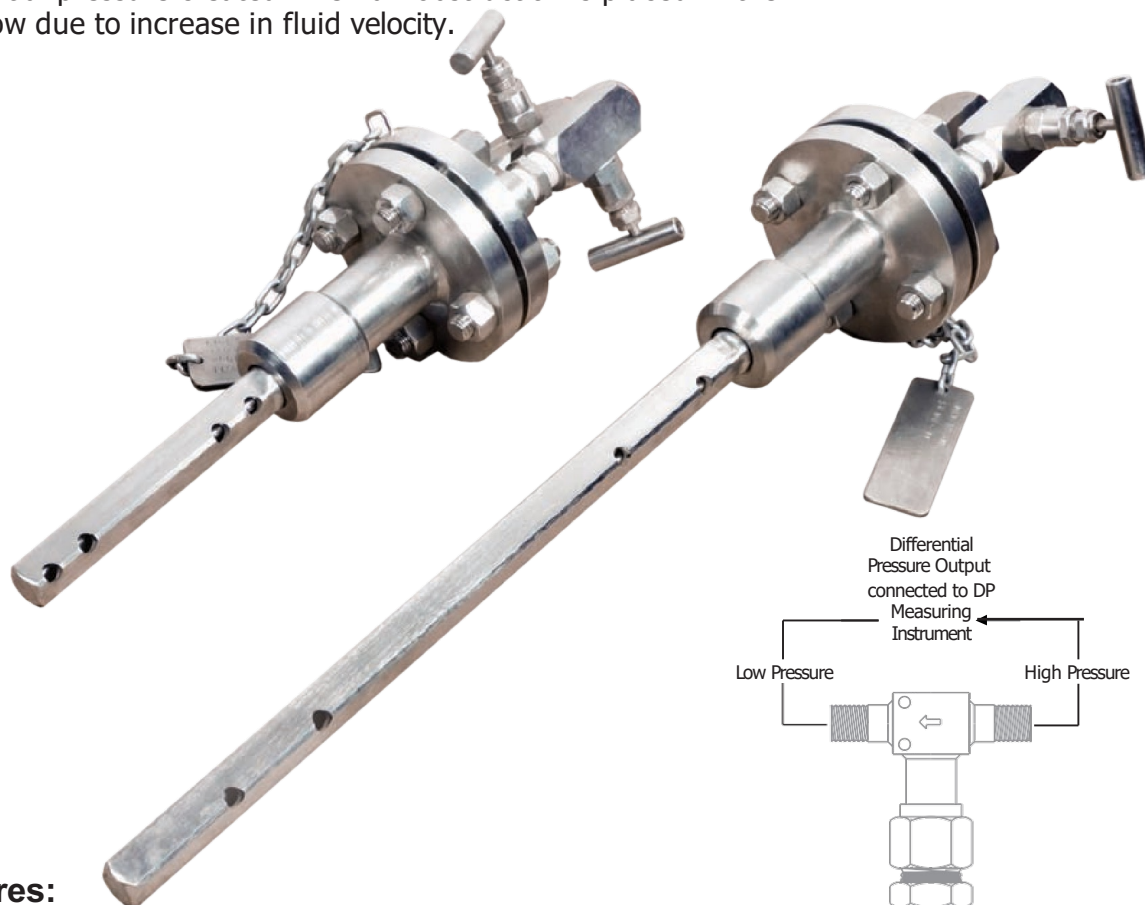


Averaging Pitot Tube

PRISMA
Instruments



Averaging Pitot tube is a multiport self averaging flow meter. It is a primary element for flow measurement of gas, liquid, vapour in pipelines and ducts based on the principle of measurement of differential pressure created when an obstruction is placed in the fluid flow due to increase in fluid velocity.



