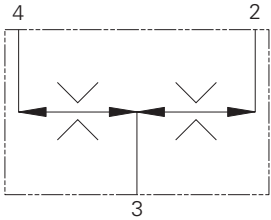


# 2CFD50 - Flow Divider/Combiner

Pressure compensated, spool type

Up to 40 L/min (10.5 USgpm) • 350 bar (5000 psi)



## Operation

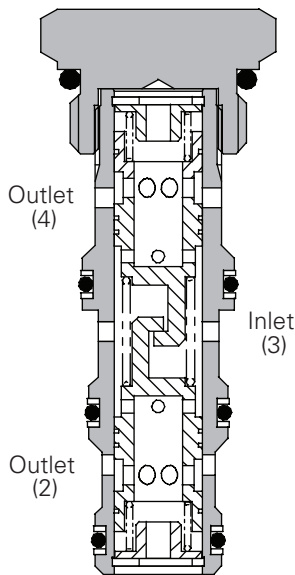
Inlet flow passes through the two matched orifices in the spools, through the spools and out of the radial holes in the sleeve. The matched orifices and the compensating springs ensure that the flow is divided equally, excess flow in either

direction causes the spool to move and close the radial holes in the sleeve until equilibrium is restored. In the reverse direction the spools close together and regulate the flow in through the radial ports.

## Features

One valve synchronizes in both directions. Matched spools give high accuracy under load and pressure imbalance conditions. Cartridge construction gives versatility of application. A valve may be fitted into a line body, a custom designed Hydraulic Integrated Circuit or other hydraulic equipment.

## Sectional View



## Performance Data

### Ratings and Specifications

Figures based on oil temp at 40° and viscosity at 40 cSt

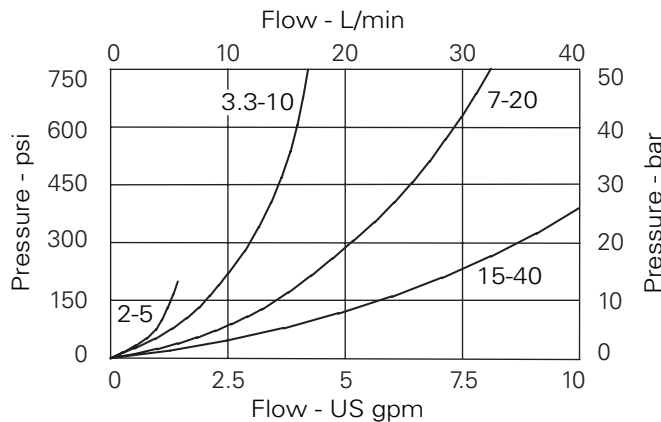
Rated flow	Up to 40 L/min (10.5 USgpm)	
Max pressure	350 bar (5000 psi)	
Cartridge material	All working parts hardened and ground steel. Zinc plated external steel body	
Body material	Standard aluminum (up to 210 bar*) add suffix "377" for steel option	
Mounting position	Unrestricted	
Cavity number	A12744 (See Section M)	
Torque cartridge into cavity	34 Nm (25 lbs ft)	
Weight	2CFD50	0.10 kg (0.23 lbs)
	2CFD55	0.44 kg (0.98 lbs)
Seal kit	SK1065 (Nitrile) SK1065V (Viton®)	
Recommended filtration level	Up to 40 L/min (10.5 USgpm)	
Operating temp	-30° to +90°C (-22° to +194°F)	
Nominal range	50 to 500 cSt	

Viton is a registered trademark of E.I. DuPont

## Description

This range of flow divider/combiner valves gives division of input flow into two equal parts and re-combination of flow in the reverse direction. Pressure compensation ensures that whether dividing or combining, equal flow is maintained over a wide range of pressure variation. A typical use of these valves is to divide a pump flow to operate two actuators (which may be under different load conditions and at different pressures) and to re-combine the return flows to synchronize actuator movement. Flow variation is within ±10% with the maximum variation of pressure and inlet flow and under normal conditions will be significantly less.

## Pressure Drop



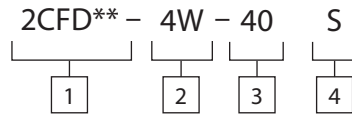
Note: When used on cylinders size to suit the return flow rate.

