General Description

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

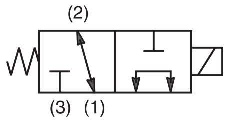
Features

- High flow capacity with reduced space requirements
- Standard valve bodies and common cavities
- One-piece encapsulated coil with minimal amperage draw
- Manual overrides, seal variations and other options available
- No dynamic seals
- Variety of coil terminations
- Polyurethane “D”-Ring eliminates need for backup rings
- Nylon inserted jam-nut provides secure holding in high vibration applications
- All external parts zinc plated

Specifications

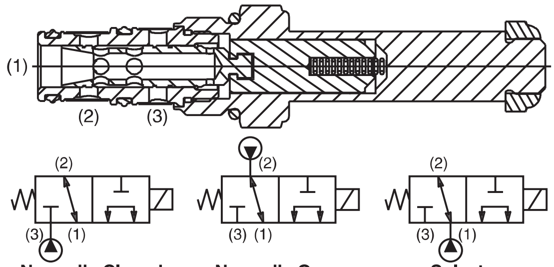
Rated Flow	**DSH103A** N.O. 17.0 LPM (4.5 GPM) N.C. 15.0 LPM (4.0 GPM) Selector 15.0 LPM (4.0 GPM) **DSH103B** N.C. 30.0 LPM (8.0 GPM) Selector 30.0 LPM (8.0 GPM) **DSH103C** N.O. 30.0 LPM (8.0 GPM) **DSH103N** N.O. 15.0 LPM (4.0 GPM) N.C. 15.0 LPM (4.0 GPM) Selector 30.0 LPM (8.0 GPM)
Maximum Inlet Pressure	350 Bar (5000 PSI)
Leakage at 150 SSU (32 cSt)	160 cc/min. (10 in^3/min.) DSH103B - 250 cc/min. (15 in^3/min.) DSH103N - 250 cc/min. (15 in^3/min.)
Minimum Operating Voltage	85% of rated voltage at 20°C (72°F).
Response Time	50 ms to 100 ms
Cartridge Material	All parts steel. All operating parts hardened steel.
Operating Temp. Range/Seals	-45°C to +93.3°C (“D”-Ring) (-50°F to +200°F) -31.7°C to +121.1°C (Fluorocarbon) (-25°F to +250°F)
Fluid Compatibility/ Viscosity	Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)
Filtration	ISO Code 16/13, SAE Class 4 or better
Approx. Weight	.19 kg (.42 lbs.)
Cavity	C10-3 (See BC Section for more details)
Form Tool	Rougher NFT10-3R Finisher NFT10-3F

DSH103A



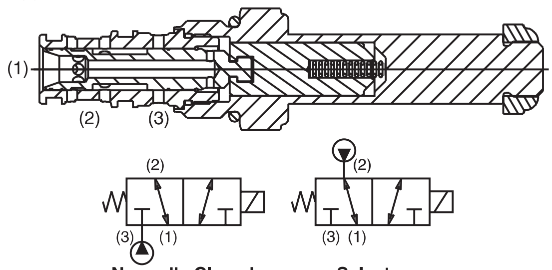
Construction/Symbols

DSH103A



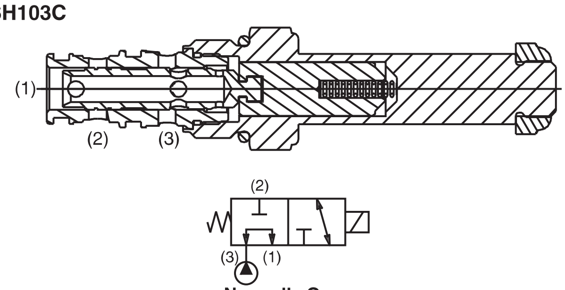
Normally Closed   Normally Open   Selector