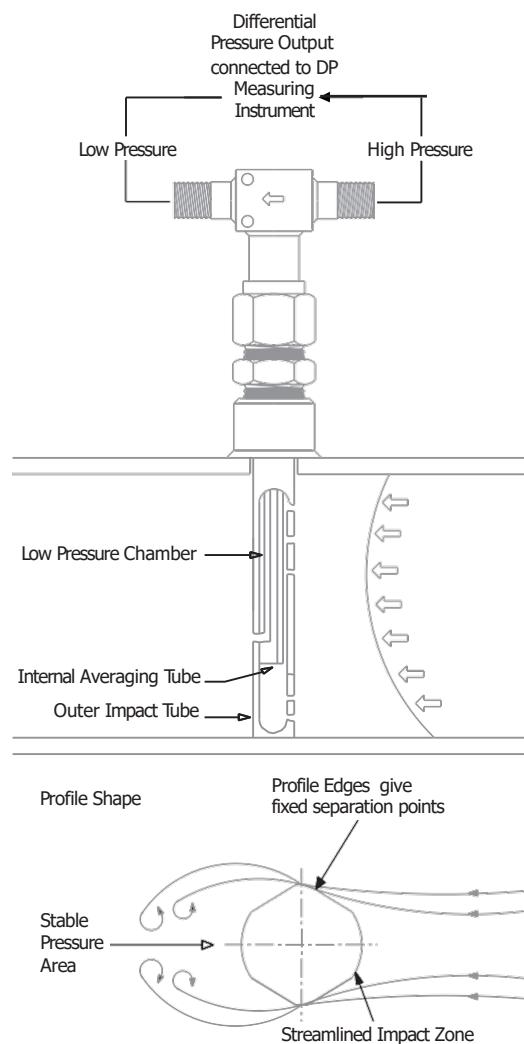
Features:

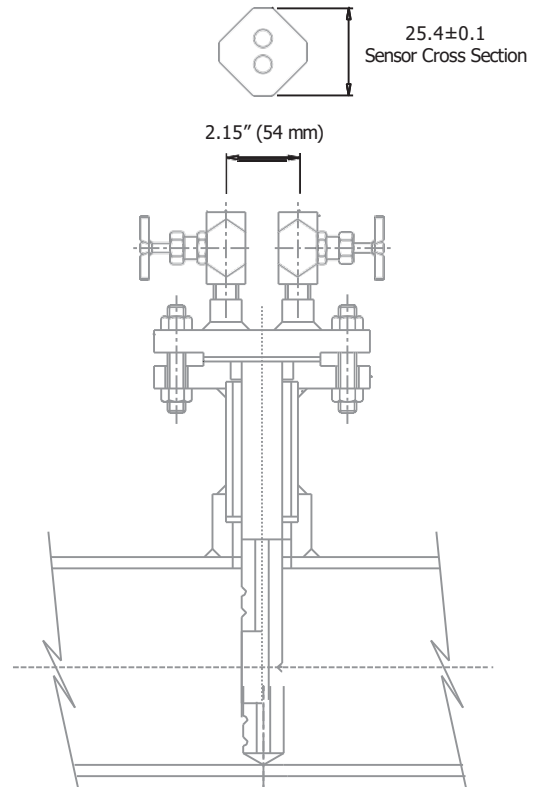
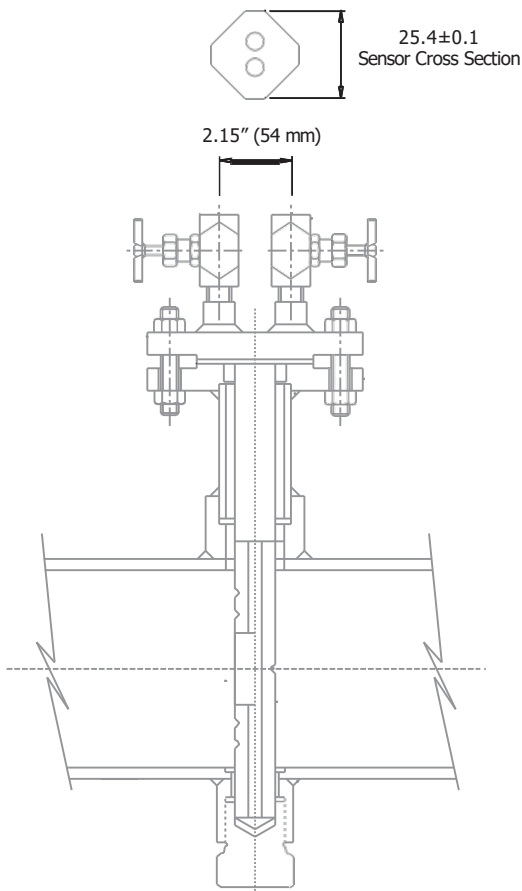
- Unique profile shape enables high flow rate turn down
- Dual averaging for better accuracy
- Suitable for Liquid, gas and steam flow measurement
- Repeatability of measurement $\pm 0.1 \%$
- Short upstream and downstream straight pipe lengths
- Long term accuracy unaffected by wear.

Averaging pitot tubes are generally used for large line sizes or ducts where other primary devices become relatively expensive.

Averaging Pitot tube comprises of following components:

- Outer impact tube - one piece construction
- Internal averaging tube
- Low pressure chamber
- Head





The outer impact tube has a number of pressure sensing holes facing upstream which are positioned at equal annular points in accordance with a loglinear distribution.

