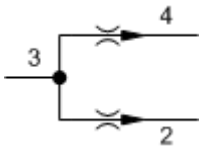

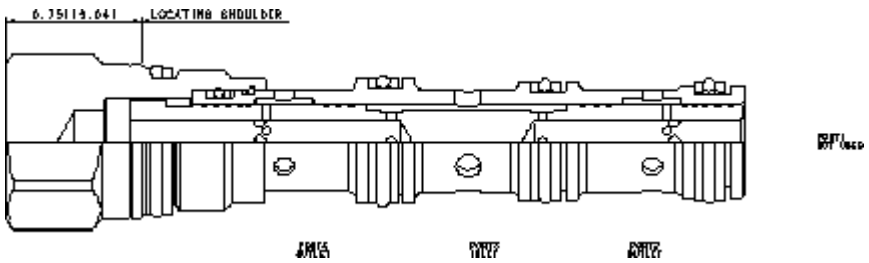

Flow dividers are sliding-spool, pressure-compensated devices used to split oil flow to two different branches of a circuit in a designated ratio. These valves are suitable for applications that use the following: unidirectional hydraulic motors, hydraulic cylinders where flow division in one direction 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-31A
Series	1
Capacity	1.5 - 8 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	1.2 - 6 gpm
Rated Input Flow with 40/60 Split	1.4 - 7 gpm
Rated Input Flow with 50/50 Split	1.5 - 8 gpm
Valve Hex Size	7/8 in.
Valve Installation Torque	30 - 35 lbf ft
Model Weight	0.34 lb.
Seal kit - Cartridge	Buna: 990-031-007
Seal kit - Cartridge	Polyurethane: 990-031-002
Seal kit - Cartridge	Viton: 990-031-006

OPTION SELECTION EXAMPLE: FSCDXAN

CONTROL	(X)
X	Not Adjustable

FLOW SPLIT	(A)
A	50/50
B	40/60
C	33/67

SEAL MATERIAL	(N)
N	Buna-N
V	Viton

MATERIAL/COATING	
	Standard Material/Coating
/AP	Stainless Steel, Passivated
/LH	Mild Steel, Zinc-Nickel

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	8 gpm	±3.5%	3.72 - 4.28 gpm	
		30 L/min		14,1 - 15,9 L/min	
	Min rated	1.5 gpm	±6.5%	.65 - .85 gpm	
		6 L/min		2,5 - 3,5 L/min	
40:60	Max Rated	7 gpm	±3.5%	4.0 - 4.4 gpm	2.6 - 3.0 gpm
		26,5 L/min		15,0 - 16,8 L/min	9,7 - 11,6 L/min
	Min rated	1.4 gpm	±6.5%	.81 - .87 gpm	.53 - .59 gpm
		5,3 /min		2,8 - 3,5 L/min	1,8 - 2,5 L/min
33:67	Max Rated	6 gpm	±3.5%	3.8 - 4.2 gpm	1.8 - 2.2 gpm
		22,7 L/min		14,4 - 16 L/min	6,7 - 8,3 L/min
	Min rated	1.2 gpm	±6.5%	.72 - .88 gpm	.32 - .50 gpm
		4,5 L/min		2,7 - 3,3 L/min	1,2 - 1,8 L/min

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