VIM20
Vortex Insertion Flowmeter

Description
The VIM20 Vortex Insertion Flowmeter utilises **three primary sensing elements** to measure the mass flowrate of steam, liquids and gases:

- Vortex shedding velocity sensor
- RTD temperature sensor
- Solid-state pressure transducer

Principle of operation
Vortex flowmeters measure the flow of liquid, gas and steam by detecting the frequency at which vortices are alternately shed from a bluff body. According to proven laws of physics, the frequency at which the vortices are alternately shed is directly proportional to the flow velocity.
Insertion vortex flowmeters measure flow by detecting the local velocity at a strategically located position within the pipe. The VIM20 detects the frequency at which vortices are alternately shed from the bluff body located within the sensor head.
The VIM20 uses the local velocity, along with other parameters, such as fluid type, pipe size and Reynolds number to calculate the average pipe velocity, and consequently, the volumetric flowrate.

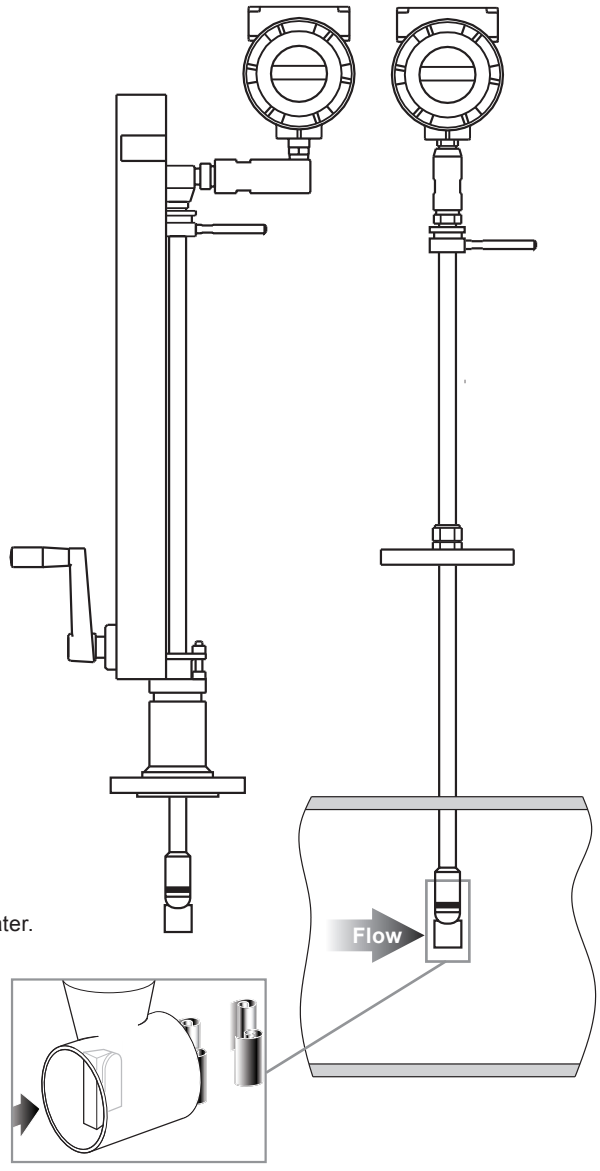
VIM20 range and benefits

The **VIM20-V** delivers a direct reading of volumetric flowrate, generally the most cost-effective solution for liquid flow monitoring, in applications ranging from general water flows to hydrocarbon fuel flow measurement.

The **VIM20-VT** integrates a precision 1000 Ω platinum RTD temperature sensor that can be used to calculate and output a compensated mass reading. This device is typically used to measure flowrates of saturated steam.

The **VIM20-VTP** offers you flow computer functionality in a compact field device. This multivariable instrument incorporates temperature and pressure sensors to provide an instantaneous reading of the compensated mass flowrate of gases, liquids and steam. In addition to outputs for totalized mass and alarm settings, the field-configurable electronics deliver up to three analogue 4-20 mA outputs of five process measurements, including volumetric flowrate, mass flowrate, pressure, temperature and density.

The **VIM20-EM** Energy Monitoring option permits real-time calculation of energy consumption for a facility or process. The flowmeter can be programmed to measure steam, hot water or chilled water. The VIM20-VTP-EM flowmeter monitors one side of the process, either sent or returned, and uses the input from a second separate temperature sensor on the opposite leg of the process to calculate the change in energy. Selectable energy units include BTUs, joules, calories, Watt-hours, Megawatt-hours and Horsepower-hours. The local or remote electronics indicate two temperatures, delta T, mass total and energy total.



Compliance
- Electromagnetic Compatibility Directive
- Low Voltage Directive

Sizes
Insertion style mounting permits installation in any pipe DN50 (2") and greater.