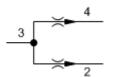
MODEL **FSDD** 

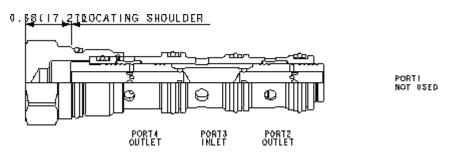
Flow divider valve

## CAPACITY: 3 - 15 gpm / CAVITY: T-32A



sunhydraulics.com/model/FSDD





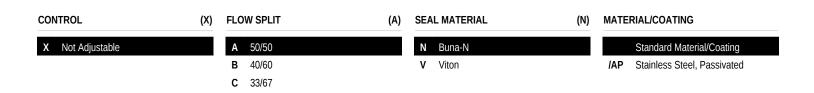
Flow dividers are sliding-spool, pressure-compensated devices used to split oil flow to two different branches of a circuit in a designated ratio. These valves are suitable for applications that use the following: unidirectional hydraulic motors, hydraulic cylinders where flow division in one direction only is required, and multiple circuits that are serviced from one pump supply.

# **TECHNICAL DATA** NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-32A	
Series	2	
Capacity	3 - 15 gpm	
Maximum Operating Pressure	5000 psi	
Divisional Accuracy at Max Input Flow	±3.5%	
Divisional Accuracy at Minimum Input Flow	±6.5%	
Pressure Drop at Maximum Rated Input Flow	250 psi	
Pressure Drop at Minimum Rated Input Flow	30 psi	
Rated Input Flow with 33/67 Split	2.2 - 11 gpm	
Rated Input Flow with 40/60 Split	2.5 - 12.5 gpm	
Rated Input Flow with 50/50 Split	3 - 15 gpm	
Valve Hex Size	1 1/8 in.	
Valve Installation Torque	45 - 50 lbf ft	
Model Weight	0.57 lb.	
Seal kit - Cartridge	Buna: 990-032-007	
Seal kit - Cartridge	Polyurethane: 990-032-002	
Seal kit - Cartridge	Viton: 990-032-006	

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#### **OPTION SELECTION EXAMPLE: FSDDXAN**



### **TECHNICAL FEATURES**

- All flow divider and divider/combiner cartridges are physically interchangeable (i.e. same flow path, same cavity for a given frame size).
- Operating characteristics cause the leg of the circuit with the greatest load to receive the higher percentage of flow in dividing mode. If a rigid mechanism is used to tie actuators together, the lead actuator may pull the lagging actuator and cause it to cavitate.
- In applications involving rigid mechanisms between multiple actuators, operating inaccuracy will cause the eventual lock-up of the system. If the mechanical structure is not designed to allow for the operating inaccuracy inherent in the valve, damage may occur.
- In motor circuits, rigid frames or mechanisms that tie motors together, and/or complete mechanical synchronized motion of the output shaft of the motors, either by wheels to the pavement or sprockets to conveyors, will contribute to cavitation, lock-up and/or pressure intensification.
- Variations in speed and lock-up can be attributed to differences in motor displacement, motor leakage, wheel diameter variance and friction of wheels on the driving surface.
- This valve is a divider only; any attempt to flow backwards through the valve is not advised.
- Dividers with unequal ratios have the higher flow at port 4.
- Below the minimum flow rating there is not enough flow for the valve to modulate. It is effectively a tee. If flow starts at zero and rises, there will be no dividing control until the flow reaches the minimum rating.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

#### PERFORMANCE CURVES

Split	Input Flow	Rated Accuracy	Maximum Possible Flow Variations		
	,		High Flow Leg	Low Flow Leg	
50:50	Max Rated	15 gpm	±3.5%	6.98 - 8.02 gpm	
		60 L/min		28 - 32 L/min	
	Min rated	3 gpm	±6.5%	1.30 - 1.70 gpm	
		12 L/min		5,2 - 6,7 L/min	
40:60	Max Rated	12.5 gpm	±3.5%	7.1 - 7.9 gpm	4.6 - 5.4 gpm
		47 L/min		26,6 - 29,8 L/min	17,2 - 20,4 L/min
	Min rated	2.5 gpm	±6.5%	1.34 - 1.66 gpm	.84 - 1.16 gpm
		9,4 L/min		5,0 - 6,2 L/min	3,2 - 4,4 L/min
33:67	Max Rated	11 gpm	±3.5%	7.0 - 7.8 gpm	3.2 - 4.0 gpm
		42 L/min		26,5 - 29,5 L/min	12,5 - 15,5 L/min
	Min	2.2 gpm	±6.5%	1.3 - 1.6 gpm	.69 gpm
	rated	8,4 L/min		5,1 - 6,2 L/min	2,2 - 3,3 L/min

The maximum variation is at 5000 psi (350 bar) differential between legs with the high pressure leg being the higher flow.

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