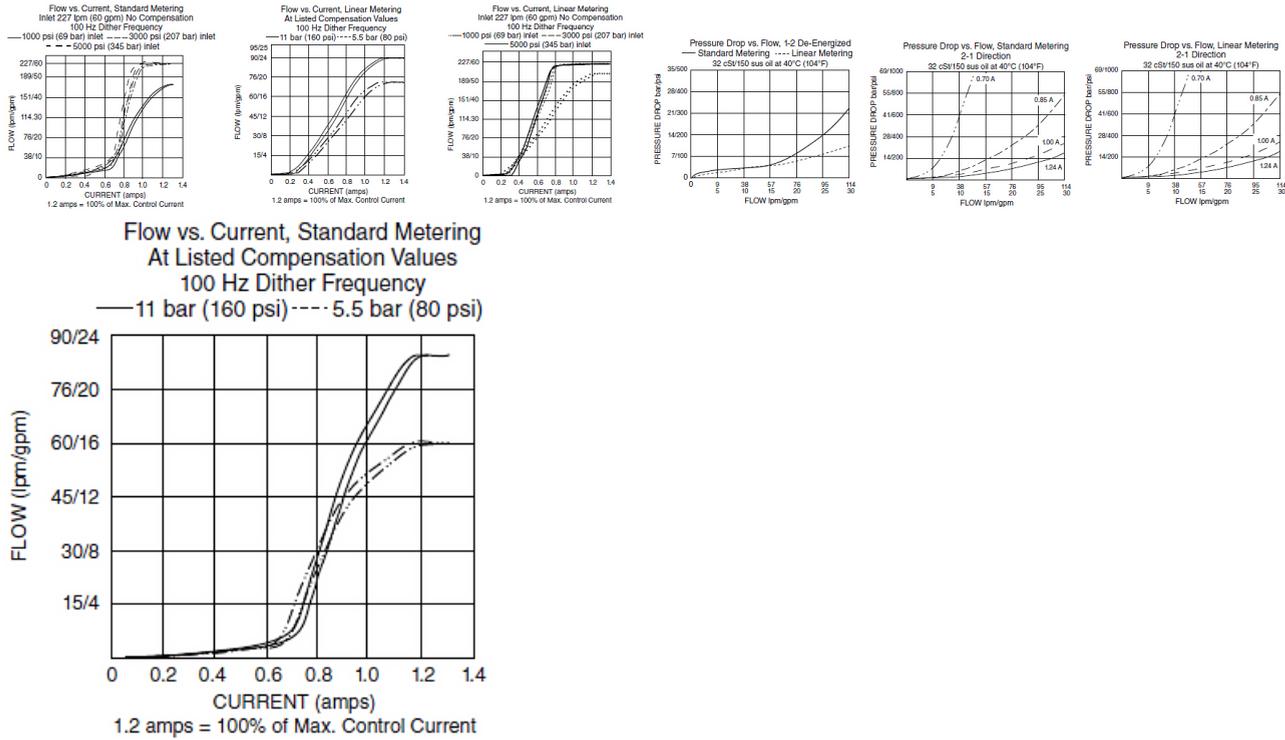
Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	18/16/13 per ISO 4406

## Properties

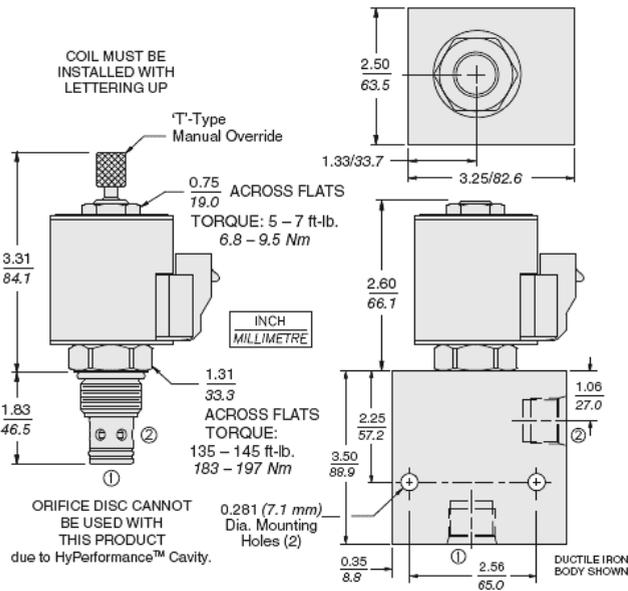
Unit weight	0.27 kg (0.59 lb)	- <b>Note:</b> (without coil and nut)
Internal wetted surface area	168 cm <sup>2</sup> (26 in <sup>2</sup> )	



## Performance



## Dimensions



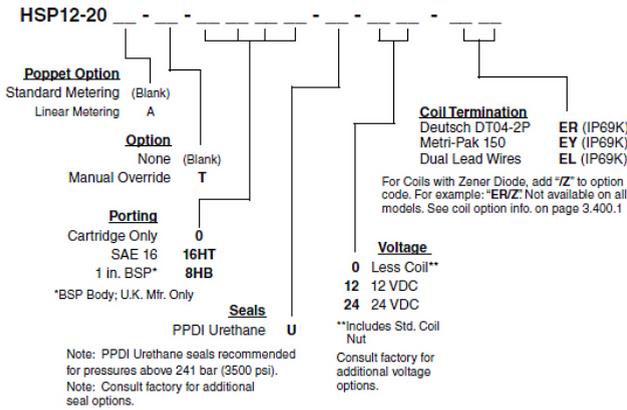
## Installation Specifications

Cavity	HVC12-2	
Cartridge installation torque	183 to 197 N-m (135 to 145 ft-lb) 122 to 136 N-m (90 to 100 ft-lb)	- <b>Note:</b> Steel/ductile iron cavity - <b>Note:</b> Aluminum cavity
Orientation restriction	None	

## Accessories

Seal kit	SK12-2N-T SK12-2V-T SK12-2U-0	- <b>Note:</b> Buna N - <b>Note:</b> Fluorocarbon - <b>Note:</b> Urethane
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## Order Code



**Model Options**

**HSP12-20DE-H-J-L**

**D Poppet Metering**

CODE	DESCRIPTION
A	Linear Poppet Metering
BLANK	Standard Poppet Metering

**E Manual Override**

CODE	DESCRIPTION
BLANK	NONE
T	Variable Position Override, Red Knurled Knob

**H Line Body**

CODE	DESCRIPTION
0	No Body
12HT	Ductile Iron SAE 12

**J Seal**

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
U	PPDI Urethane

**L Coil**

CODE	DESCRIPTION
0	No Coil
10EL	10 VDC, E-Coil, Dual Lead Wires
10ER	10 VDC, E-Coil, Deutsch
12EG	12 VDC, E-Coil, DIN 43650
12EJ	12 VDC, E-Coil, AMP Jr.
12EL	12 VDC, E-Coil, Dual Lead Wires, 18 inches long
12EL/36	12 VDC, E-Coil, Dual Lead Wires, 36 inches long
12ER	12 VDC, E-Coil, Deutsch
12EY	12 VDC, E-Coil, Metri-Pack 150
20ER	20 VDC, E-Coil, Deutsch
24EG	24 VDC, E-Coil, DIN 43650



CODE	DESCRIPTION
24EJ	24 VDC, E-Coil, AMP Jr.
24EL	24 VDC, E-Coil, Dual Lead Wires, 18 inches long
24EL/36	24 VDC, E-Coil, Dual Lead Wires, 36 inches long
24ER	24 VDC, E-Coil, Deutsch
24EY	24 VDC, E-Coil, Metri-Pack 150