# 2CFD50 - Flow Divider/Combiner

Pressure compensated, spool type

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## Model Code



### 1 Function

2CFD50 - Cartridge only  
2CFD55 - Cartridge and body

### 2 Port Size

Code	Port Size	Housing Number - Body Only	
		Aluminium	Steel
Omit	Cartridge only		
3W	3/8" BSP inlet and outlet	B19187	
4W	1/2" BSP inlet and outlet	B20816	
8T-6T	1/2" SAE inlet and 3/8" SAE outlet	B19185	B21935

See section J for housing details.

### 3 Seals

S - Nitrile (for use with most industrial hydraulic oils)  
SV - Viton (for high temperature & most special fluid applications)

### 7 Capacity (Input)

5 - 2-5 L/min (0.5-1.3 USgpm)  
10 - 3.3 - 10 L/min (0.9-2.6 USgpm)  
20 - 7-20 L/min (1.8-5.3 USgpm)  
40 - 15-40 L/min (4.0-10.5 USgpm)

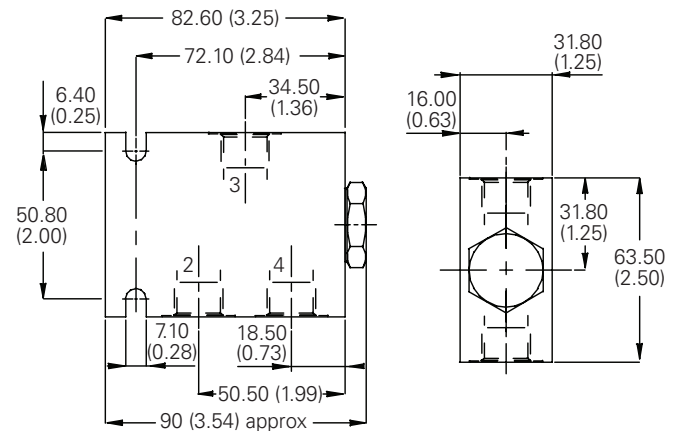
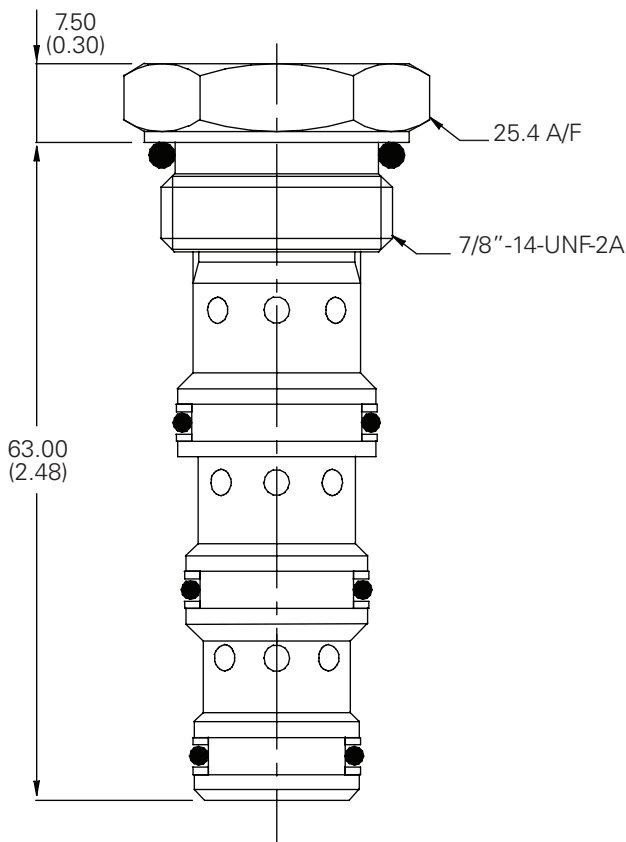
Other terminations available on request.

## Dimensions

mm (inch)

Cartridge Only  
Basic Code  
2CFD50

Complete Valve  
3/8", 1/2" Ports  
Basic Code  
2CFD55



Notes: For applications above 210 bar (3000 psi), please consult our technical department or use the steel body option.

Notes: Blocking one leg will result in a large reduction in flow from the other. Valves with higher working pressures are available. Contact main office for details.