

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 Rotary Spool Valve. The DM103 Series Valves are suited for any 3-way application (such as a selector function) where manual operation is desired. For additional information see Technical Tips pages MV1-MV2.

**Features**

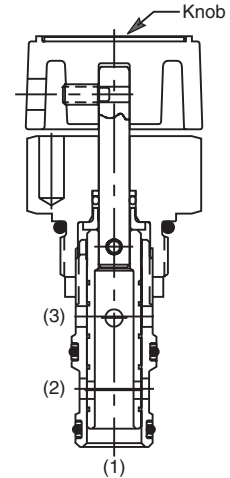
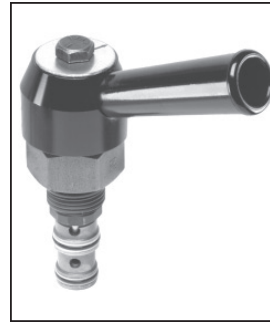
- Several lever and knob options available
- Detented versions available
- Serviceable cartridge design
- All external parts zinc plated

**Operation**

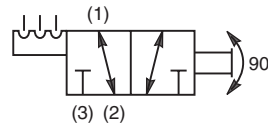
The K, LD, and FKD options require a full 90° rotation to shift the spool from one offset position to the other. The LN and FKN options require a full 45° rotation from center to either offset position. The knob (or lever) position indicator can be positioned anywhere within the 360° circle.

**Specifications**

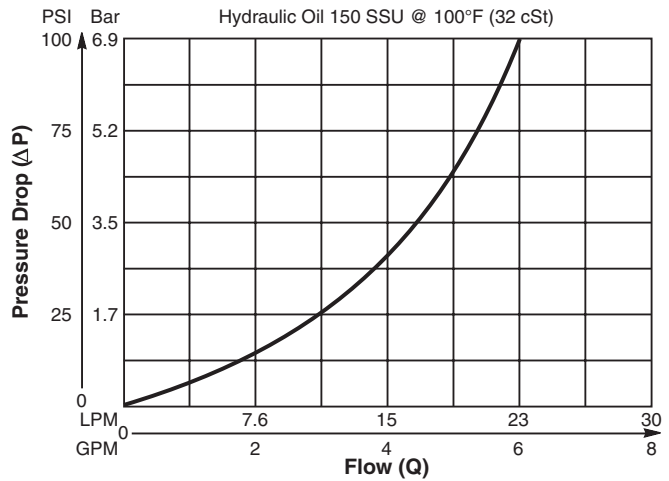
<b>Nominal Flow</b>	22.5 LPM (6 GPM)
<b>Maximum Inlet Pressure</b>	240 Bar (3500 PSI)
<b>Degrees of Rotation</b>	K, LD, and FKD Styles: 90° from Offset to Offset (2 positions) LN, FKN Style: 45° from center to either Offset (3 positions)
<b>Leakage at 150 SSU (32 cSt)</b>	164 cc/min. at 240 Bar (3500 PSI)
<b>Cartridge Material</b>	Stem, stainless steel. All other 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>	0.11 kg (.30 lbs.)
<b>Cavity</b>	C10-3 (See BC Section for more details)
<b>Form Tool</b>	Rougher NFT10-3R Finisher NFT10-3F



