



VENTURI TUBE

A Venturi tube is a differential pressure flow measurement device. It works on Bernoulli's principle and measures flow by detecting the differential pressure created across the throat and the upstream side. Medium entering the venturi through the upstream side is accelerated through a converging nozzle, followed by a diverging diffuser section. Venturi tube is suitable for measuring the flow velocity with minimal pressure drop as the diffuser allows the medium to regain most of its original pressure.

SPECIAL FEATURES

- ◆ Suitable for liquid, gas and steam flow measurement
- ◆ Accuracy $\leq \pm 0.5\%$ of actual flow rate
- ◆ Repeatability of measurement 0.1 %
- ◆ Lowest pressure loss in the family of primary flow elements
- ◆ Calibration may be performed, if required
- ◆ Venturi tube design based on ISO5167, ASME.MFC.3M and ISO TR15377 :2007 industry standards
- ◆ Accuracy, repeatability and reliability of the flow element
- ◆ Very low pressure loss
- ◆ Low requirements in terms of upstream and downstream lengths
- ◆ Suitable for all types of fluids, large flow range
- ◆ Long working life
- ◆ Different types of venturi tubes : machined from a bar stock or rolled and welded from a metal sheet or casted

APPLICATIONS

- ◆ Oil and Gas
- ◆ Power generation
- ◆ Water and waste water treatment and distribution
- ◆ Gas processing and transmission
- ◆ Chemical and Petrochemical Industries
- ◆ Food and Beverages

TECHNICAL SPECIFICATION

Design Standards:

ISO 5167-4, ASME MFC-3M &
ISO TR 15377:2007 Industry Standards

Pressure rating:

Flange Class 150~2500 lbs, ISO PN 20-420.

Material:

Carbon steel, AISI 316, Duplex, Super Duplex,
Inconel 825/625 (others on request)

Mounting style:

Weld ends / Flanges / Grayloc Clamp
connections.

Pressure taps:

Weld ends \varnothing 21.3 mm, 26.9 mm,
Thread connection 3/8", 1/2" BSP, 1/2"NPT,
or flanged. (others on request)

Tapping:

Single pressure tapping or
2x4 tapping each arranged with an external
annular ring to equalize the pressure.

Outlet cone:

7° - 15°

Pressure loss:

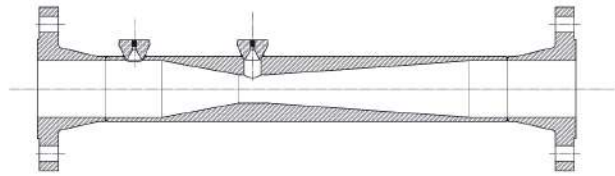
Depending on outlet cone between 10 - 15 %
of the differential pressure measured

Limits for Re. No.:

$2 \times 10^5 < ReD < 2 \times 10^6$ according to ASME

Ordering information

Model / Nominal size / Pipe schedule
Nominal pressure rating / Sealing face
Pressure tapplings / Material



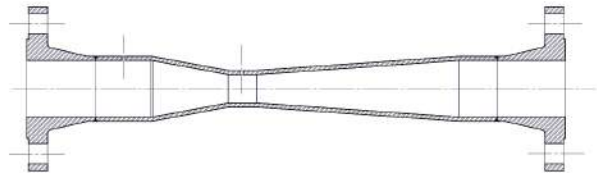
Venturi tube - From bar stock

Sizes: (other sizes on request):

DN 50 - 250 according to ISO 5167,

2" - 10" according to ASME

Beta (d/D): $0.4 \leq \beta \leq 0.75$



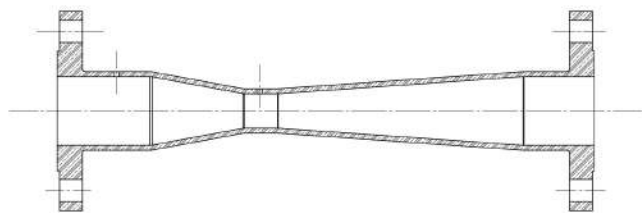
Venturi tube - From welded sheet

Sizes: (other sizes on request).

DN 200 - 1,200 according to ISO 5167,

8" - 48" according to ASME

Beta (d/D): $0.4 \leq \beta \leq 0.70$



Venturi tube - From cast

Sizes: (other sizes on request).

DN 100 - 800 according to ISO 5167,

4" - 32" according to ASME

Beta (d/D): $0.3 \leq \beta \leq 0.75$



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