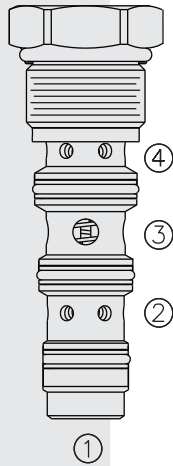


FD50-45 Flow Divider/Combiner . . . Heavy Duty,



Note: This new FD50-45 flow divider incorporates the features of the older FDxx-40, FDxx-41 and FDxx-42 flow dividers in one product. It is designed to supersede the older models. OEMs are encouraged to consider this newer, more robust and versatile model for new applications.

DESCRIPTION

A heavy duty, multifunction, screw-in, cartridge-style, spool-type flow divider/combiner.

OPERATION

In the dividing mode, the **FD50-45** will divert input flow from port 3 to ports 2 and 4, based on the ratio specified, regardless of operating pressure. When the flow direction is reversed the valve will combine flows from 2 and 4 to port 3. Synchronizing flow is provided in both the dividing and combining modes at “bottomed” conditions in cylinder applications and at “stalled” conditions in motor applications.

FEATURES

- Hardened parts for long life.
- Quiet, modulated response.
- Wide operating flow range.
- Synchronizing in dividing and combining modes.
- Floating cage — high installation torque.
- Industry common cavity.

RATINGS

Operating Pressure: 345 bar (5000 psi)

Burst Pressure: 1103 bar (16000 psi)

Flow Options:

- Input Flow: 4 - 19 lpm (1 - 5 gpm); Ratio: 50:50; Model Code: 22
- Input Flow: 5.5 - 26.7 lpm (1.5 - 7 gpm); Ratio: 50:50; Model Code: 33
- Input Flow: 9.5 - 38 lpm (2.5 - 10 gpm); Ratio: 50:50; Model Code: 44
- Input Flow: 11.5 - 41.5 lpm (3 - 11 gpm); Ratio: 50:50; Model Code: 55
- Input Flow: 15 - 45 lpm (4 - 12 gpm); Ratio: 50:50; Model Code: 66
- Input Flow: 19 - 57 lpm (5 - 15 gpm); Ratio: 50:50; Model Code: 88

Synchronizing Flow: Approximately 10% of maximum inlet flow

Flow Accuracy: 10% of inlet flow for Models 22, 33, 44, 55 and 66; 15% of inlet flow for Model 88.

Temperature: -40 to 100°C (-40 to 212°F) for Buna N seals; -26 to 204°C (-15 to 400°F) for fluorocarbon seals; -54 to 107°C (-65 to 225°F) for polyurethane and urethane seals.

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

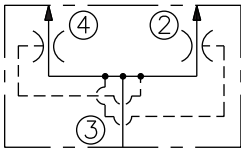
Note: Standard 10 size 4-way bodies can be used with this product with Port 1 plugged. See page 8.010.1 for special flow divider bodies.

Cavity: VC10-4; See page 9.110.1

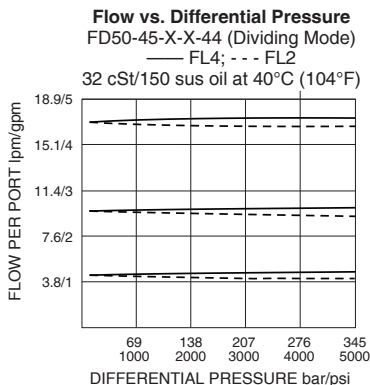
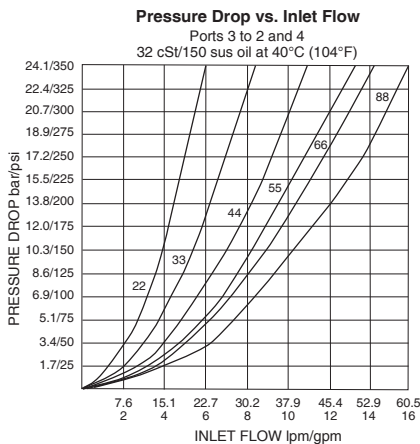
Cavity Tool: CT10-4X; See page 8.600.1

