

Flow Measurement Technology

A recent article in Control Engineering Magazine discussed the issues that come into play when selecting flow meters. The author gave an overview of the three main types of flow meters: differential pressure, vortex, and magnetic, and discussed the advantages and shortcomings of each based on application and technical requirements. As a system integrator and distributor of Badger Meters, GTH is able to offer support for flow measurement projects such as product selection, implementation, and even field programming.



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Differential Pressure Flow Meters

Differential Pressure or DP Flow Meters introduce a constriction in the pipe that creates a pressure drop across the flow meter. This is an affordable technology, particularly in applications with large line sizes. Badger Meters offers a number of DP Flow Meter options including the Preso Ellipse and the Preso Venturi. With its unique elliptical shape, the Ellipse measures pressure using a series of ports facing the upstream velocity pressures and flow sensing ports strategically located ahead of the trailing edge flow separation. The Badger Venturi restricts the flow of gas or liquid and then measures pressure differences between the unrestricted flow and the restricted flow. comply with AMS 2750 regulations.



Vortex Flow Meters

These instruments measure the velocity of an acoustically conductive liquid moving through the meter. Vortex Meters from Badger have no moving parts and little or no maintenance requirements so they are an excellent choice for water quality or treatment equipment. They are loop powered with standard HART communications for ease of field programming and system integration.



Electromagnetic Flow Meters

Mag Meters operate on the principle of Faraday's law of electromagnetic induction. As they do not obstruct the flow, they avoid many of the disadvantages of insertion meters. The ModMAG Electromagnetic Flow Meters from Badger are a good fit for critical flow applications to improve accuracy, decrease system maintenance, and meet the demands of challenging liquid conditions. As there are no moving parts, it is ideal for wastewater applications or any dirty liquid that is conductive or water-based.



Want more information?

Contact your local GTH office to review the various types and styles of flow meters available for both Commercial and Industrial applications. In addition to meters, Badger also offers network solutions, encoders, and flow computers to assist with the automation of your flow application.

[Click here for Badger's Flow Instrument Selection Chart.](#)