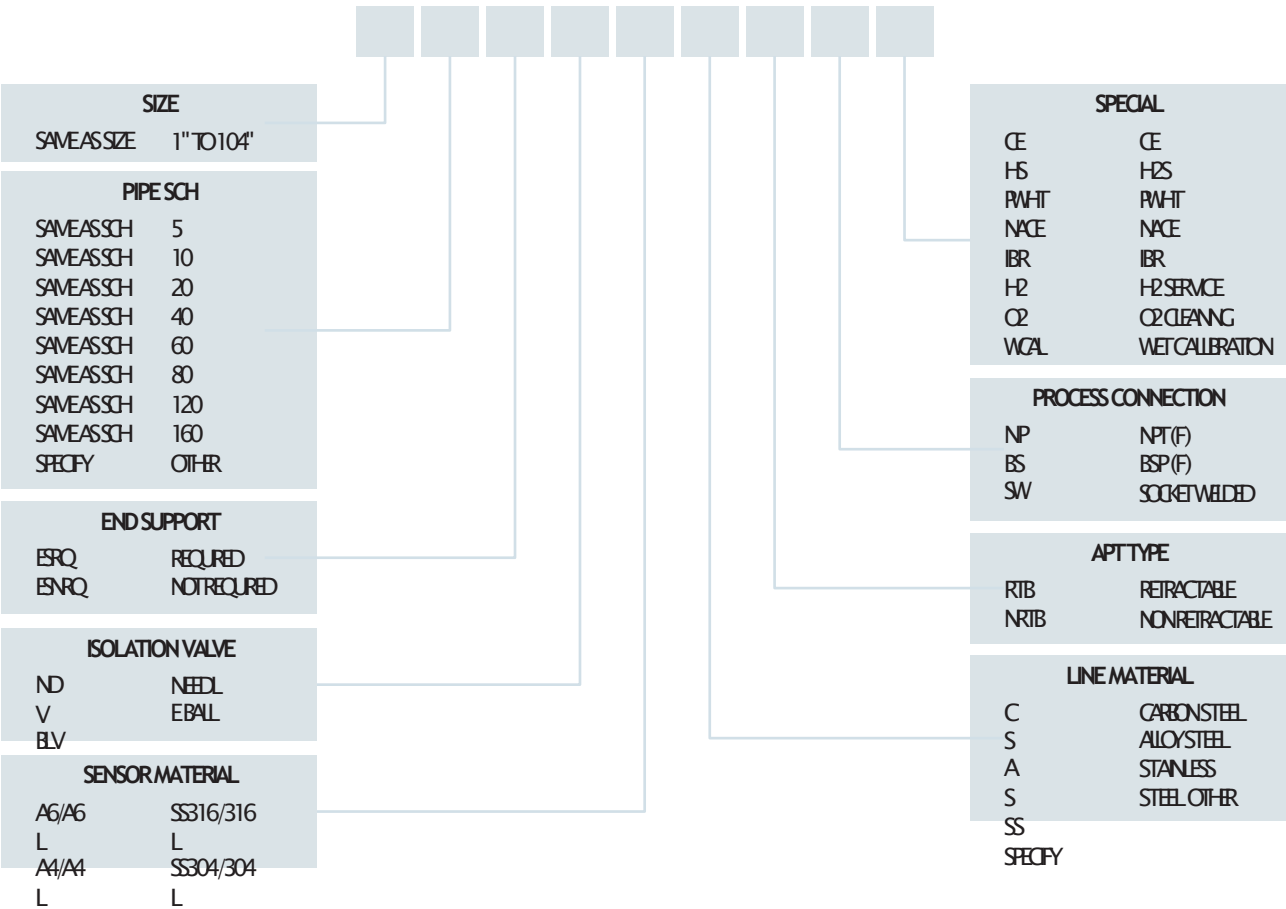
The 'total pressures' developed at each upstream hole by the impact of the flowing medium are firstly averaged within the outer impact tube and then to a second order (and more accurately) averaged within the internal averaging tube.

This pressure is represented at the head as the high pressure component of the DP output. The low pressure component is generated from a single sensing hole located on the downstream side of the outer impact tube.

Stable flow coefficient which is the result of typical diamond shape, makes it a reliable flow measuring primary flow element.

Simple and inexpensive, long term accuracy within acceptable limits over wide range of flow, low permanent pressure loss & minimum operating cost makes it ideal choice of any design engineer.





Note: 1. Line material is required to select the respective mounting hardware material.
2. Other than above information customer has to provide process data as on page no. 32
3. Default process connection size is 1/2" other than this (e.g. 3/4" or 1"), please specify.