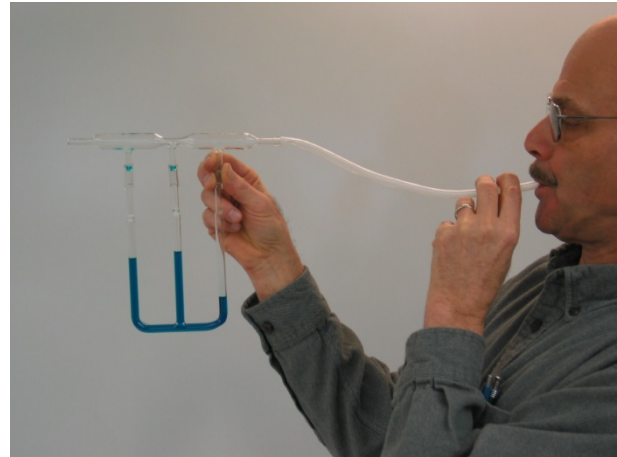


Venturi Tubes



Purpose: To show how pressure varies when air flows thru a restriction in a tube or pipe

Location: room 136, shelf O5

CAUTION: FRAGILE GLASS APPARATUS

Put about 20 ml of water into a small beaker and add a few drops of food coloring to make it more visible. Using the dropper, put the colored water into the open end of the Venturi tube until the three legs of the manometer are about half full. Blow air thru the Venturi tube at a steady rate and observe that the pressure is lowest in the restricted portion of the Venturi tube, as predicted by Bernoulli's equation and the equation of continuity. Also note that the pressure downstream of the restriction is lower than the upstream pressure, implying energy loss thru the restriction.

Such devices are commonly used to infer flow rate by measuring pressure differential.