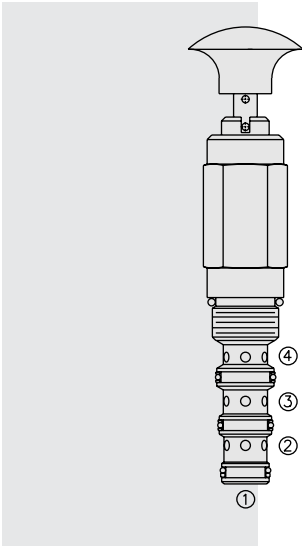


## MP10-43 Manual, Spring Return, Pull-to-Shift



### DESCRIPTION

A 4-way, manual, pull-to-shift, spring-return, screw-in, directional hydraulic cartridge valve.

Series operation is prohibited due to the tank port (1) pressure rating.

### OPERATION

In its steady-state spring-offset position, the **MP10-43** blocks flow at (3) and at (2), while (4) is open to (1). In the actuated (pulled) position, the cartridge directs flow from (3) to (4) and from (2) to (1). Note that all ports are restricted/open in transition.

**Note: Pressure at port (1) will directly act on the spool and spring. Port (1) is intended to be a tank port only.**

A unique pull-and-rotate feature for a positive actuated position hold is optional. A 90° rotation is required to position at the hold slot. The valve resets to spring-return de-actuated with a slight pull and 90° turn from the locked actuated position.

### FEATURES

- Hardened spool and cage for long life.
- Remains closed to 10.3 bar (150 psi) back-pressure.
- Optional rotational lock position.
- Industry common cavity.

### RATINGS

#### Operating Pressure:

- On (2), (3) and (4): 207 bar (3500 psi)
- On (1) (Max.): 12.4 bar (180 psi)

**Proof Pressure:** 350 bar (5075 psi)

**Flow:** See Performance Chart

**Internal Leakage:** 82 cc/minute (5 cu. in./minute) max.

**Mechanical Pull Effort Required:** 7.3 kg. (16 lbs.) installed; 8.2 kg. (18 lbs.) to travel 3.2 mm (0.125 inch); 8.6 kg. (19 lbs.) to detent

**Temperature:** -40 to 120°C

**Filtration:** See page 9.010.1

**Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

**Installation:** No restrictions; See page 9.020.1

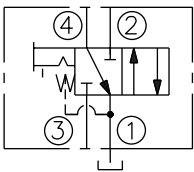
**Cavity:** VC10-4; See page 9.110.1

**Cavity Tool:** CT10-4XX; See page 8.600.1

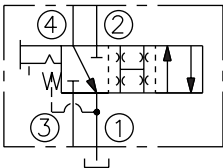
**Seal Kit:** SK10-4X-MMT; See page 8.650.1

### SYMBOLS

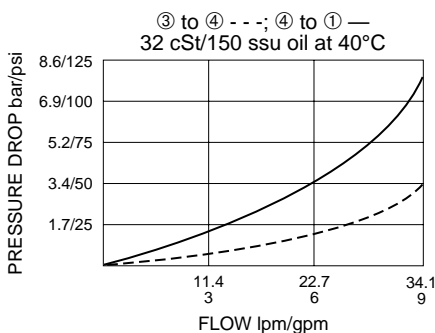
#### USASI/ISO:



