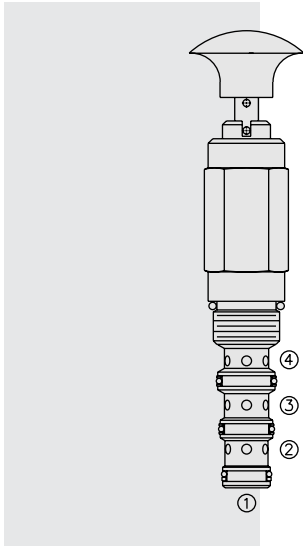


DIRECTIONAL VALVES

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-off 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

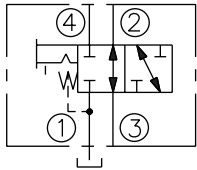
Cavity: VC10-4; See page 9.110.1

Cavity Tool: CT10-4XX; See page 8.600.1

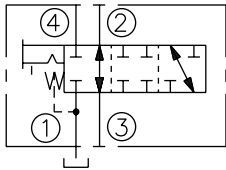
Seal Kit: SK10-4X-MMT; See page 8.650.1

SYMBOLS

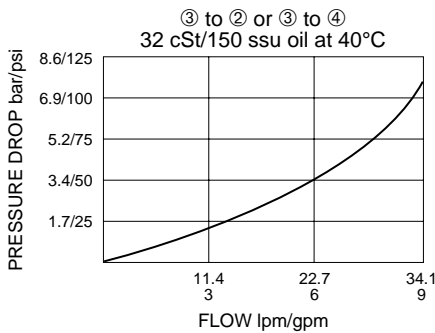
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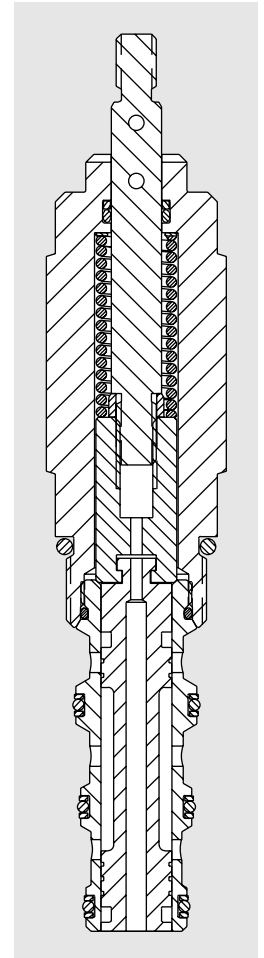
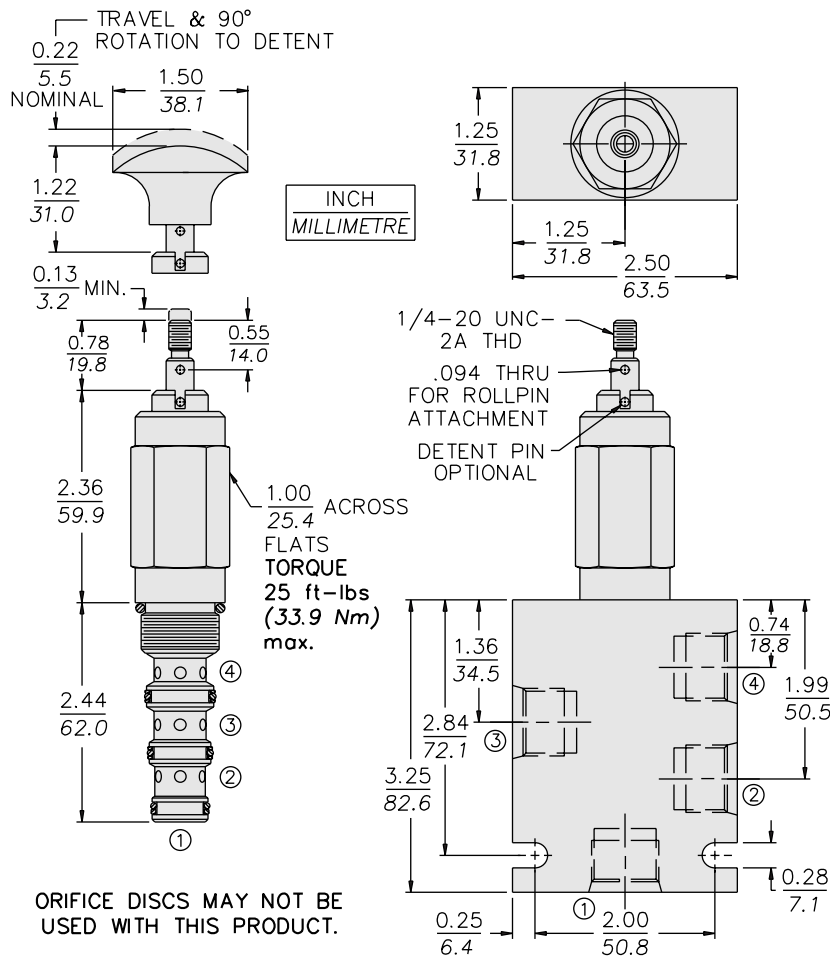
TRANSITION:



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