

1 is with a bigger area, and section 2 is with a smaller area. The water is pumped from the lower sink using the electronic pump. Take water properties at room temperature of 20 °C.

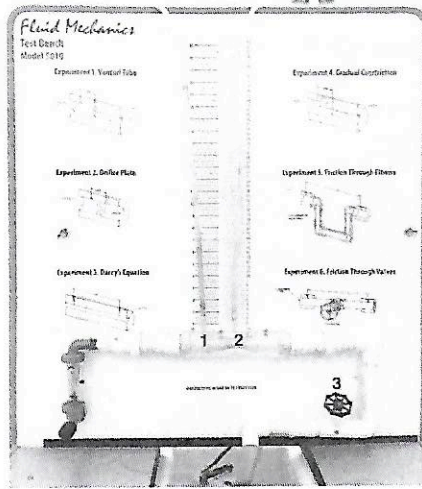


Figure 2 Venturi Tube Setup

Step1: Record the diameters of the Venturi tube at two sections.

$D_1 = 1 \text{ in}$ ,  $D_2 = 0.5 \text{ in}$

Step2: Open the valve and adjust it to a certain volume flow rate and record it in the first column of Table 1.

Step3: Measure the height difference and record the height value in the second column of Table 1.

Step4: Repeat Step 2 and 3 until for at least 4 times.

Table 1 Measured and Calculated Data *into cm 2.54*

Measured Flow Rate $Q_{actual}$ [LPM]	$h$ measured [cm]	$\Delta p = p_1 - p_2$ [Pa]
3	0.254 cm	$9.79 \times 0.254 = 2.49$
6	2.28 cm	$9.79 \times 2.28 = 22.32$
9	6.35 cm	$9.79 \times 6.35 = 62.17$
12	11.43 cm	$9.79 \times 11.43 = 111.90$

Note: LPM represents liter per minute, and GPM represents Gallon per minute.