

# The World Market for Magnetic Flowmeters

*A New Market Study Available from Flow Research!*

The magnetic flowmeter market has the distinction of being the largest flowmeter market, in terms of revenues. Even though more differential pressure flowmeters are still sold today than any other type, revenues from magnetic flowmeters are greater, due to their higher price. Water and wastewater is the most popular industry for magnetic meters.

## Operating Principle: The Voltage Generator

Magnetic flowmeters operate on Faraday's Law of Magnetic Induction. This principle states that a voltage is generated in a conductive medium when it passes through a magnetic field. This voltage is directly proportional to the length of the conductor, the density of the magnetic field, and the velocity of the conductive medium.



Magnetic flowmeters generate a magnetic field by passing current through wires that are mounted on our outside a pipe. They have electrodes that detect the amount of voltage as the conductive fluid passes through this magnetic field. Since this voltage is proportional to flowrate, magnetic flowmeters use this value to compute flowrate.

## Paradigm Case Applications

Paradigm case applications for magnetic flowmeters are for conductive liquids that do not contain fluids that coat the electrodes or damage the lining, flowing through a full pipe. The most important limitation on magnetic meters is that they are limited to conductive liquids. Hydraulic fluids are nonconductive, so their use in the oil & gas and refining industry is limited. On the other hand, magmeters are widely used in the water & wastewater industry. Magnetic flowmeters only work with liquids: they cannot be used to measure gas or steam.

## Study Highlights

Magnetic flowmeters are the leading flowmeter in terms of revenues. Sales of magnetic flowmeters exceeded sales of all other types of flowmeters in 2002, including DP and Coriolis flowmeters. Even though ultrasonic and Coriolis meters are growing faster than magnetic flowmeters, magmeters are likely to retain their edge over other types of meters, at least for the next several years.

Installed base is probably the single biggest factor that will sustain growth in the magnetic flowmeter market throughout the forecast period. Many companies have invested very heavily in magnetic flowmeter technology, and are not likely to abandon this investment for another type of meter. Magnetic flowmeters generate more revenue than any other type of meter, and this is likely to remain true for the foreseeable future.

The most severe limitation on the use of magmeters is their inability to meter nonconductive fluids. Apart from this, they will remain the **king of the flowmeter hill**, at least in terms of revenues.

As part of our effort to define the worldwide flowmeter market, Flow Research has contacted and interviewed every known supplier of magnetic flowmeters worldwide. We have gathered detailed information about these suppliers and compiled the result into a complete description of the worldwide magnetic flowmeter (magmeter) market. Highlights of the study include:

- Market size by geographic region
- Market shares by geographic region
- Multivariable vs. smart vs. conventional magmeters
- Multivariable and smart by communication protocol
- Shipments by industry
- Shipments by distribution channel
- Shipments by customer type
- Market strategies for magmeter suppliers
- Growth forecasts through 2007
- Company profiles of magmeter suppliers

While the magnetic flowmeter market is not growing as fast as the Coriolis or ultrasonic flowmeter market, they are still experiencing solid growth worldwide. Magnetic flowmeters are very widely used in Europe, especially in the food processing and water and wastewater industries. Magnetic flowmeters are well known for their accuracy, and they are well liked because of their nonintrusive nature. Magmeters today are more capable than before of handling low conductivity applications. Insertion mags are sometimes used for larger pipes.

### **Companies Profiled**

Companies profiled in this study include:

ABB Automation  
Advanced Flow Technology  
Badger Meter  
Brinck  
Brooks Instrument  
Brunata  
Burkert  
Danfoss  
Datam Flutec  
Diessel  
Dynasonics  
Elis Plzen  
Emerson Rosemount  
Endress & Hauser

Enko  
Euromag  
Hangzhu Shenhua Meter Factory  
Invensys/Foxboro  
Isco  
Isoil  
Istec  
Krohne  
Marsh McBirney  
McCrometer  
Oval  
Proces-Data  
Siemens  
Sparling Instruments  
Tec Fluid  
Toshiba  
Venture Measurement  
Yamatake  
Yokogawa

**The World Market for Magnetic Flowmeters** is part of a larger market research project. The purpose of this project is to study the fast-growing “new technology” markets within flow simultaneously, so that meaningful comparisons can be drawn among the different technologies. The results of these comparisons are contained in **Volume V: The World Market for New-Technology Flowmeters**. We believe that this is the first time such an effort has been undertaken.

Visit Flow Research at [www.flowresearch.com](http://www.flowresearch.com) for more details about this exciting new study. **The World Market for Magnetic Flowmeters** is available for purchase today. Or, call Flow Research today at 781-245-3200.