

As in all differential producers, its output varies as the square root of the flow rate.

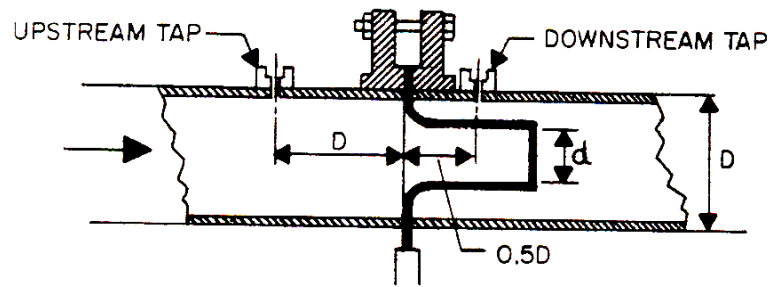


Figure 2 – Flow Nozzles

A. Venturi

The Venturi tube can measure 25 to 50% more flow than orifice for comparable line size and head loss. The flow range for satisfactory measurement is usually considered to extend upward from Reynolds numbers of about 200,000.

Some advantages of Venturi tubes are:

- high flow rates
- minimal piping straight run requirements (typically 10 pipe diameters)
- good accuracy with Beta ratios greater than .75
- integral pressure connections

The purchase cost of the Venturi tube is greater than most other primary flow elements. However, the greater pressure recovery can result in significant energy savings in large pipelines.

The Venturi tube has a converging conical inlet, a cylindrical throat, and a diverging recovery cone. A standard Venturi tube is shown in Figure 3.