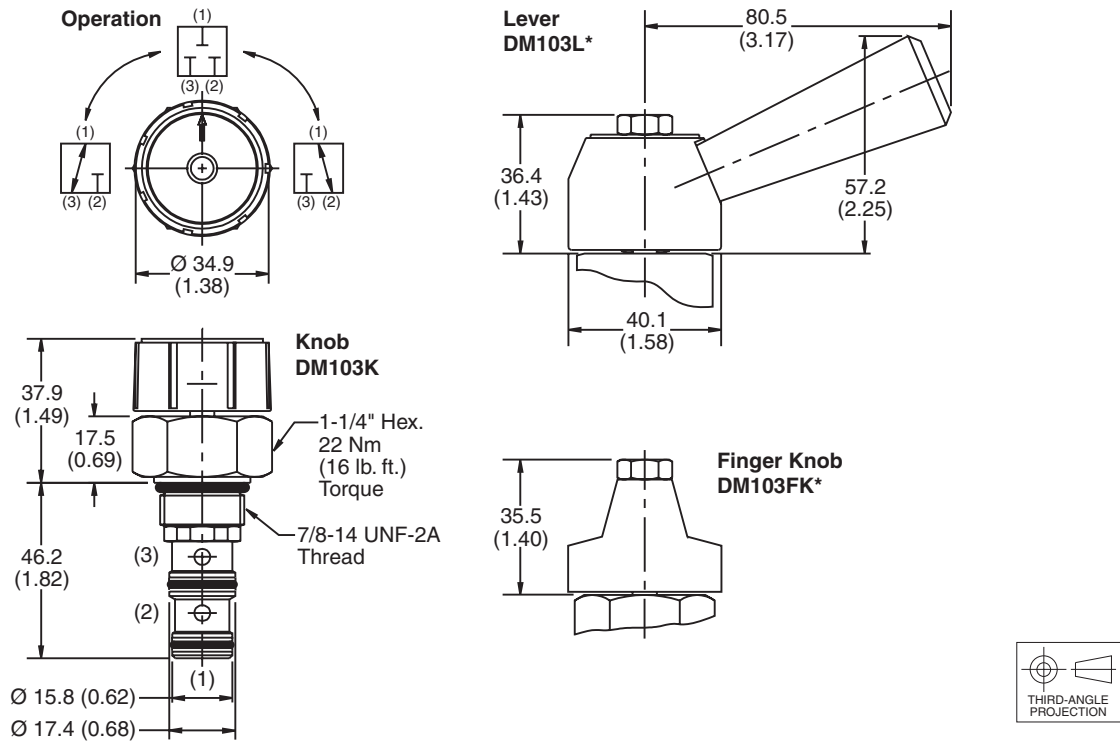
DM103LD



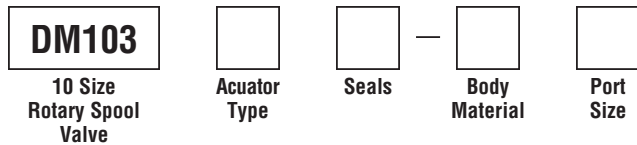
**Performance Curve**  
**Flow vs. Pressure Drop**  
(Through cartridge only)



**Dimensions** Millimeters (Inches)



**Ordering Information**



Code / Actuator Type	Diagram
<b>K</b> Knob	
<b>LD</b> Lever with 2 position detent	
<b>LN</b> Lever with 3 position detent	
<b>FKD</b> Finger Knob with 2 position detent	
<b>FKN</b> Finger Knob with 3 position detent	

Code	Seals / Kit. No.
Omit	Nitrile / (SK10-3N)
<b>V</b>	Fluorocarbon / (SK10-3V)

Code	Body Material
Omit	Steel
<b>A</b>	Aluminum

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

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

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**General Description**

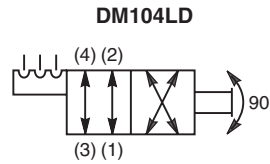
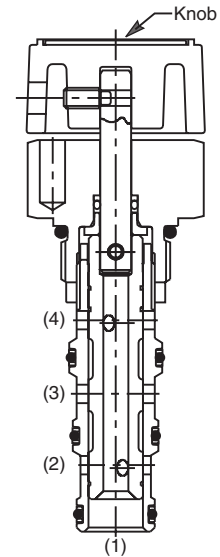
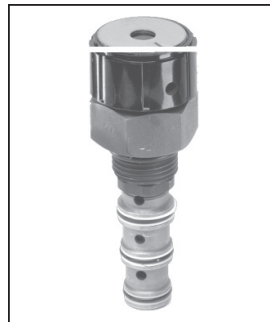
4-Way Rotary Spool Valve. The DM104 Series Valves are suited for all 4-way directional control applications where manual operation is desired.

**Features**

- Several lever and knob options available
- Detented versions available
- Serviceable cartridge design
- All external parts zinc plated

**Operation**

The K, LD, and FKD options require a full 90° rotation to shift the spool from one offset position to the other. The LN and FKN options require a full 45° rotation from center to either offset position. The knob (or lever) position indicator can be positioned anywhere within the 360° circle.