Seal Kit: SK10-4X-MMM; SK10-2U-000 (urethane). See page 8.650.1

ISO SYMBOL



PERFORMANCE (Cartridge Only)



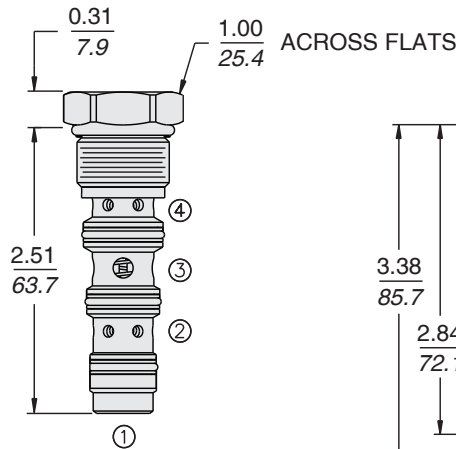
Multifunction

FD50-45

DIMENSIONS

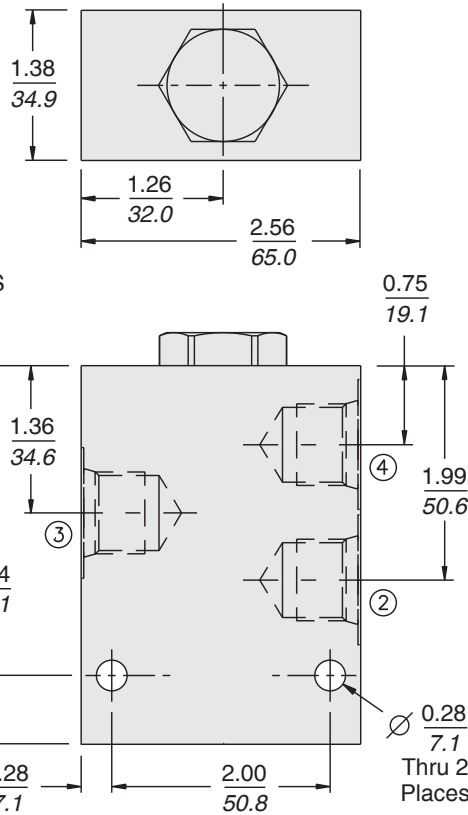
INCH
MILLIMETRE

Installation Torque:
48–52 ft-lbs (65–71 Nm)



Port 1 is not used.

Ductile Iron, FD-Type
Body Shown



MATERIALS

Cartridge: Weight: 0.11 kg. (0.24 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.

Ported Body: Ductile iron required for operation over 207 bar (3000 psi). Aluminum bodies are available for lower pressure operation. FD-type bodies recommended but a standard 4-way body may also be used with Port 1 plugged. See page 8.010.1.

TO ORDER

FD50-45 -

Ported Bodies
Cartridge Only **0**
SAE 6 (all ports) **6TD**
SAE 8 (all ports) **8TD**
SAE 8 port 3;
SAE 6 ports 2 & 4 **8DD**
1/4 in. BSP* (all ports) **2BD**
3/8 in. BSP* (all ports) **3BD**

*BSP Body; U.K. Mfr. Only

Dividing/Combining Ratio

22 50:50 rated @ 4-19 lpm
(1-5 gpm) input
33 50:50 rated @ 5.5-26.5 lpm
(1.5-7 gpm) input
44 50:50 rated @ 9.5-38 lpm
(2.5-10 gpm) input
55 50:50 rated @ 11.5-41.5 lpm
(3-11 gpm) input
66 50:50 rated @ 15-45 lpm
(4-12 gpm) input
88 50:50 rated @ 19-57 lpm
(5-15 gpm) input

Seals

N Buna N (Std.)
V Fluorocarbon
P Polyurethane*
U Urethane*

* Required for operation over 240 bar (3500 psi); FD50 option.