

Flow Research, Inc.
27 Water Street
Wakefield, MA 01880
(781) 245-3200
(781) 224-7552 (fax)
www.flowresearch.com



The Global Market for Magnetic Flowmeters, 3RD Edition

Volume I: Magnetic Flowmeter Market Analysis

Volume II: Magnetic Flowmeter User Survey

September 2005

The Global Market for Magnetic Flowmeters, 3rd Edition

Study Summary

Magnetic flowmeters are the leading type of flowmeter in terms of revenues. In our 2003 study, Flow Research found that magnetic flowmeter sales had increased only by one percent over sales reported in our 2001 study. This was due to the after-effects of 9/11/2001, and to the unfavorable economic conditions of that time. One purpose of this study has been to determine what has happened to magnetic flowmeter revenues in the past two years.

In conducting this study, we contacted all known manufacturers of magnetic flowmeters worldwide. Flow Research has identified more than 50 magnetic flowmeter manufacturers around the world. By obtaining detailed information about each company, we have assembled a picture of the total magnetic flowmeter market. We have asked suppliers to provide detailed information about geographic segmentation, industries sold into, types of magnetic flowmeters sold, and many other product segments. As a result, the study identifies where growth is occurring in the market, as well as the underlying factors for that growth. Our end-user survey provides additional perspectives on this market.

This study includes market size in dollars and units for magnetic flowmeters worldwide and by geographic region. It reveals market shares by geographic region. It says what industries magnetic flowmeters are sold into. The study also includes other important segmentation, including:

- Smart vs. conventional
- Wafer vs. flanged vs. insertion
- 2-wire vs. 4-wire
- Compact vs. remote
- AC vs. High-Strength DC vs. Standard DC
- Type of Communication Protocol (Foundation Fieldbus, Profibus, HART, etc.)
- Sales Channel (Direct vs. Independent Reps vs. Distributors vs. E-Business)
- Customer Type (End-users vs. OEMs vs. Systems Integrators vs. Engineers/Consultants)

In addition to the above segmentation, which was included in the earlier 2001 and 2003 studies, this study introduces new segmentation not used before in these studies. This study introduces the following new segmentation:

- High strength DC vs. Standard DC
- Application (Custody transfer, filling machines, slurries, etc.)
- Line size (eight sizes from < ½ inch to > 20 inches)

- Liner type (PFA, PTFE, Ceramic, Hard Rubber, Tefzel, Soft Rubber, Polyurethane, Other)
- Accuracy

Scope

The data developed in this study includes total revenues and unit sales by geographic region, and average selling prices. Other data includes the following:

- Market shares for the leading suppliers of magnetic flowmeters by geographic region
- Market size and growth forecasts for magnetic flowmeters by type (extending through 2009)
- Market size and growth forecasts for magnetic flowmeters by the segmentation listed above (smart/conventional, AC/DC, wafer/flanged/insertion, etc.)
- Market size and growth forecasts for magnetic flowmeters by industry
- Detailed product descriptions by supplier
- Magnetic flowmeter sales by distribution channel
- Magnetic flowmeter sales by customer type
- Strategies for success
- Profiles of all significant supplier companies

Study Segments

Geographic Regions

- North America
- Europe
- Japan
- Asia w/o Japan
- Rest of World

Magnetic Flowmeters by Type

- Smart
- Conventional

Multivariable vs. Single Variable

- Multivariable
- Single Variable

Liquid Applications

- Water
- Other Liquids

Coil Power Types

- AC
- High Strength DC
- Standard DC

Mounting Types

- Wafer
- Flanged
- Insertion

Configuration

- Integral
- Remote

Wiring Types

- 2-wire
- 4-wire

Liners

- PFA
- PTFE
- ETFE
- Ceramic
- Polyurethane
- Hard Rubber
- Soft Rubber
- Other

Line Sizes

- ½ inch or less
- > ½ inch to 1 inch
- > 1 to 2 inches
- > 2 to 4 inches
- > 4 to 8 inches
- > 8 to 12 inches
- > 12 to 20 inches
- > 20 inches

Communication Protocols

- Foundation Fieldbus
- HART
- Profibus DP
- Profibus PA
- Modbus
- Serial
- Other

Industries

- Oil & Gas
- Refining
- Chemical
- Food & Beverage
- Pharmaceutical
- Pulp & Paper
- Metals & Mining
- Electric Power
- Water & Wastewater
- Other

Study Segments (continued)

