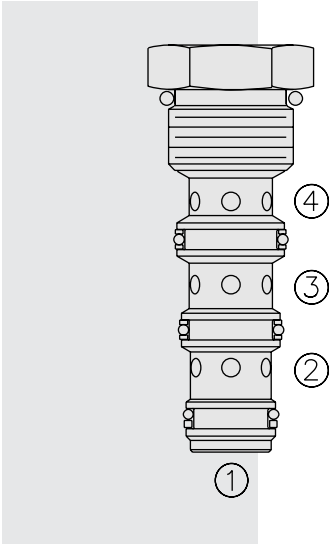


# FD10-42 Flow Divider/Combiner w/ Anti-Stall Feature



## DESCRIPTION

A screw-in, cartridge-style, spool-type flow divider/combiner. Optional flow dividing/combining ratios are maintained regardless of system operating pressure conditions.

## OPERATION

In the dividing mode, the **FD10-42** will divert input flow from port ③ to ports ② and ④, based on the ratio specified, regardless of operating pressure.

The cartridge will combine input flows from ports ② and ④.

The FD10-42 is designed to maintain a flow path to both combining ports ② and ④ when one port is “free-wheeling.” This feature keeps hydraulic (parallel) motor drive circuits from stalling in the combining mode only.

## FEATURES

- Hardened parts for long life.
- Quiet, modulated response.
- Industry common cavity.

## RATINGS

**Operating Pressure:** 240 bar (3500 psi)

**Flow:** 60.6 lpm (16 gpm) input max.

### Flow Options:

- Input Flow: 7.6 lpm (2 gpm); Ratio: 50:50; Model Code: 11
  - Input Flow: 15.1 lpm (4 gpm); Ratio: 50:50; Model Code: 22
  - Input Flow: 22.7 lpm (6 gpm); Ratio: 50:50; Model Code: 33
  - Input Flow: 30.3 lpm (8 gpm); Ratio: 50:50; Model Code: 44
  - Input Flow: 37.9 lpm (10 gpm); Ratio: 50:50; Model Code: 55
  - Input Flow: 45.4 lpm (12 gpm); Ratio: 50:50; Model Code: 66
  - Input Flow: 60.6 lpm (16 gpm); Ratio: 50:50; Model Code: 88
- Other ratio options available; consult factory.

**Standard Compensator Bias Spring:** 2.07 bar (30 psid)

**Flow Accuracy:** 10% from 30–100% of rated flow

**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.

Note: Standard 10 size 4-way bodies should not be used with this product. See page 8.010.1 for special flow divider bodies.

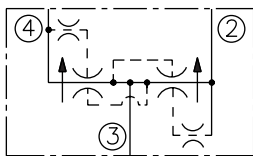
**Cavity:** VC10-4 (Variation “A”); See page 9.110.1

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

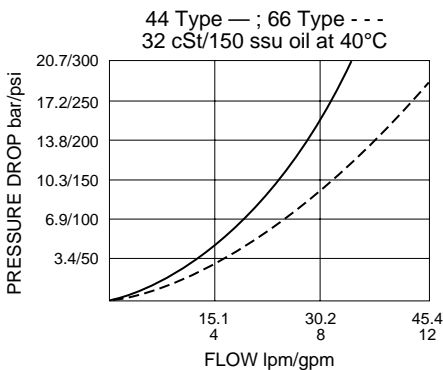
**Seal Kit:** SK10-4X-MMM; See page 8.650.1

