

Spraytech Systems Venturi Tubes serve users with accurate measurement of non-viscous fluids in clean & dirty streams. Venturi Tubes are virtually maintenance-free and corrosion-resistant. Venturi tubes are manufactured in strict accordance with ASME MFC-3M, BS-1042 and ISO-5167 standards. These measurement standards provide users with +/-1.0% uncertainty of discharge coefficient. For critical measurement applications, wet calibration at reputed flow laboratories can be offered.

Venturi Tube is a low pressure drop metering device. It offers constant accuracy, low susceptibility to erosion, high-pressure recovery, and installation at any angle from horizontal to vertical. Corrosion-resistant and virtually maintenance-free, this measurement product performs in a wide variety of applications that include air, water, vapour, steam, gas, chemical substances, sludge and slurry applications.

The classical Venturi Tube is made up of an entrance cylinder of the same diameter as the pipe connected to a conical convergent section, a cylindrical throat, and a conical divergent section. The high pressure taps are located on the middle of inlet section and the low pressure taps are located at the middle of the throat section. A piezometer ring is sometimes used for differential pressure measurement. This consists of several holes in the plane of the tap locations. Each set of holes is connected together in an annular slot to give an average pressure.

Salient features & benefits

- Can be used on slurries and dirty fluids
- Short upstream piping required
- Low installation costs
- Lower susceptibility to erosion
- Low permanent pressure loss
- Extended product life with no moving parts
- Vertical or horizontal installation

Up to 12 inches, the entire venturi is machined from a single solid bar-stock. Above 12 inches the venturi is fabricated from sheet. Rectangular type venturi used in ductwork are also fabricated from sheet.

Many times the piping geometry does not allow full length of the Venturi Tube. In such case, 'Truncated' classical Venturi Tube can be offered wherein the divergent section can be truncated down by about 35% of its length without modifying the divergent angle. The outer diameter of the divergent section is less than the inside diameter D of the pipe.

The throat restricts the fluid flow resulting in a pressure drop. This differential pressure relates to the flow rate by applying Bernoulli's equation. The angled inlet and outlet cones help control the pressure recovery, making the Venturi the most efficient of all the differential meters available. This results in lower permanent pressure loss and greater capacity than other differential meters of the same size. Permanent pressure loss is generally 5% to 20% of the differential pressure, depending on the bore size selected.

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