DSH103B



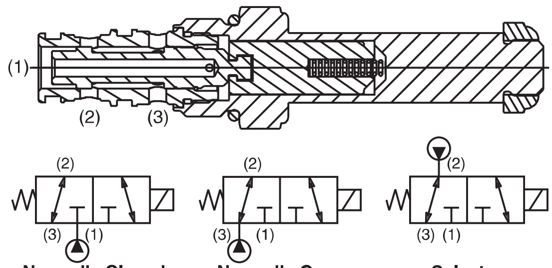
Normally Closed   Selector

DSH103C



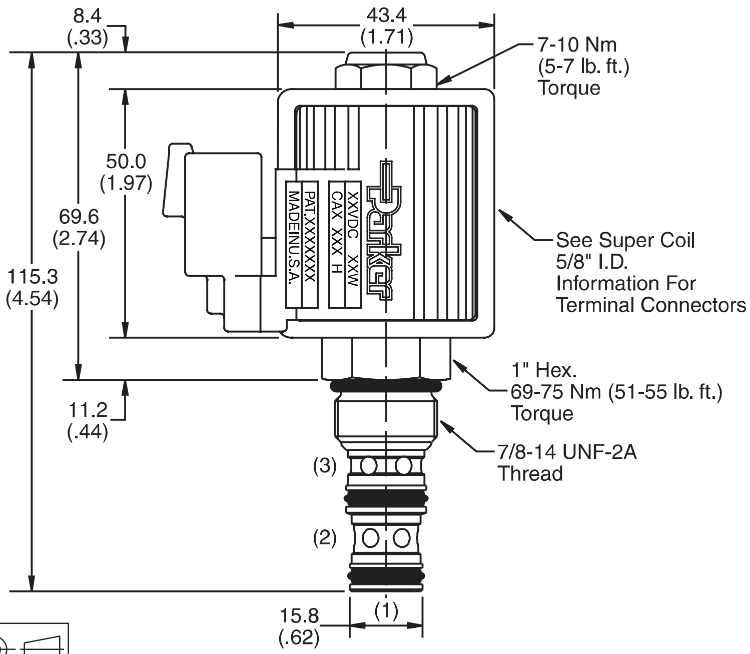
Normally Open

DSH103N

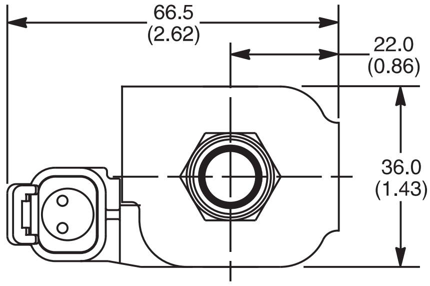


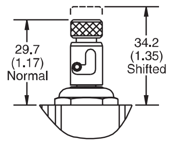
Normally Closed   Normally Open   Selector

Dimensions Millimeters (Inches)



THIRD-ANGLE PROJECTION

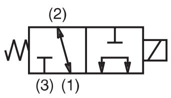
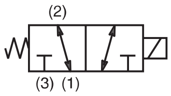
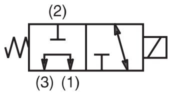
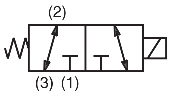




Push and Twist M.O.

Ordering Information

DSH103								–	
10 Size Solenoid Valve	Style	Override Option	Seals	Coil Type	Coil Voltage	Coil Termination	Diode	Body Material	Port Size

Code	Style
A	
B	
C	
N	

Code	Override Options
Omit	None
T	Push & Twist (N.C. & N.O.)

Code	Seals / Kit No.
Omit	"D"-Ring / (SK10-3)
N	Nitrile / (SK10-3N)
V	Fluorocarbon / (SK10-3V)

Code	Coil Type
Omit	Without Coil
SP*	Super Coil - 28 Watts

***Recommended**

Code	Coil Voltage
Omit	Without Coil
D012	12 VDC
D024	24 VDC
A120	120/110 VAC, 60/50 Hz
A240	240/220 VAC, 60/50 Hz

SP* Coil	Coil Termination
Omit	Without Coil
C	Conduit With Leads
D	DIN Plug Face
A	Amp Jr. Timer†
S	Dual Spade†
L	Dual Lead Wire†
LS	Sealed Lead Wire†
H	Molded Deutsch†

**Recommended*
†DC Only

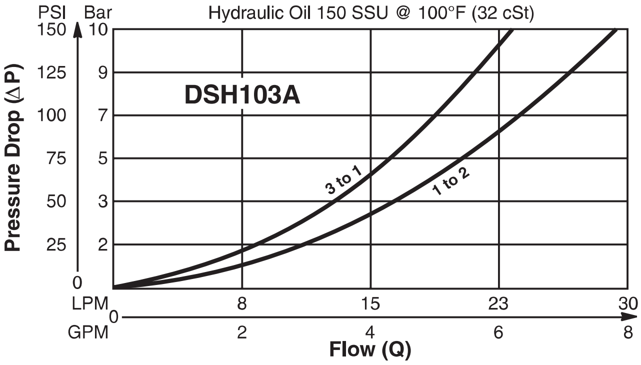
Code	Diode
Omit	None
R	Diode

Code	Body Material
Omit	Steel
A	Aluminum

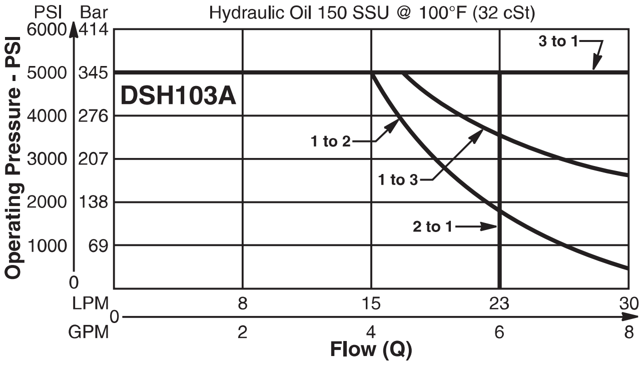
Code	Port Size	Body Part No.
Omit	Cartridge Only	
4P	1/4″ NPTF	(B10-3-*4P)
6P	3/8″ NPTF	(B10-3-*6P)
8P	1/2″ NPTF	(B10-3-*8P)
6T	SAE-6	(B10-3-*6T)
8T	SAE-8	(B10-3-*8T)
6B	3/8″ BSPG	(B10-3-6B)†
8B	1/2″ BSPG	(B10-3-*8B)

