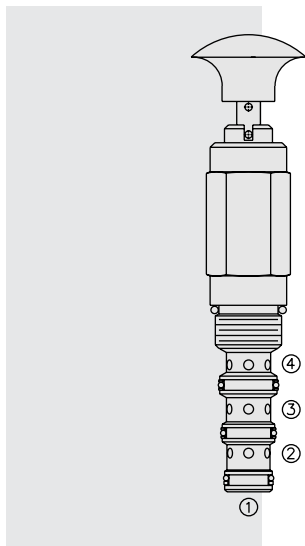


## MP10-42 Manual, Spring Return, Pull-to-Shift



### 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 **MP10-42** directs flow between ports 3 and 2.

In the actuated (pulled) position, the cartridge directs flow from 3 to 4.

**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 holding the positive actuated position 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 a 90° turn from the locked actuated position.

### FEATURES

- Hardened spool and cage for long life.
- Remains closed to 12.4 bar (180 psi) back-pressure.
- Optional rotational lock position.
- Industry common cavity.

### RATINGS

#### Operating Pressure:

On 2, 3 and 4: 240 bar (3500 psi)

On 1 (Max.): 12.4 bar (180 psi)

**Proof Pressure:** 420 bar (6090 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

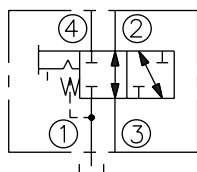
**Cavity:** VC10-4; See page 9.110.1

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

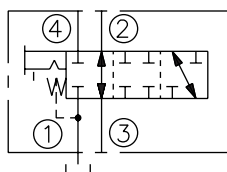
**Seal Kit:** SK10-4X-MMT; See page 8.650.1

### SYMBOLS

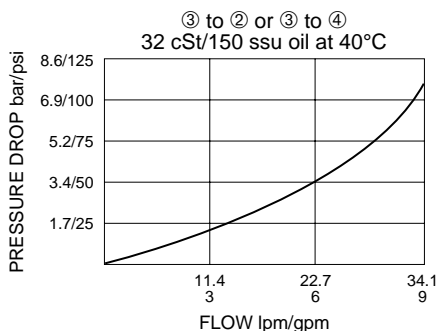
#### USAS/ISO:



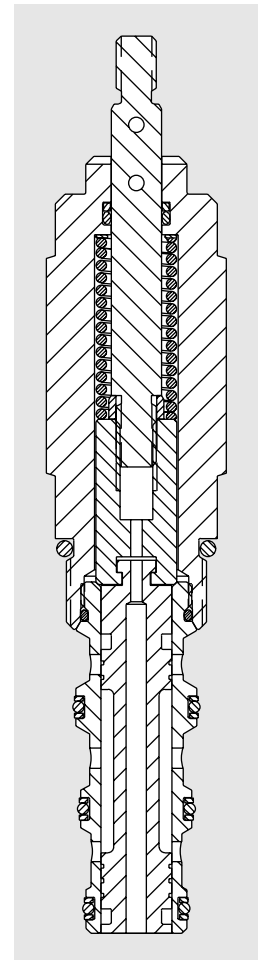
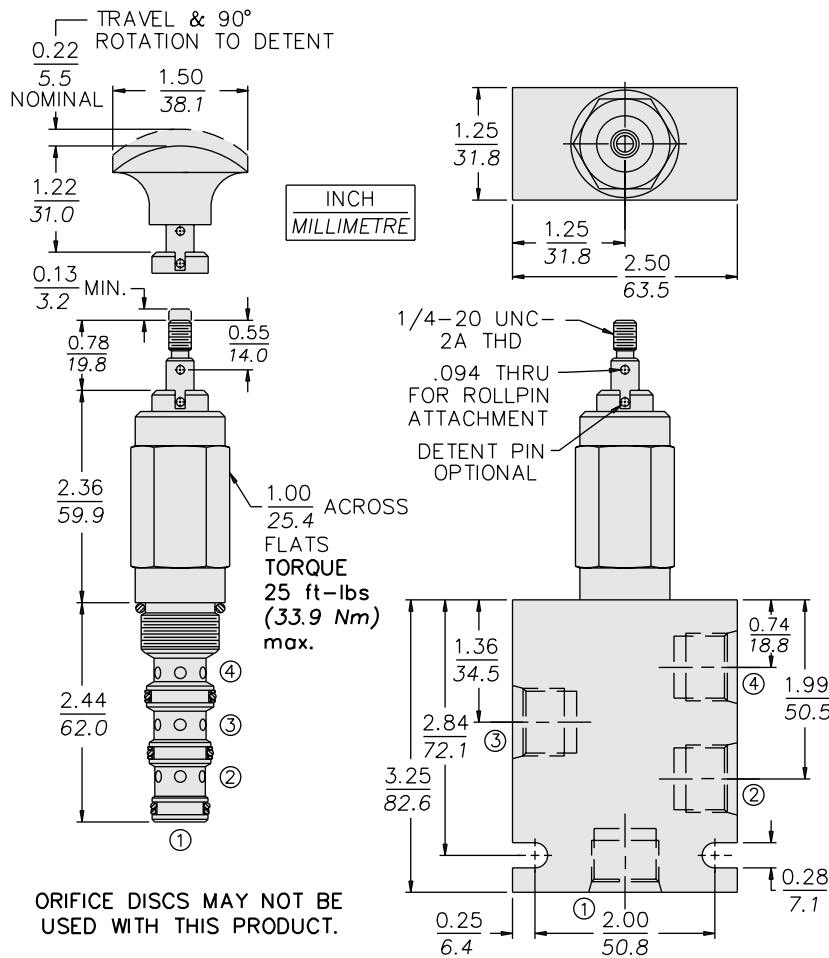
#### TRANSITION:



### 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**

MP10-42 - -

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

- Seals**
- N Buna N (Std.)
  - V Fluorocarbon
  - NS Buna N with Sealed Spool
  - VS Fluorocarbon with Sealed Spool

- 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