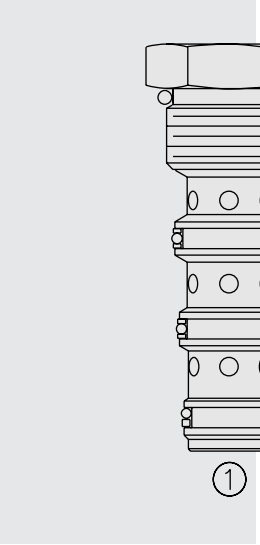
FD10-42 Flow Divider/Combiner w/ Anti-Stall Feature



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.

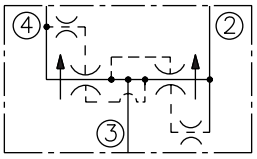
Cavity: VC10-4 (Variation "A"); See page 9.110.1

Cavity Tool: CT10-4XX; See page 8.600.1

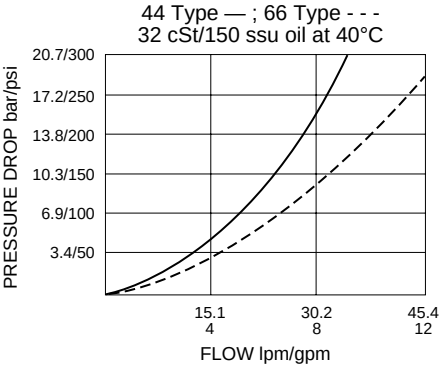
Seal Kit: SK10-4X-MMM; See page 8.650.1

SYMBOLS

USASI/ISO:



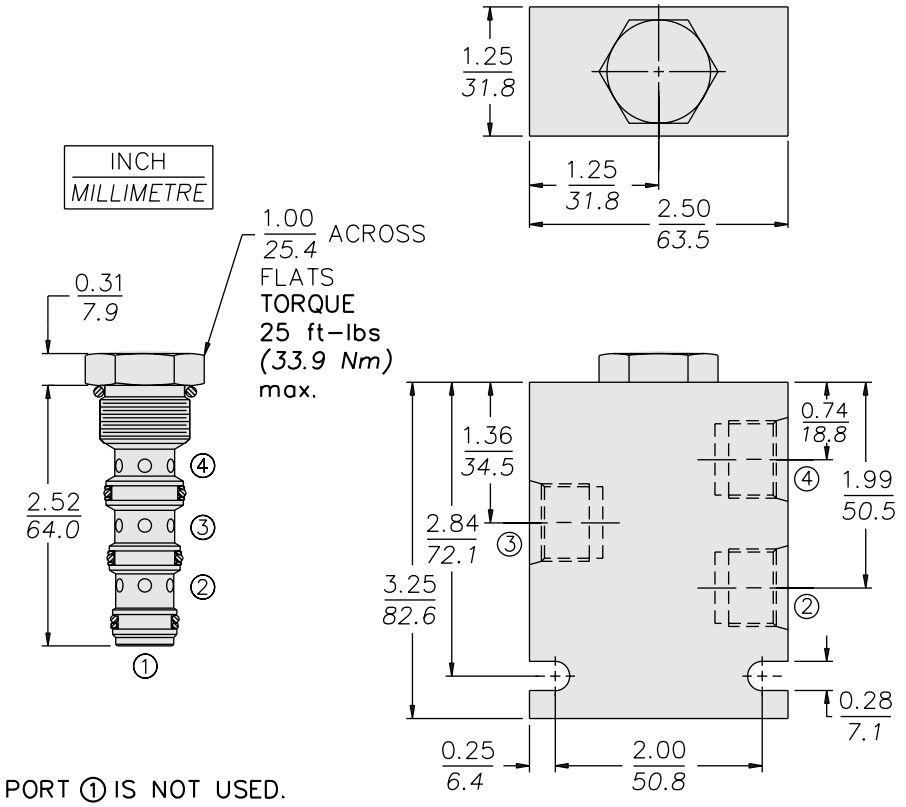
PERFORMANCE (Cartridge Only)

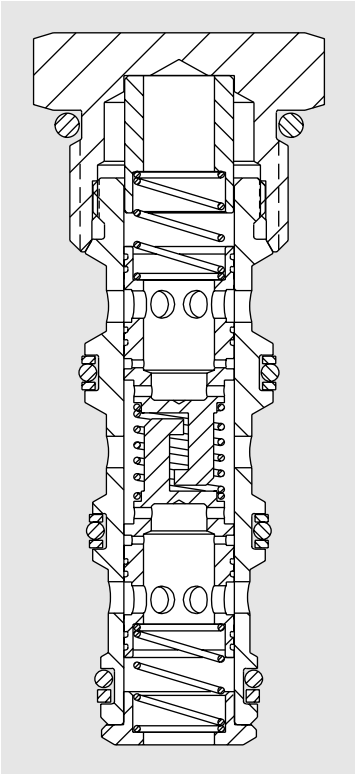


Note: This model will be superseded by the new FDxx-45 models, which incorporate the features of the FDxx-40, FDxx-41 and FDxx-42 series valves in one product. OEM's are encouraged to consider the newer, more robust and versatile FDxx-45 models for new applications:

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

DIMENSIONS





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; SAE 6 ② & ④	**8D**
1/4 in. BSP* (All Ports)	**2B**
3/8 in. BSP* (All Ports)	**3B**
1/2 in. BSP* ③; 3/8 in. BSP* ② & ④	**5B**

*BSP Body; U.K. Mfr. Only

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

Seals

N Buna N (Std.)
V Fluorocarbon

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