** Add "A" for aluminum, omit for steel.*
† Steel bodies only.

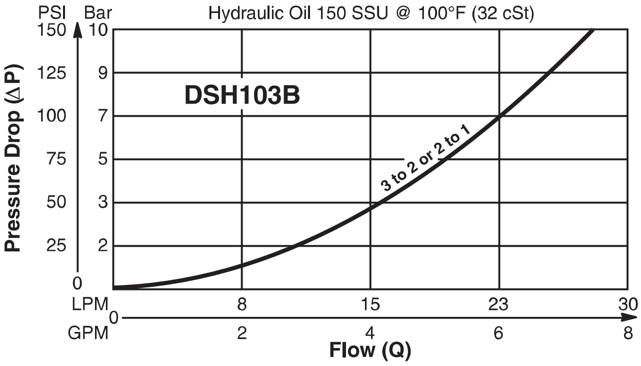
Pressure Drop vs. Flow (Through cartridge only)



Shift Limit Characteristics (Min. Operating Voltage)



Pressure Drop vs. Flow (Through cartridge only)



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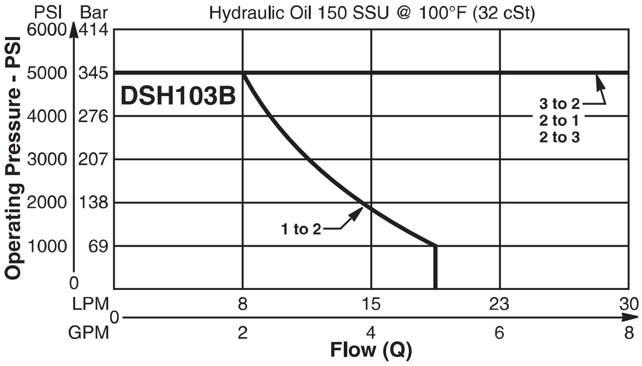
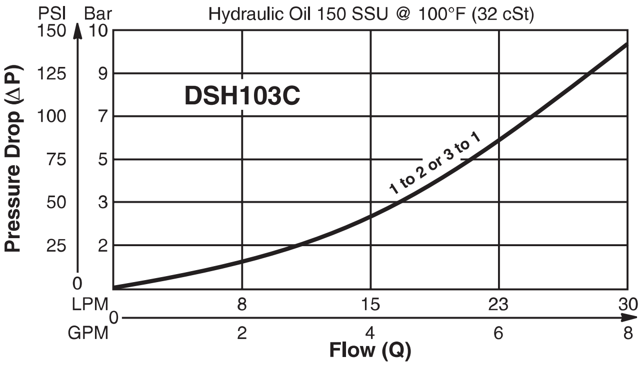
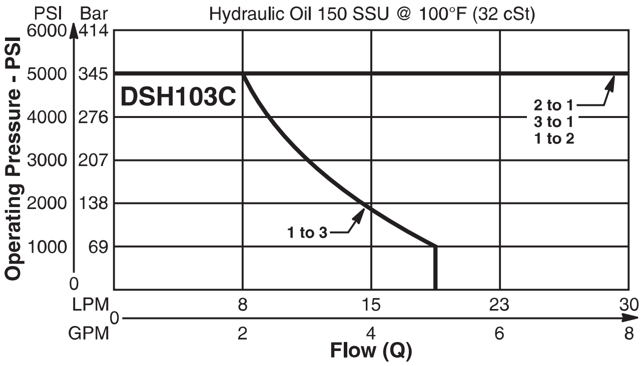


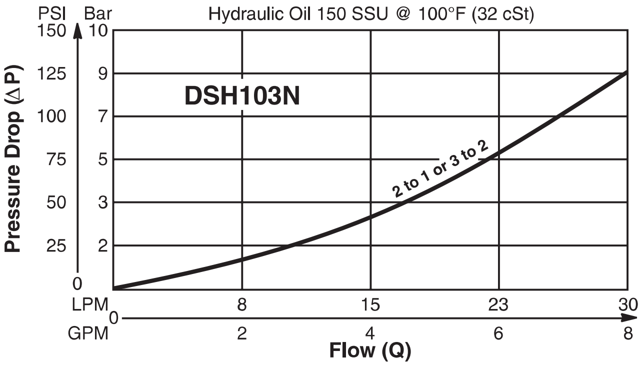
Pressure Drop vs. Flow (Through cartridge only)



Shift Limit Characteristics (Min. Operating Voltage)



Pressure Drop vs. Flow (Through cartridge only)



Shift Limit Characteristics (Min. Operating Voltage)