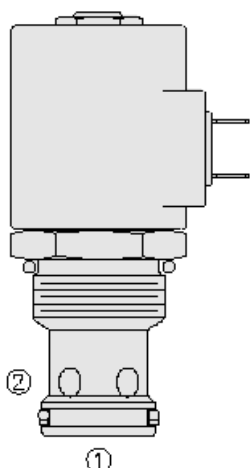




Overview



Description

A solenoid-operated, 2 port, normally closed, poppet-type, proportional, screw-in hydraulic cartridge valve, designed for low leakage blocking and load-holding applications.

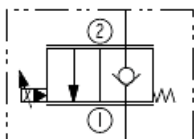
Operation

OPERATION: When de-energized, the valve acts as a check, allowing flow from port 1 to port 2, while blocking flow from port 2 to port 1. When energized, the poppet lifts to open the port 2 to port 1 flow path. In this mode, flow from port 1 to port 2 is severely restricted.

Features

- Continuous-duty rated coil.
- Efficient wet-armature construction.
- Manual override options.
- Optional waterproof E-Coils rated up to IP69K.
- Industry common cavity.

Symbol



Ratings

Pressure Ratings

Pressure rating	250 bar (3625 psi)	- Note: Per NFPA T2.6.1 R2-2000 using 99.9 assurance and 90% verification levels
Proof pressure	344 bar (5000 psi)	
Burst pressure	779 bar (11300 psi)	

Flow Ratings

Flow rating	227.4 lpm (60 gpm)	- Note: Based on 34.4 bar (500 psi) pressure drop (see performance graphs)
Maximum internal leakage	5 drops/min	- Note: At rated pressure
Hysteresis	5 %	- Note: Maximum up to 60% of imax
	10 %	- Note: Maximum from 60% of imax up to imax

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 seals
Storage temperature	-40 to 70 °C (-40 to 160 °F)	
Ambient temperature	-40 to 70 °C (-40 to 160 °F)	

Other Ratings

Corrosion protection	960 hr salt spray per ASTM b117
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Operating Parameters

Fluids	Mineral based or synthetic hydraulic fluid with lubricating properties
Fluid viscosity range	7.4 to 420 cSt
Maximum operating contamination level	20/18/14 per ISO 4406



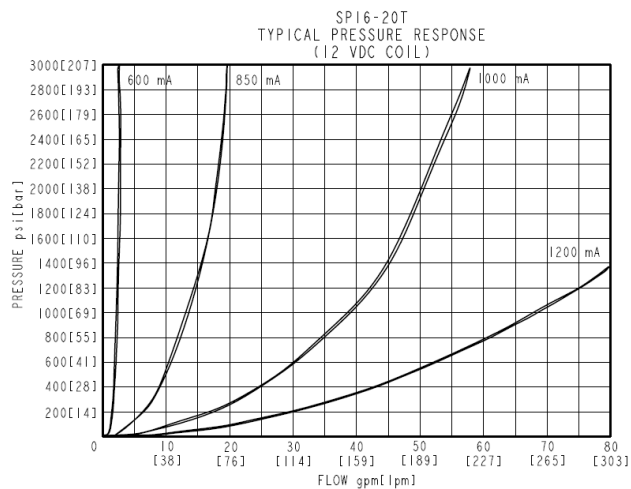
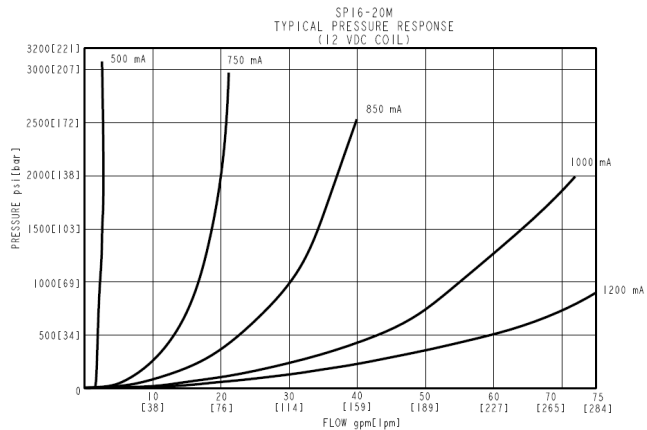
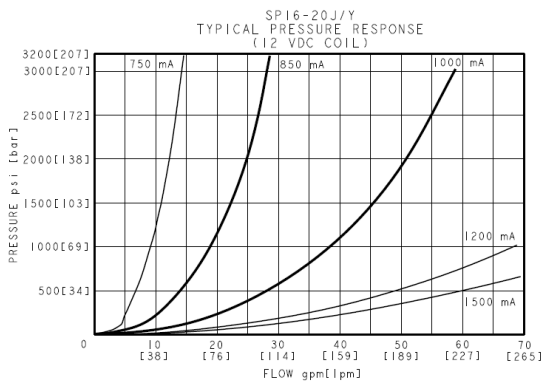
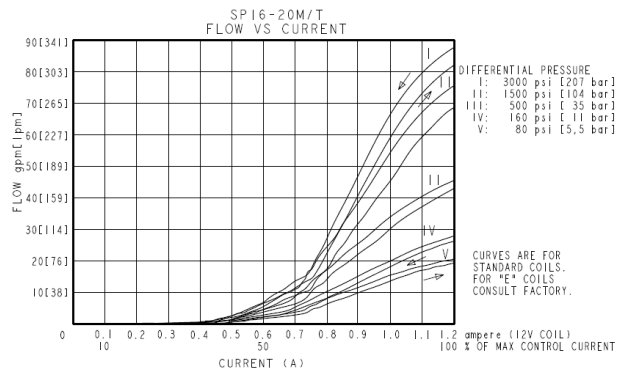
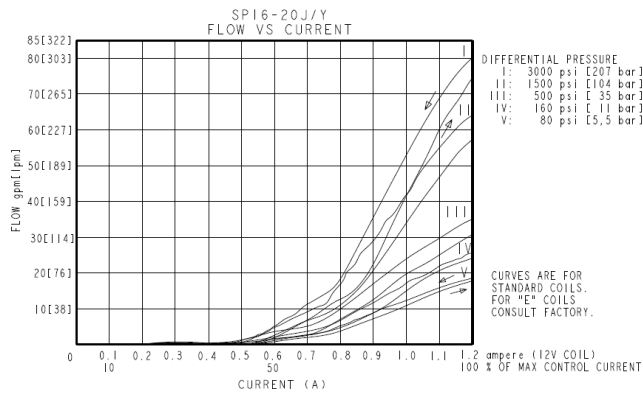
Properties

