

## General Description

3-Way Pilot Operated Spool Valve. The DH103A/B/C Series Valves are used in normally closed or normally open directional control three way circuits requiring remote pilot actuation. The DH103 Series Valves are used to direct flow alternately from either side of a closed loop transmission for cooling or filtering. All external parts are zinc plated.

**Operation** (pressure at port 4 additive to spring)

### DH103A (Normally Open)

- Neutral (Deactivated)  
Port (3) open to port (2), port (4) is blocked.
  - Activated with pilot pressure at port (1):  
Port (3) open to port (4), port (2) blocked.
- Note: There is an air breather vent plug in the end cap to allow for air pressure equalization in the spring chamber

### DH103B (Normally Closed)

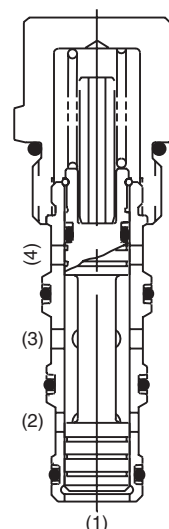
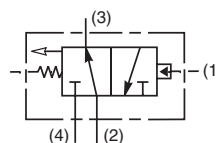
- Neutral (Deactivated)  
Port (4) open to port (3), port (2) is blocked.
- Activated with pilot pressure at port (1):  
Port (3) open to port (2), port (4) blocked.

### DH103C (Normally Open)

- Neutral (Deactivated)  
Port (3) open to port (2), port (4) is blocked.
- Activated with pilot pressure at port (1):  
Port (3) open to port (4), port (2) blocked.

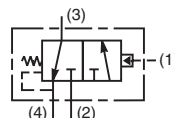
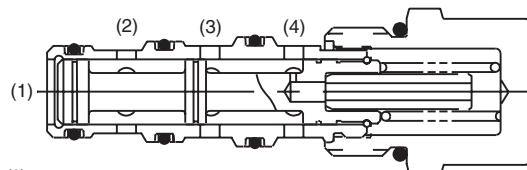
## Specifications

Rated Flow	38 LPM (10 GPM)
Maximum Inlet Pressure	345 Bar (5000 PSI)
Leakage at 150 SSU (32 cSt)	50cc/min. @ 240 Bar (3500 PSI)
Cartridge Material	All parts steel. All operating parts hardened steel.
Operating Temp. Range/Seals	-37°C to +93°C ("D"-Ring) (-35°F to +200°F) -34°C to +121°C (Nitrile) (-30°F to +250°F) -26°C to +204°C (Fluorocarbon) (-15°F to +400°F)
Fluid Compatibility/Viscosity	Mineral-based or synthetic with lubricating properties at viscosities of 45 to 2000 SSU (6 to 420 cSt)
Filtration	ISO-4406 18/16/13, SAE Class 4
Approx. Weight	0.17 kg (0.37 lbs.)
Cavity	C10-4 (See BC Section for more details)

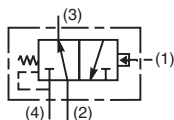
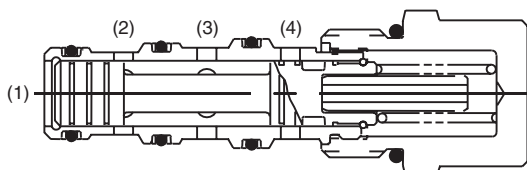


"A" SPOOL — DH103A

"B" SPOOL — DH103B

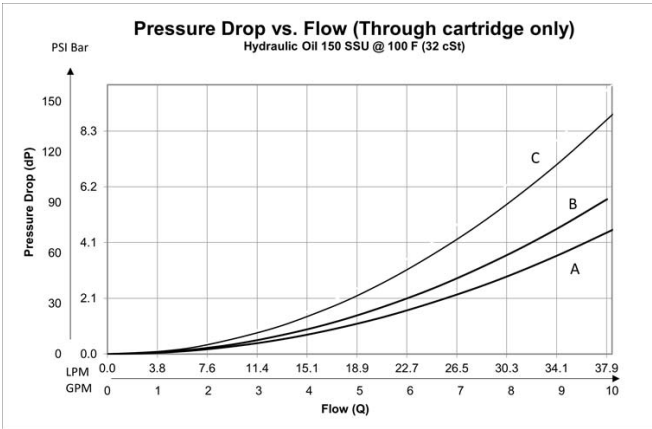


"C" SPOOL — DH103C



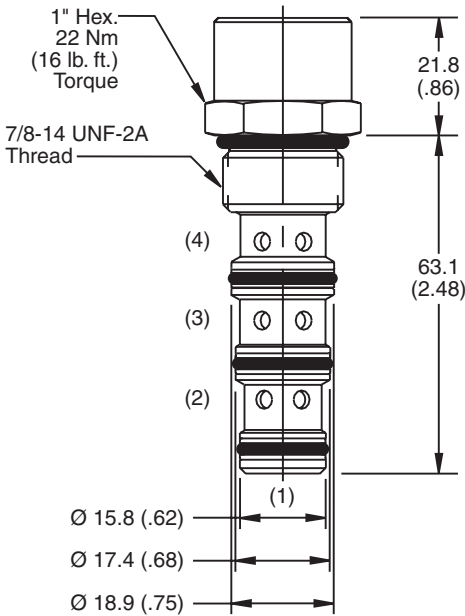
<b>CV</b>
Check Valves
<b>SH</b>
Shuttle Valves
<b>LM</b>
Load/Motor Controls
<b>FC</b>
Flow Controls
<b>PC</b>
Pressure Controls
<b>LE</b>
Logic Elements
<b>DC</b>
Directional Controls
<b>SV</b>
Solenoid Valves
<b>PV</b>
Proportional Valves
<b>CE</b>
Coils & Electronics
<b>BC</b>
Bodies & Cavities
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

Performance Curve



FLOW DIRECTION	SPOOL NO.		
	A	B	C
SPOOL SHIFTED	3 → 4 c	2 → 3 d	3 → 4 c
SPOOL NEUTRAL	2 → 3 a	3 → 4 b	2 → 3 a

Dimensions    Millimeters (Inches)



Ordering Information

**DH103**

10 Size  
Pilot Operated  
Spool Valve



Spool  
Type



Shifting  
Pressure

**Highlighted** represents preferred options that offer the shortest lead times. Other options may be available, but at extended lead times.

Code / Spool Type	
<b>A</b> Normally open 2 position, vent to atmosphere.	
<b>B</b> Normally closed 2 position, internally drain.	
<b>C</b> Normally open, 2 position, internally drain.	

Code	Cracking Pressure
Omit	5.5 Bar (80 PSI)
16	11 Bar (160 PSI)

Code	Seals
Omit	Nitrile

Kit	Part Number
Nitrile Seal	SK10-4
Fluorocarbon Seal	SK10-4V

Order Bodies Separately  
See section BC

<b>B10</b>	—	<b>4</b>	—	<b>8T</b>
10 size		4-Way Cavity		Port Size

Code	Porting / Body Material
8T	SAE-8 / Steel (5000 PSI)