Magnetic Flowmeter Sales by Distribution Channel

- Direct Sales
- Independent Representatives
- Distributors
- E-Business

Magnetic Flowmeter Sales by Customer Type

- End-Users
- OEMs
- Systems Integrators
- Engineering and Consulting Firms

Strategies for Success

- Discussion of market forces at work
- Strategic action perspectives
- Real world success stories

Company Profiles

- Profiles of all identified manufacturers including contact information, product line(s), and other essential information

Here are some of the 51 companies profiled in this study:

ABB
Advanced Flow Technology
Badger Meter
Bopp & Reuther
Brunata International
Burkert GmbH
Diessel

Elis Plzen
Emerson Rosemount
Endress+Hauser
Enko S.A.
Euromag International
Heinrichs Messtechnik
Invensys (Foxboro)

Isoil
Krohne Messtechnik
Marsh-McBirney
McCrometer
Oval Corporation
Proces-Data
Racine Federated

Siemens AG
Sparling Instruments
TecFluid
Tokyo Keiso
Toshiba Corp.
Yamatake Corporation
Yokogawa Electric Company

Key Questions Answered in this Study

- What are the causes of growth in the magnetic flowmeter market?
- What is the growth outlook for magnetic flowmeters for the next several years?
- Is demand for 2-wire meters growing? Does the industry offer products to meet this demand? If not, what is missing?
- How strong is DC meter displacement of AC types? Is this trend gaining momentum? Stagnant? In decline? Why?
- How severe is the price pressure for standard classes of magnetic flowmeters? What is the related impact on gross margins? What are the sources of the pricing pressure? What are the typical responses of established suppliers?
- Will multivariable magnetic flowmeters show any growth in the next several years?
- What growth is occurring for insertion magnetic flowmeters and why?
- Are accuracy levels for magnetic flowmeters increasing or remaining stable?
- What types of liners are most widely used in magnetic flowmeters? What are the trends in liner use?
- How do the relative adoption rates of the dominant communications protocols compare?
- To what extent are low cost suppliers from China, India, and elsewhere penetrating the magnetic flowmeter market and influencing prices?
- How quickly is e-business growing as a distribution channel?
- What features are end-users looking for in magnetic flowmeters?
- Are end-users switching from one type of magnetic flowmeter to another, and why?



The Global Market for Magnetic Flowmeters. 3rd Edition

TABLE OF CONTENTS (abbreviated)

CHAPTER SUBJECT

1 Executive Summary

- Overview
- Methodology
- Growth Factors
- Magnetic Flowmeter Market Size and Forecast
- Market Shares for Magnetic Flowmeters
- A Strategic Perspective

2 Introduction

- Study Objectives
- Methodology
- Geographic Regions
- Types of Magnetic Flowmeters
- End-User Industries
- Magnetic Flowmeter Industry Structure

3 Magnetic Flowmeter Product and Technology Analysis

- New-Technology Flowmeters
- Coriolis Flowmeters
- Magnetic Flowmeters
- Ultrasonic Flowmeters
- Vortex Flowmeters
- Thermal Flowmeters
- Paradigm Case Selection Method
- Magnetic Flowmeter Product Analysis

The Global Market for Magnetic Flowmeters, 3rd Edition

CHAPTER SUBJECT (continued)

4 Magnetic Flowmeter Market Size and Forecast

- Growth Factors for the Magnetic Flowmeter Market
- Market Size and Growth Forecasts
- Shipments of Magnetic Flowmeters Worldwide by Geographic Region
- Shipments of Magnetic Flowmeters Worldwide by Type
- Average Selling Prices of Magnetic Flowmeters by Region
- Shipments of Smart Magnetic Flowmeters Worldwide and by Region
- Shipments of Conventional Magnetic Flowmeters Worldwide and by Region
- Shipments of Multivariable Magnetic Flowmeters Worldwide and by Region
- Shipments of Magnetic Flowmeters by Application by Type of Liquid
- Shipments of Magnetic Flowmeters by Coil Power Type Worldwide and by Region
- Shipments of Magnetic Flowmeters Mounting Type Worldwide and by Region
- Shipments of Magnetic Flowmeters by Configuration Worldwide and by Region
- Shipments of Magnetic Flowmeters by Accuracy Levels Worldwide and by Region
- Shipments of Magnetic Flowmeters by Wiring Type Worldwide and by Region
- Shipments of Magnetic Flowmeters by Lining Type Worldwide and by Region
- Shipments of Magnetic Flowmeters by Line Size Worldwide and by Region
- Shipments of Smart Magnetic Flowmeters by Communication Protocol Worldwide and by Region
- Shipments of Magnetic Flowmeters by Industry Worldwide and by Region
- Shipments of Magnetic Flowmeters by Application Worldwide and by Region
- Shipments of Magnetic Flowmeters by Distribution Channel Worldwide and by Region