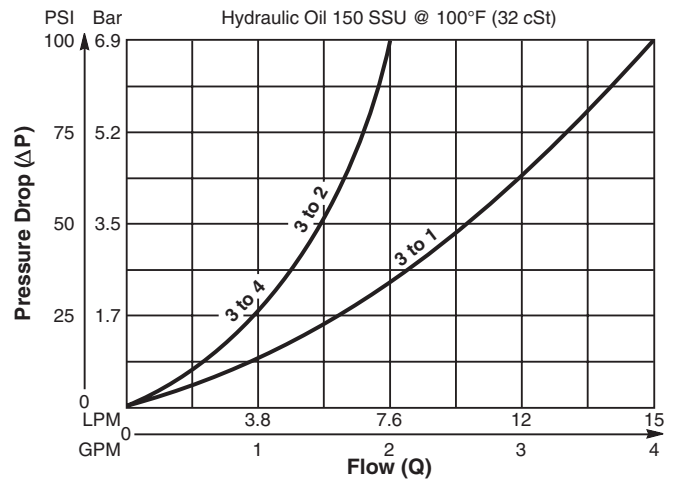


**Specifications**

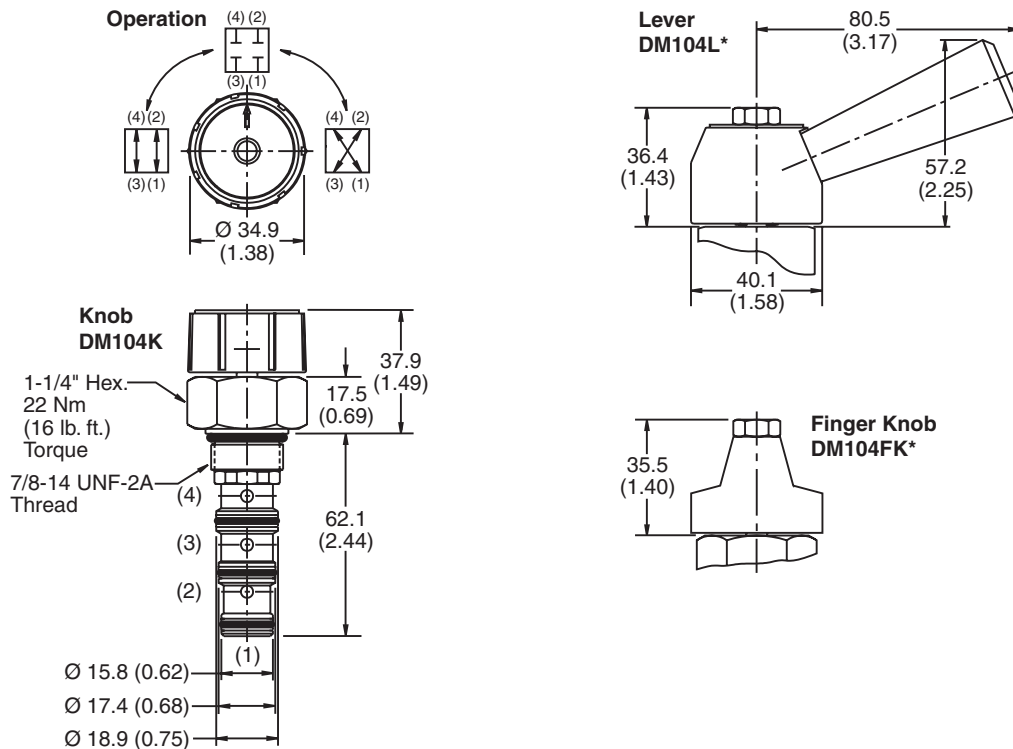
<b>Nominal Flow</b>	7.5 LPM (2 GPM)
<b>Maximum Inlet Pressure</b>	240 Bar (3500 PSI)
<b>Degrees of Rotation</b>	K, LD, and FKD Styles: 90° from Offset to Offset (2 positions) LN and FKN Styles: 45° from center to either Offset (3 positions)
<b>Leakage at 150 SSU (32 cSt)</b>	164 cc/min. at 240 Bar (3500 PSI)
<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>	0.11 kg (.30 lbs.)
<b>Cavity</b>	C10-4 (See BC Section for more details)
<b>Form Tool</b>	Rougher NFT10-4R Finisher NFT10-4F

**Performance Curve**

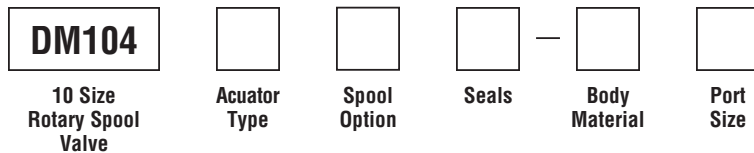
**Flow vs. Pressure Drop**  
(Through cartridge only)



**Dimensions** Millimeters (Inches)



**Ordering Information**



Code / Actuator Type	
<b>K</b> Knob	
<b>LD</b> Lever with 2 position detent	
<b>LN</b> Lever with 3 position detent	
<b>FKD</b> Finger Knob with 2 position detent	
<b>FKN</b> Finger Knob with 3 position detent	

Code / Spool Option	
<b>1</b> Closed Center	
<b>8</b> Tandem Center	

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

Code	Body Material
Omit	Steel
<b>A</b>	Aluminum

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

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