Unit weight	0.345 kg (0.76 lb)	- Note: SP16-20J
	0.376 kg (0.83 lb)	- Note: SP16-20Y
	0.38 kg (0.84 lb)	- Note: SP16-20M/T
	221 cm ² (34.2 in ²)	
Internal wetted surface area		

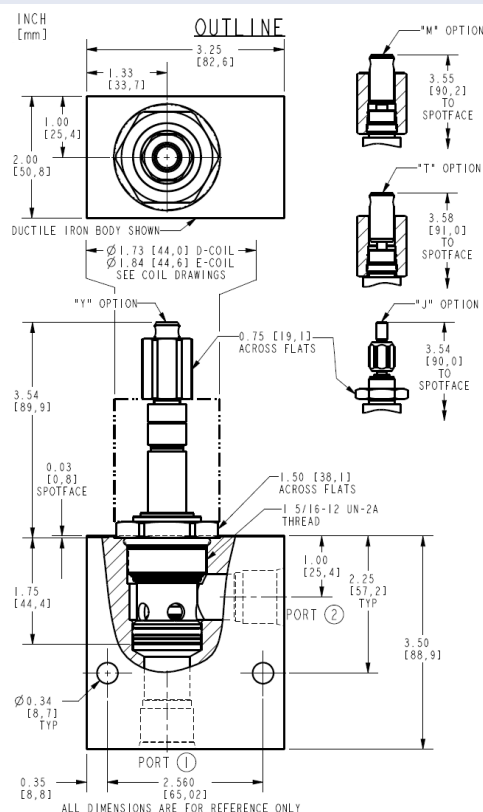
Electrical Parameters

Valve inductance	166 mH	
Maximum control current	1.2 A	- Note: D-coil 12 Vdc
Threshold current	0.4 A	- Note: D-coil 12 Vdc (see performance graphs)
Dither PWM frequency	100 to 400 Hz	

Performance



Dimensions



Installation Specifications

Cavity	VC16-2
Cartridge installation torque	62.4 to 73.2 N-m (46 to 54 ft-lb)
Coil nut torque	6.8 to 9.5 N-m (5 to 7 ft-lb)
Orientation restriction	None

Accessories

Seal kit	SK16-2X-T	- Note: X = seal option
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Order Code

ORDERING INFORMATION

SP16-20X-X-X-XXXXX

BASE MODEL NUMBER

MANUAL OVERRIDE OPTION

"J", "Y", "M" OR "T"

PORTING

CARTRIDGE ONLY - 0

SEAL OPTIONS

BUNA-N - N
FLUOROCARBON - V
POLYURETHANE - P

COIL VOLTAGE

LESS COIL - 00
12 VDC COIL - 12
24 VDC COIL - 24

COIL TERMINATIONS

E-COIL OPTIONS:

METRI-PACK CONNECTOR - EY
DEUTSCH CONNECTOR - ER

D-COIL OPTIONS:

DUAL SPADES SAE J858a - DS
(2) LEADWIRES 18" - DL
STANDARD LENGTH