The Global Market for Magnetic Flowmeters, 3rd Edition

CHAPTER SUBJECT (continued)

- Shipments of Magnetic Flowmeters by Customer Type Worldwide and by Region

5 Magnetic Flowmeter Supplier Market Shares

- Market Shares for Magnetic Flowmeters Worldwide
- Market Shares for Magnetic Flowmeters by Geographic Region
- Market Shares for Smart Magnetic Flowmeters by Region
- Market Shares for Conventional Magnetic Flowmeters by Region

6 Strategies for Success

- Overview
- Guidelines for Applying the Strategies

7 Magnetic Flowmeter Supplier Profiles

- Supplier Contact Information
- Supplier Product Lines

Appendix Exhibits

Magnetic Flowmeter User Survey

The purpose of this survey was to capture the views of the market's end-users as another means of informing suppliers to the markets. Purchase decisions and application requirements and changes are best understood – and most easily anticipated – from the perspective of end-users. The Survey provides detailed insight into the purchasing plans and preferences of those who purchase, specify, and use flowmeters.

The industries sampled in the Survey were drawn from the process industries. The pertinent questions regarding applications, product preferences, buying criteria, accuracy and safety considerations, purchase plans, and supplier sources were asked and included in the results. Below is a brief outline of the *Magnetic Flowmeter User Survey* for your review:

Survey Segments

- Industry
- Company Size / Employee Totals
- Primary Applications
- Flowmeters in Use (by quantities and by types)
- Purchase Factors and Supporting Rationales (with priority ratings)
- Unmet Needs from Products and Suppliers
- Anticipated Changes in Applications
- Industry Growth Estimates (through 2008)
- Purchase Plans (through 2008)
- Mounting Types of Magnetic Flowmeters Purchased (Insertion, Flanged, Wafer)
- Coil Power of Magnetic Flowmeters Purchased (AC, High-Strength DC, Standard DC)
- Liners Used in Magnetic Flowmeters Purchased
- Applications of Magnetic Flowmeters Purchased
- Accuracy Levels of Magnetic Flowmeters Purchased
- Size of Installed Base of Flowmeters
- Communication Protocols Used with Flowmeters Purchased
- Safety and Other Approvals
- Non-Product Considerations in Flowmeter Selection
- Openness to Doing Business with New Suppliers
- Ways to Become Aware of Flowmeters and Vendors (Internet, Product Literature, Salespeople, Ads, Articles, etc.)
- Trade Periodicals and Trade Shows that are Sources of Information about Flowmeters and Vendors

Research Methodology

Flow Research has a well-demonstrated ability to design and execute rigorous methodologies. We rely heavily on our own primary research, which we reinforce with information from secondary sources where appropriate.

The most important components of the methodology used in our studies are as follows:

- Supplier Input
- Supplier analysis
- OEM and end-user analysis
- Forecasting

Supplier Input. To obtain updated information for this study, suppliers of magnetic flowmeters were asked to provide their 2004 sales numbers. Other questions related to their growth rate, industry growth, growth factors, industries sold into, and many other questions. Flow Research received a very good response from magnetic flowmeter suppliers.

Supplier Analysis. Market size and market shares were determined through a variety of methods. The primary method of determining market size was through interviews conducted with magnetic flowmeter suppliers. Most companies were quite forthcoming about revenue figures. Revenue numbers provided by companies were also crosschecked with other sources, including business directories, interviews with other knowledgeable persons, and other publicly available data sources, including Dun & Bradstreet reports. In many cases, Flow Research conducted multiple interviews to develop the most complete understanding of each company. Every effort was made to obtain the most accurate information possible about each company.

OEM and End-User Analysis. In addition to the supplier analysis, Flow Research has conducted a comprehensive survey of flowmeter users, including users of magnetic flowmeters. The purpose of this survey is to determine user preferences and decision-making patterns, and to find out what user purchasing expectations are for the next several years. The results are being published as a separate volume called Magnetic Flowmeter User Survey.

