

Adjustable Flow Splitter & Adjustable Makeup-Flow Splitter Operation

To vary Split Ratio, simply turn Adjustment Knob.

Turning Knob **counterclockwise** will **increase Split Ratio** (**decreasing Low Split Flow**); turning Knob **clockwise** will **decrease Split Ratio** (**increasing Low Split Flow**). For a given Inlet Flow, Split Ratio and Low Split Flow vary inversely.

Varying Inlet Flow at the same Knob Setting changes Low Split Flow directly and proportionately (i.e.: doubling Input Flow doubles Low Split Flow).

If you wish to keep a constant Low Split Flow while varying Input Flow, you must adjust Knob accordingly. When increasing Inlet Flow, turn Knob **counterclockwise** (**increasing Split Ratio**). When decreasing Inlet Flow, turn Knob **clockwise** (**decreasing Split Ratio**).

To closely approximate desired Low Split Flow, consult the Manufacturing Test Log (see Figure1) shipped with your splitter. The data in the Test Log is measured with NO Back Pressure downstream from the splitter.

The 2nd column of data shows Low Split Flow, labelled “Capillary Flow”. The 4th column shows Back Pressure generated by the splitter when providing that particular Low Split Flow. These numbers in 2nd and 4th columns vary in tandem.

Finding Split Flow using Back Pressure

Use pressure drop across the flow splitter and Ohms Law.

$$P = L \times Q \times V$$

Q: Desired split flow, mL/min.

P: Pressure drop across splitter, PSI

L: Fluid resistor value PSI/mL/min. (from calibration sheet)

V: Viscosity in centipoise

Note:

Once it's set, the split ratio will remain constant regardless of changes to inlet flow rate or solvent viscosity. Regarding gradients with different viscosity mobile phases, the low split flow will remain constant for Post-column applications. Accuracy is $\pm 10\%$ of the listed value, on account of system-to-system variability.