

**Technical Information**

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**General Description**

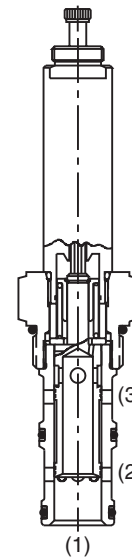
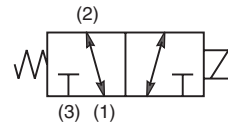
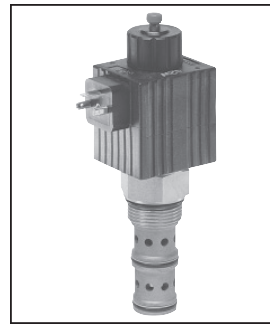
3-Way Spool Valves. For additional information see Technical Tips on pages SV1-SV6.

**Features**

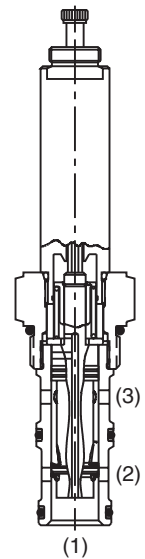
- High flow capacity with reduced space requirements
- Standard valve bodies and common cavities
- One-piece encapsulated coil with minimal amperage draw
- No dynamic seals
- Variety of coil terminations
- All external parts zinc plated
- Manual override standard

**Specifications**

<b>Rated Flow</b>	<b>DS163</b>	N.O. 45.4 LPM (12 GPM)
		N.C. 49.2 LPM (13 GPM)
		Selector 41.6 LPM (11 GPM)
<b>DS163B</b>	N.O. 26.5 LPM (7 GPM)	
	N.C. 53.0 LPM (14 GPM)	
	Selector 56.8 LPM (15 GPM)	
<b>Maximum Inlet Pressure</b>	210 Bar (3000 PSI)	
<b>Leakage at 150 SSU (32 cSt)</b>	82 cc/min. (5 in <sup>3</sup> /min.)	
<b>Minimum Operating Voltage</b>	85% of rated voltage at 20°C (72°F).	
<b>Response Time</b>	Normally Closed up to 90 ms Normally Open up to 100 ms	
<b>Cartridge Material</b>	All parts steel. All operating parts hardened steel.	
<b>Operating Temp. Range/Seals</b>	-40°C to +93.3°C (Nitrile) (-40°F to +200°F) -31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)	
<b>Fluid Compatibility/Viscosity</b>	Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)	
<b>Filtration</b>	ISO Code 16/13, SAE Class 4 or better	
<b>Approx. Weight</b>	.59 kg (1.3 lbs.)	
<b>Cavity</b>	C16-3 (See BC Section for more details)	
<b>Form Tool</b>	Rougher	NFT16-3R
	Finisher	NFT16-3F

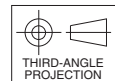
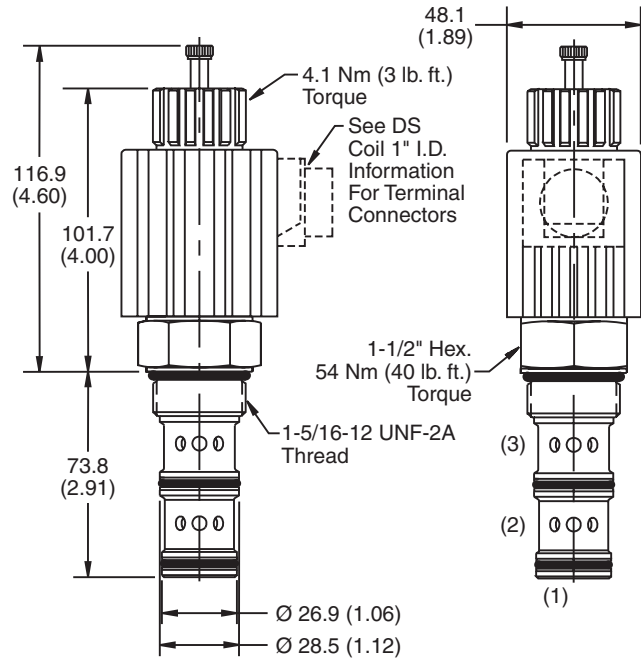