Forecasts. A number of factors were taken into account in generating forecasts. Suppliers of magnetic flowmeters were asked about their growth prospects. Suppliers were also asked to project future sales for their products and for the industry as a whole. Industry growth for the industries covered in this study was considered. Other factors include economic growth in various geographic regions, the recovering Asian economies, and prior flowmeter growth patterns.

Background of Flow Research, Inc.

Jesse Yoder, PhD is President of Flow Research Inc., a company he founded in 1998. Dr. Yoder has 18 years experience as a writer and analyst in process control and instrumentation. Since 1990, he has written 65 market research studies, many of them in the area of flowmeters, valves, and related instrumentation. He has also written more than 60 published articles on flowmeters and related topics in industry journals. Dr. Yoder serves as Contributing Editor to Flow Control magazine.

Norman Weeks, Market Analyst, spent 24 years in sales, marketing, and technical sales support of Verizon Communications. During this time he introduced new technologies to both clients for their own use, and other employees within several training modes. His last assignment at Verizon was as Northeast Region Solutions Manager. Since joining Flow Research, he has worked on a variety of projects; including user surveys, the European energy market, and the API 6A valve market.

Belinda Burum, Vice President and Editor, has worked in high tech for 16 years as a technical writer and marketing communications manager. Before that she honed her interviewing skills as a newspaper and wire service reporter. In 1990 and 1991, Belinda wrote newsletters and company profiles for Idea Network. Belinda is editor of Worldflow Energy Monitor and Worldflow User Perspective. She has also worked on a variety of projects at Flow Research, including customer perception user surveys.

Flow Research Studies

A selection of recent and scheduled Flow Research studies is as follows:

- The Market for Temperature Sensors in the Americas, 2nd Edition (May 2006)
- The Market for Temperature Transmitters in the Americas, 2nd. Edition (August 2006)
- The Market for Infrared Thermometers and Thermal Imagers Worldwide (2000)
- Volume I: The World Market for Coriolis Flowmeters (2003)
- Volume II: The Global Market for Magnetic Flowmeters, 3rd Edition (September 2005)
- Volume III: The World Market for Ultrasonic Flowmeters (2003)
- Volume IV: The World Market for Vortex Flowmeters (March 2006)
- Volume V: The World Market for DP Flowmeters and Primary Elements (July 2006)
- Volume VI: Magnetic Flowmeter User Survey (January 2006)
- Volume VII: The World Market for Positive Displacement Flowmeters (2002)
- Volume VIII: The World Market for Turbine Flowmeters (2002)
- Volume IX: The World Market for Pressure Transmitters (February 2004)
- Volume X: The World Market for Flowmeters (includes all flow technologies) (2003)

Volume XI: The World Market for Gas Flow Measurement (September 2004)

Dr. Yoder has also written more than 60 articles on flow and instrumentation for trade journals. Links to many of these can be found at <http://www.flowresearch.com/articles.htm>.

In addition to the offerings described above, Flow Research supports a number of complementary services focused on the global market for flowmeters and related instrumentation, including:

- WorldFlow Monitoring Service. Quarterly surveys of major suppliers, channel partners and users.
- WorldFlow Barometer. Quarterly updates on the flow industry.
- WorldFlow Energy Monitor. Quarterly updates on the oil & gas, power, and chemical industries.
- WorldFlow User Perspective. Periodic updates on customer and end-user needs and requirements.

Flow Research E-Z Faxback Response Form

Please use this form to request more information about any of our market studies.

Name:	Street:
Company:	City:
Phone:	State/Region:
Fax:	ZIP/Postal Code:
Email:	Country:



Please send more information on the following studies and services:

____ Worldflow Monitoring Service
(Worldflow Barometer, Energy Monitor)

____ The Global Market for Magnetic
Flowmeters, 3rd Edition (user survey
available)

____ The World Market for Vortex Flowmeters, 3rd Edition (user survey available)

____ The Global Market for Differential Pressure (DP) Flowmeters and Primary
Elements (user survey available)

____ The Market for Temperature Sensors in the Americas, 2nd Edition

____ The Market for Temperature Transmitters in the Americas, 2nd Edition

____ The World Market for Steam Flow Measurement

____ We have specific needs. Please contact us about a possible custom project.

Please fax this page back to Flow Research at (781) 224-7552. More details are available on the above studies on our website at www.flowresearch.com.



27 Water Street
Wakefield, MA 01880
info@flowresearch.com

(781) 245-3200
(781) 224-7552 (fax)
www.flowresearch.com

Thanks for your inquiry! We will be in touch with you right away.