KANAGAWA INSTRUMENTS

Venturi Tube Flowmeter

Model: KVTF



Overwiew

The Venturi flowmeter is based on a classical Venturi tube, an engineered primary flow element for a most efficient and accurate differential pressure (DP) flow measurement. Thanks to its design, it has an excellent resistance to wear and doesn't require any maintenance. The service life of the Venturi element is usually equal to the one of the entire plant. It is therefore often the ideal choice in live steam applications of power plants, wet gas flow measurement in natural gas production or CO2 injection, flow measurement of hydrocarbons and LNG as well as in gas-to-liquid processes and refineries. Kanagawa offers the complete flowmeter assembly with the Venturi tube, DP transmitter, valves, accessories, engineering, testing and documentation from a single source.

Features

Flowmeter assembly for the highest requirements of accuracy and long-term stability
Only short straight inlet/outlet pipe sections required
Very low remaining pressure drop
Fully machined or welded/machined design for perfect surface conditions and flow performance
Manufacturing and calibration capabilities up to 120"
Special 20-point calibration at high Reynolds-numbers possible (e.g. acc. to ASME PTC)
Specific versions for acceptance testing, wet gas, geothermal steam, CO2 hydrocarbons and others available
Reduced engineering, commissioning and installation costs
Reduced TCO due to reduced need for recalibration in the field through advanced 3-D linearised KANAGAWA DP transmitters
Complete flowmeter solution with Venturi tube, DP transmitter, flow computer, valves, accessories, engineering, testing and documentation from a single source
Redundancy available (1oo2, 2oo3)
HART®7, Foundation fieldbus and Profibus-PA communication options
SIL 2/3 declared versions
Ex ia, Ex d, Ex t approvals
International references with renowned EPCs

KANAGAWA INSTRUMENTS

Venturi Tube Flow Meter

Venturi tubes have long been specified and used in a multitude of flow measurement applications. The versatility of measurable fluids, line sizes, and material of construction available to a Venturi tube flow meter has made it a highly recognized differential pressure flow element.

Kanagawa offers classical style Venturi tubes – short form and long form – manufactured in accordance with applicable ASME codes. Also available is the Halmi Venturi tube which features superior performance and design with shorter laying lengths and reduced cost.

General Venturi Specifications	
Accuracy	±0.5% up to ±0.25% with calibration
Beta Ratio	Customizable between 0.30 through 0.75
Permanent Pressure Loss	5% to 20% dependent on Beta Ratio
Line Size	3/8” through 144” (9.525mm through 3657.6mm)
End Connection	Flange, weld, plain end, mechanical joint, or other
Material of Construction	CS, SS, Duplex SS, Chrome Moly, Aluminum, Hastelloy, Monel, Inconel, Zirconium, Titanium, Tantalum, Cast and Ductile Iron
Operating Pressure and Temperature	As limited by the materials of construction

Common Applications

- Clean gases and liquids
- Potable water
- High pressure steam
- Combustion air
- Compressor surge control
- Process measurement (alcohol, ethylene, chlorine, etc.)
- Gas oxygenation
- Storm sewage
- Solids-bearing fluids
- Higher viscosity liquids



Available Models and Configurations

Classical Venturi

- In-line, insert, and eccentric designs
- Flanged, weld-in, socket weld, butt weld connections
- Meter runs

Bi-Directional Venturi

- Classical and Halmi designs
- Cast, fabricated, plastic
- In-line, insert
- Flanged, weld-in, butt weld

Halmi Venturi

- Fabricated
- In-line, insert
- Flanged, weld-in, socket weld, butt weld, threaded, grout-in, wafer
- Meter runs, static tap, low flow, elbow mount

Plastic Venturi

- Insert
- Flanged, weld-in, grout-in
- Meter runs, static tap