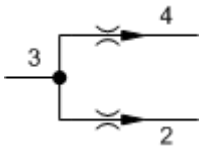


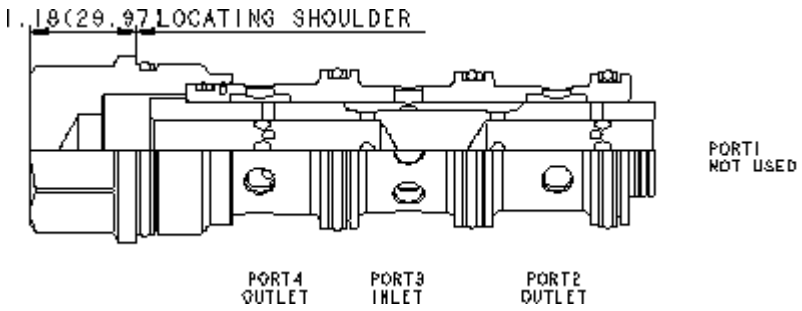


Flow dividers are sliding-spool, pressure-compensated devices used to split oil flow to two different branches of a circuit in a designated ratio. These valves are suitable for applications that use the following: unidirectional hydraulic motors, hydraulic cylinders where flow division in one direction 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-34A |
| Series | 4 |
| Capacity | 12 - 60 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 | 9 - 45 gpm |
| Rated Input Flow with 40/60 Split | 10 - 50 gpm |
| Rated Input Flow with 50/50 Split | 12 - 60 gpm |
| Valve Hex Size | 1 5/8 in. |
| Valve Installation Torque | 350 - 375 lbf ft |
| Model Weight | 2.81 lb. |
| Seal kit - Cartridge | Buna: 990-034-007 |
| Seal kit - Cartridge | Polyurethane: 990-034-002 |
| Seal kit - Cartridge | Viton: 990-034-006 |

## OPTION SELECTION EXAMPLE: FSFDXAN

| CONTROL | (X) |
|---|---|
| **X** | Not Adjustable |

| FLOW SPLIT | (A) |
|---|---|
| **A** | 50/50 |
| **B** | 40/60 |
| **C** | 33/67 |
| **D** | 25/75 |

| 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 | 60 gpm | ±3.5% | 28 - 32 gpm | |
| | | 240 L/min | | 112 - 128 L/min | |
| | Min rated | 12 gpm | ±6.5% | 5.2 - 6.8 gpm | |
| | | 45 L/min | | 19,6- 25,4 L/min | |
| 40:60 | Max Rated | 50 gpm | ±3.5% | 28 - 32 gpm | 18 - 22 gpm |
| | | 200 L/min | | 113 - 127 L/min | 73 - 87 L/min |
| | Min rated | 10 gpm | ±6.5% | 5.4 - 6.6 gpm | 3.4 - 4.6 gpm |
| | | 38 L/min | | 20,3 - 25,3 L/min | 12,7 - 17,7 L/min |
| 33:67 | Max Rated | 45 gpm | ±3.5% | 28 - 32 gpm | 13 - 17 gpm |
| | | 180 L/min | | 114 - 126 L/min | 54 - 66 L/min |
| | Min rated | 9 gpm | ±6.5% | 5.4 - 6.6 gpm | 2.4 - 3.6 gpm |
| | | 36 L/min | | 22 - 26 L/min | 10 - 14 L/min |

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