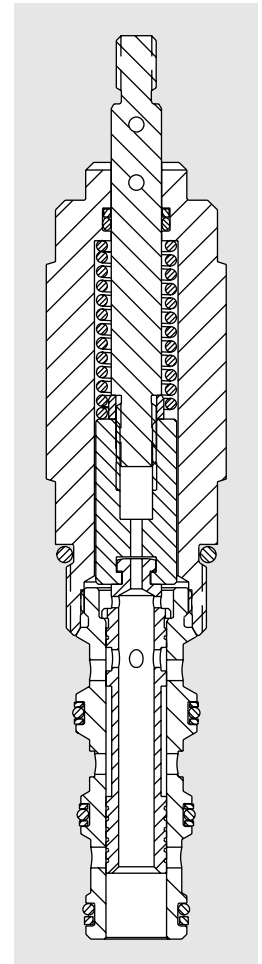
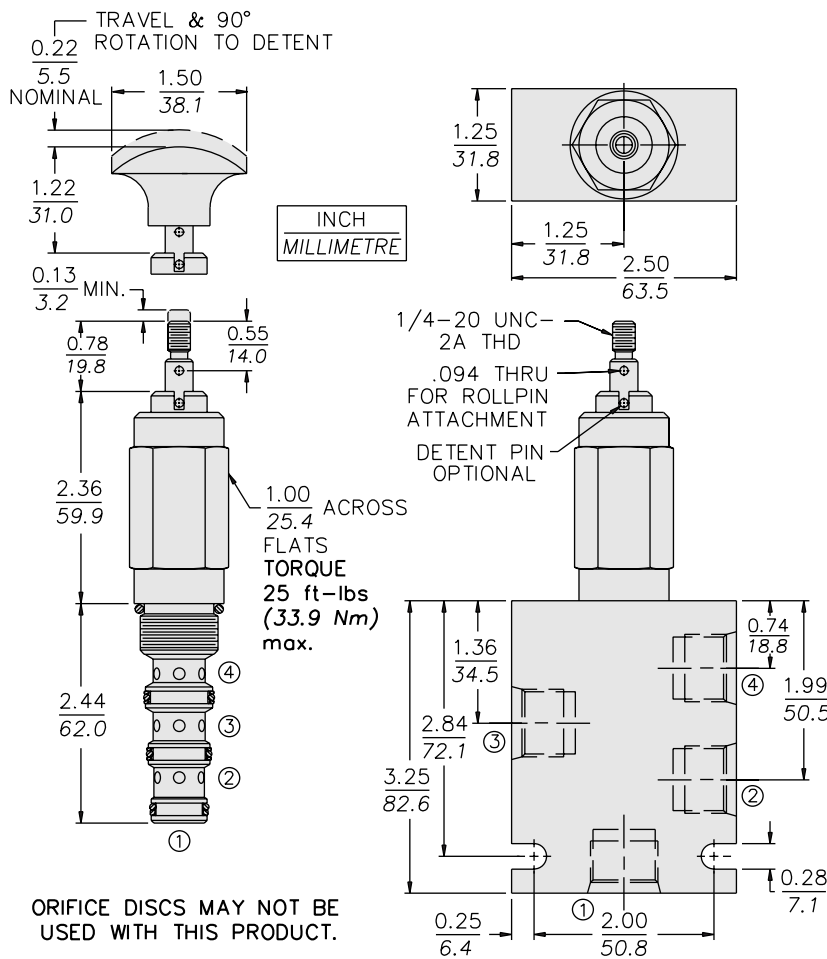
#### TRANSITION:



### PERFORMANCE (Cartridge Only)



**DIMENSIONS**



**MATERIALS**

**Cartridge:** Weight: 0.32 kg. (0.70 lbs.)  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces.  
Buna N O-rings and polyester elastomer back-ups standard.  
Plastic knob optional.

**Standard Ported Body:** Weight: 0.34 kg. (0.75 lbs.) Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.010.1.

**TO ORDER**

**MP10-43**

- Option**
- Threaded Shaft/Spring Return **T**
- Threaded Shaft/Lock Position Pin **R**
- Black Plastic Knob/Spring Return **K**
- Black Plastic Knob/Lock Position Pin **D**
- Red Plastic Knob/Spring Return **J**
- Red Plastic Knob/Lock Position Pin **L**

- Seals**
- N** Buna N (Std.)
- V** Fluorocarbon

- Porting**
- 0** Cartridge Only
- 6T** SAE 6
- 8T** SAE 8
- 2B** 1/4 in. BSP\*
- 3B** 3/8 in. BSP\*

\*BSP Body; U.K. Mfr. Only