## SYMBOLS

### USASI/ISO:



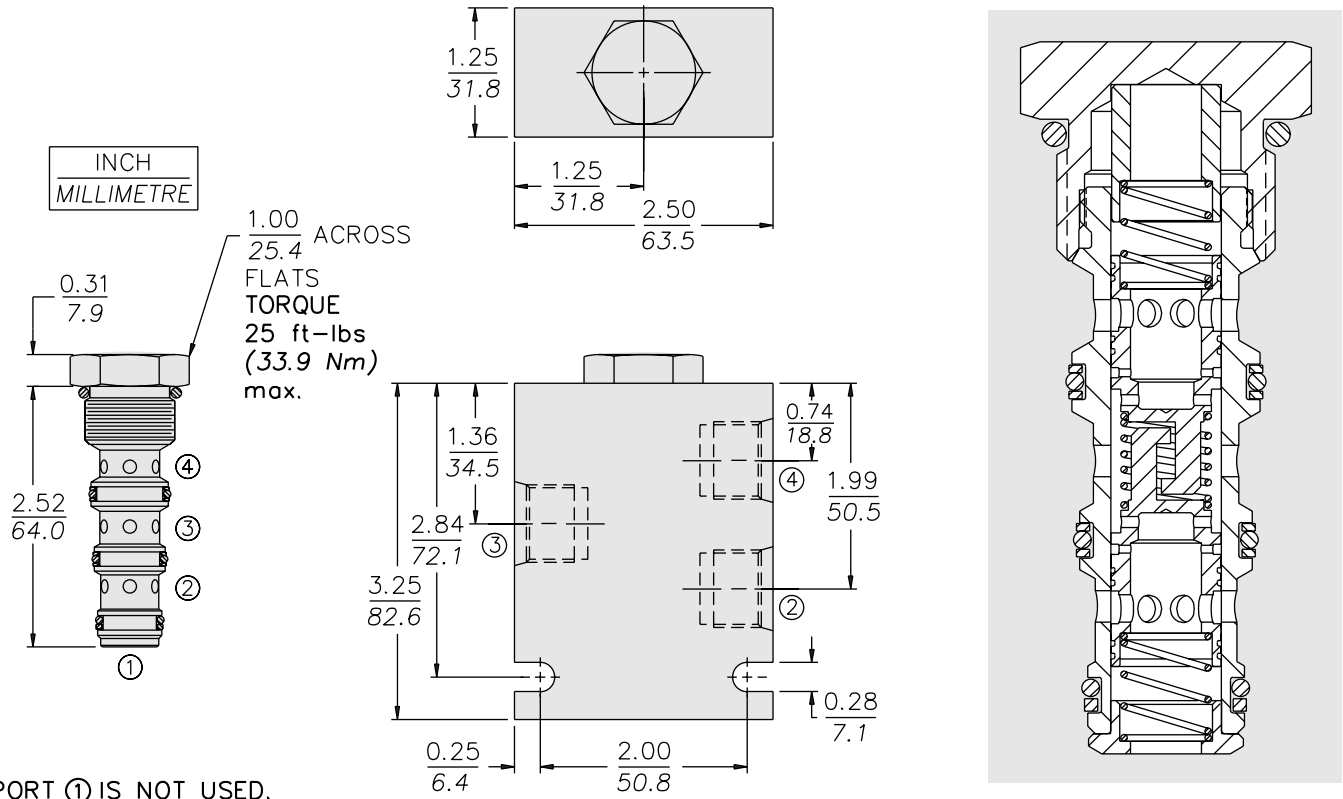
## PERFORMANCE (Cartridge Only)



**Note:** This model will be superseded by the new FDxx-45 models, which incorporate the features of the FDxx-40, FDxx-41 and FDxx-42 series valves in one product. OEM's are encouraged to consider the newer, more robust and versatile FDxx-45 models for new applications:

- FD50-45; see page 5.632.1
- FD52-45; see page 5.634.1
- FD56-45; see page 5.636.1

**DIMENSIONS**



PORT ① IS NOT USED.

**MATERIALS**

**Cartridge:** Weight: 0.10 kg. (0.23 lbs.)  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces.  
Buna N O-rings and polyester elastomer back-ups standard.

**Special 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**

FD10-42 -

**Special Ported Bodies**

- Cartridge Only **0**
  - SAE 6 (All Ports) **6T**
  - SAE 8 ③; **8D**
  - SAE 6 ② & ④
  - 1/4 in. BSP\* (All Ports) **2B**
  - 3/8 in. BSP\* (All Ports) **3B**
  - 1/2 in. BSP\* ③; **5B**
  - 3/8 in. BSP\* ② & ④
- \*BSP Body; U.K. Mfr. Only

**Dividing/Combining Ratio**

- 11** 50:50 rated @ 7.6 lpm (2 gpm) input
- 22** 50:50 rated @ 15.1 lpm (4 gpm) input
- 33** 50:50 rated @ 22.7 lpm (6 gpm) input
- 44** 50:50 rated @ 30.3 lpm (8 gpm) input
- 55** 50:50 rated @ 37.9 lpm (10 gpm) input
- 66** 50:50 rated @ 45.4 lpm (12 gpm) input
- 88** 50:50 rated @ 60.6 lpm (16 gpm) input

NOTE: Standard 10-size 4-way bodies should not be used for flow dividers. See special flow divider bodies, page 8.010.1.

NOTE: Additional ratios and/or input flow sizings available for OEM applications. Consult factory.

**Seals**

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