

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)

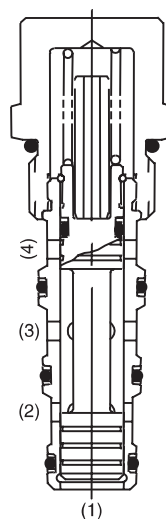
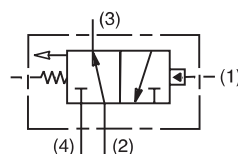
- Neutral (Deactivated)
Port (3) open to port (2), port (4) is blocked.
- Activated with pilot pressure at port (1):
Port (3) open to port (4), port (2) blocked.

Specifications

Nominal Flow	38 LPM (10 GPM)
Maximum Inlet Pressure	240 Bar (3500 PSI)
Leakage at 150 SSU (32 cSt)	50 cc/min. at 240 Bar (3500 PSI)
Cartridge Material	All parts steel. All operating parts hardened steel.
Operating Temp. Range/Seals	-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	0.23 kg (0.5 lbs.)
Cavity	C10-4 (See BC Section for more details)
Form Tool	Rougher NFT10-4R Finisher NFT10-4F

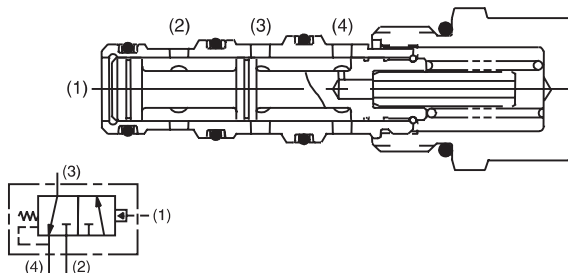


"A" SPOOL – DH103A

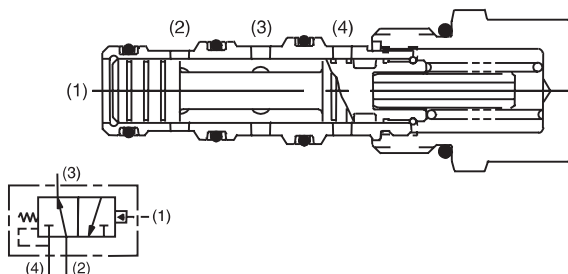


"A" SPOOL — DH103A

"B" SPOOL — DH103B

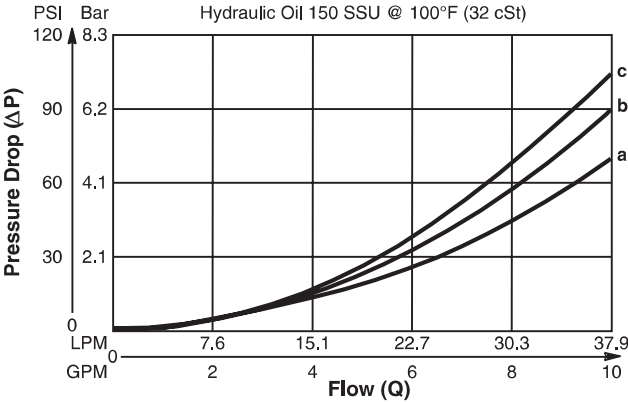


"C" SPOOL — DH103C



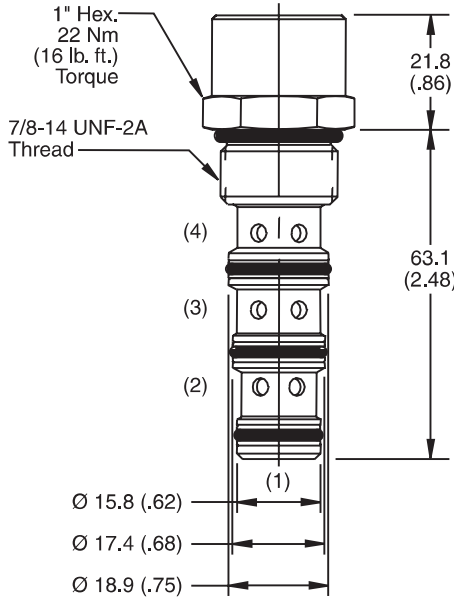
Performance Curve

Flow vs. Pressure Drop (Through cartridge only)



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

Seals

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

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

Code	Cracking Pressure
Omit	5.5 Bar (80 PSI)
04	2.8 Bar (40 PSI)
16	11 Bar (160 PSI)

Code	Seals / Kit No.
Omit	Nitrile / (SK10-4)
V	Fluorocarbon / (SK10-4V)

Order Bodies Separately
See section BC

B10

10 size

4

4-Way
Cavity

Port
Size

Code	Porting / Body Material
8T	SAE-8 / Steel (5000 PSI)
A8T	SAE-8 / Aluminium (3000 PSI)

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
CB
Cartpak Bodies
BC
Bodies & Cavities
TD
Technical Data