DS163



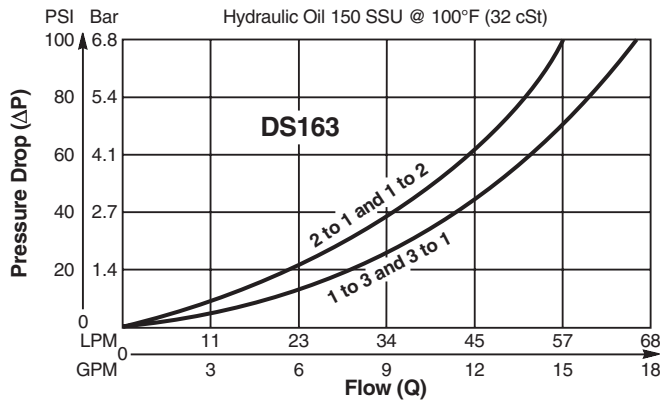
DS163B

**Dimensions** Millimeters (Inches)

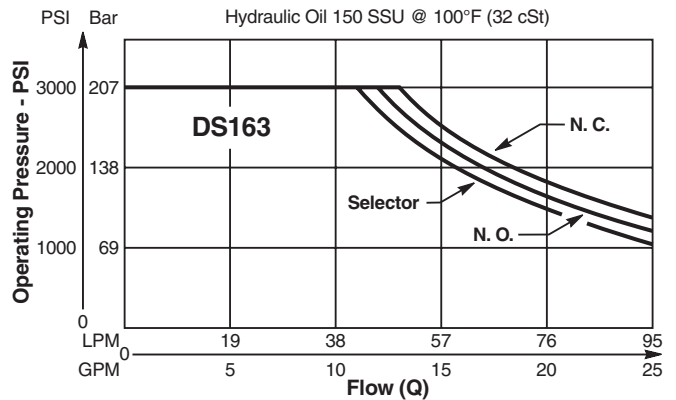


**Performance Curves**

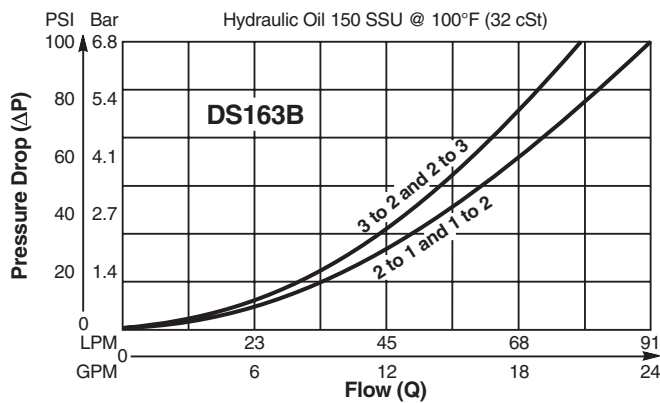
**Pressure Drop vs. Flow (Through cartridge only)**



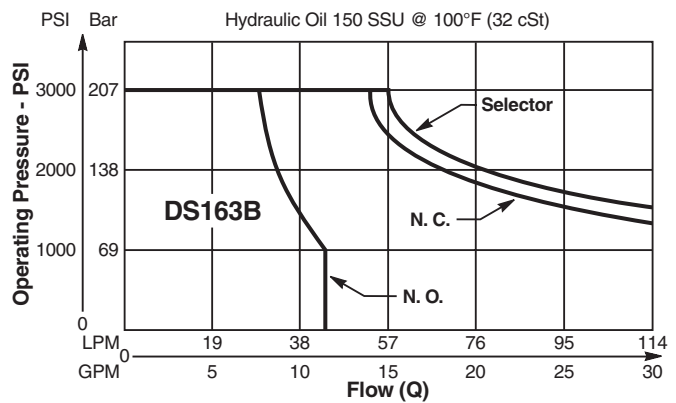
**Shift Limit Characteristics (Min. Operating Voltage)**



**Pressure Drop vs. Flow (Through cartridge only)**



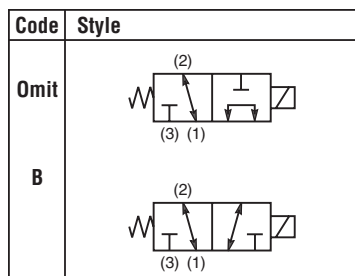
**Shift Limit Characteristics (Min. Operating Voltage)**



**Ordering Information**

**DS163**                       

**16 Size Solenoid Valve**    **Style**    **Seals**    **Coil Voltage**    **Coil Termination**    **Body Material**    **Port Size**



Code	Seals / Kit No.
Omit	Nitrile / (SK16-3)
V	Fluorocarbon / (SK16-3V)

Code	Coil Voltage
Omit	Without Coil
D012	12 VDC
D024	24 VDC
A120	120/110 VAC, 60/50 Hz

Code	Coil Termination
Omit	Without Coil
C	Conduit (AC Only)
D	DIN Plug Face
S	Dual Screw (DC Only)
W	Dual Lead (DC Only)

See DS coil 1" I.D. (42 watt)

Code	Body Material
Omit	Steel
A	Aluminum

Code	Port Size	Body Part No.
Omit	Cartridge Only	
12T	SAE-12	(B16-3-*12T)
16T	SAE-16	(B16-3-*16T)

\* Add "A" for aluminum, omit for steel.

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