

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 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-D/E 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

DH103A (Normally Open)

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

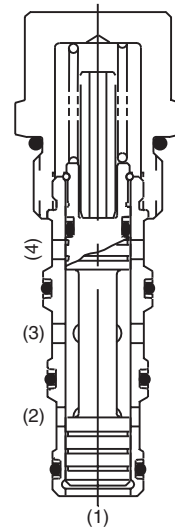
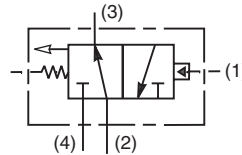
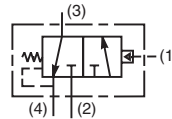
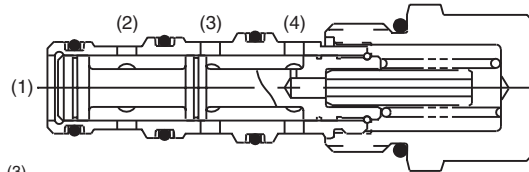
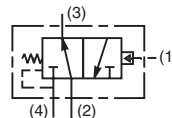
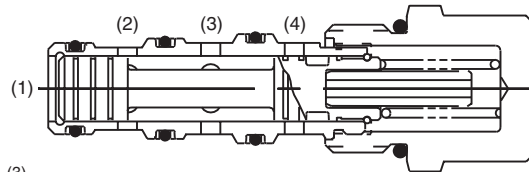
- Neutral (Deactivated)
Port (4) open to port (3), inlet port (2) is blocked.
- Activated with pilot pressure at port (1):
Port (3) open to port (2), port (4) blocked.

DH103C (Normally Open)

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

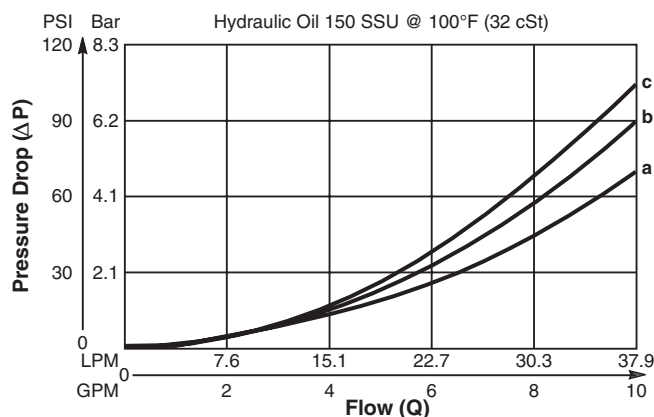
Specifications

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	-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)
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	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**

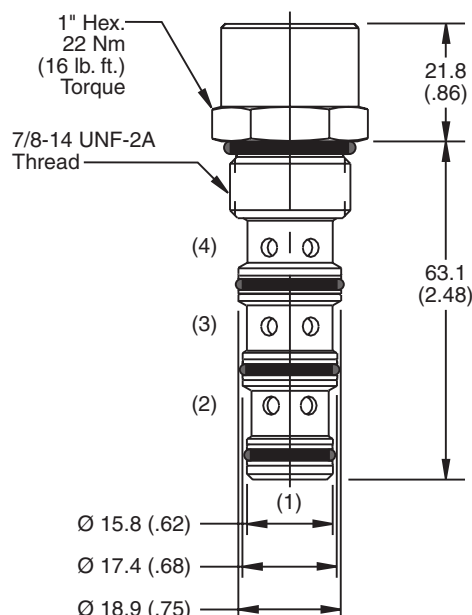
Performance Curve

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	Pressure Differential	Seals	Body Material	Port Size

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

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

Code	Body Material
Omit	Steel
A	Aluminum

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

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