

COMPARISION OF ORICE METER, VENTURI METER & PITOT TUBE

ORIFICE METER

ADVANTAGES:

1. Simple in construction & Robust primary element.
2. It can be used for wide range of pipe sizes.
3. Well established with comprehensive standards.
4. Calibration not required for standard design.
5. Lowest first cost of plate alone.
6. Applicable to gases, liquids & steam.

DISADVANTAGES:

1. Relatively high permanent pressure loss.
2. Performance changed with plate damaged or coating.
3. Output is not a linear function of flow rate.
4. Tends to clog, reducing its use in slurry services.

VENTURI METER

ADVANTAGES:

1. Low permanent pressure loss.
2. It can handle suspended solids.
3. It is used for high flow rates.
4. More accurate over wide flow ranges.
5. Well-known characteristics.

DISADVANTAGES:

1. High cost.
2. Not normally available in pipe sizes below 6 inches.

PITOT TUBE

ADVANTAGES:

1. Essentially no pressure loss.
2. Economical to install.
3. It can be removed easily from the line.

DISADVANTAGES:

1. Poor Accuracy
2. Not recommended for dirty or sticky fluid.
3. Sensitive to upstream disturbances.