

The World Market for Magnetic Flowmeters, 8th Edition

— Overview —

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The World Market for Magnetic Flowmeters, 8th Edition

Flow Research is publishing a new market study on the worldwide magnetic flowmeter market called *The World Market for Magnetic Flowmeters, 8th Edition*. The study will determine the size of the worldwide market in 2023 and 2024, forecasts the market through 2029, covers a variety of market segments, and provides market shares of the major suppliers.



Magnetic flowmeters
(Photo from Flow Research archive)

Rationale for Study

Magnetic flowmeters, first commercially produced in the 1950s, now generate more revenues worldwide than any other type of flowmeter. More than 60 suppliers worldwide now offer magnetic flowmeters for sale. Magmeters, as they are also known, are among the most widely used types of flowmeters for measuring the flow of water and other liquids. Over 40 percent of their revenues are from the Water & Wastewater and Chemical industries. Magnetic flowmeters are used to measure the flow of conductive liquids and slurries, including paper pulp slurries and black liquor. Magnetic flowmeters are also widely used in the Food & Beverage and (Bio)Pharmaceutical industries where their hygienic liners help meet strict sanitary requirements.

We believe that this is an optimal time to accurately quantify the size and growth of this flowmeter technology, and to provide a comprehensive view of its expanding market. Our user interviews show that interest in magnetic flowmeters remains at a very high level.

Study objectives:

- Determine the regional and worldwide market size in US dollars and unit volumes for magnetic flowmeters in 2023 and 2024
- Forecast market growth for magnetic flowmeters in dollars and unit volumes through 2029
- Determine worldwide and regional market shares of the leading suppliers of magnetic flowmeters
- Analyze products from all of the significant suppliers selling into the magnetic flowmeter market
- Identify the industries and applications where magnetic flowmeters are used
- Identify market growth sectors
- Offer market and product strategies for magnetic flowmeter suppliers
- Profile all of the significant suppliers of magnetic flowmeters worldwide

Rationale for Study

The World Market for Magnetic Flowmeters, 8th Edition builds on two decades of research. Flow Research published our first magnetic flowmeter study in 2001 and the 7th edition in July 2022. We also follow the magnetic flowmeter market regularly when providing updates in our study covering all flowmeters, *Volume X: The World Market for Flowmeters*.

In conducting this study, we first contacted all known manufacturers of magnetic flowmeters worldwide to assemble a picture of the total magnetic flowmeter market. We asked these suppliers to provide detailed information about geographic segmentation, industries sold into, types of magmeters sold, and many other product segments. As a result, this study identifies where growth is occurring in the market, and the underlying factors driving that growth.

When analyzing target markets, Flow Research uses the perspective of all four segments: manufacturer, distributor, representative, and end-user. We maintain regular communication with all three of these groups in order to be best positioned to note both subtle and significant shifts in technologies or buying patterns.

Operating Principle

Magnetic flowmeters use Faraday's law of electromagnetic induction: A conductive medium passing through a magnetic field generates a voltage that is directly proportional to 1) the velocity of the conductive medium, 2) the density of the magnetic field, and 3) the length of the conductor. In Faraday's law, these three values are multiplied together, along with a constant, to yield the magnitude of the voltage.

Magnetic flowmeters use wire coils mounted within or outside of the meter body. A current applied to these coils generates a magnetic field. As the conductive liquid passes through the meter body, it generates a voltage that is detected by the electrodes mounted on either side of the meter body. The flowmeter computes the flowrate from this value.

Magmeters are highly accurate and do not create pressure drop. Their main limitation is that they cannot measure hydrocarbons (which are nonconductive), and thus are not widely used in the oil & gas or refining industries.

Key Issues Addressed in This Study

- Growth outlook for magnetic flowmeters worldwide and by region
- Demand for 2-wire, 4-wire, and battery-powered meters
- How DC magnetic meters are displacing AC magnetic meters
- Competitive price pressures on magnetic flowmeters
- Need for insertion magnetic flowmeters
- Line sizes where magnetic flowmeters are most frequently used
- Types of liners used in magnetic flowmeters and their proportions of the market
- Adoption rates of communication protocols in smart magnetic flowmeters
- Features that end-users are looking for in magnetic flowmeters

Segmentation

Our comprehensive segmentation provides valuable insights into the use of this technology. All study information – including market size – is provided worldwide *and* by region.

Geographic Segmentation

- North America (U.S. and Canada)
- Western Europe
- Eastern Europe (including Central Europe)/Former Soviet Union
- Mideast/Africa
- Japan
- China
- Asia/Pacific
- Latin America (including Mexico and Caribbean)

Flow Research Gold Partner Program

We invite you to become a Gold Partner by making an early commitment to purchase this study. As a Gold Partner you can:

- Give input on our scope and segmentation to make sure the study meets your needs
- Receive early data before publication
- Enjoy a significant discount on the regular price of the study

For more details, please contact Jesse Yoder at +1 781 245-3200 or jesse@flowresearch.com.

Magnetic Flowmeters by Mounting Type

- Wafer
- Flanged
- Insertion

Magnetic Flowmeters by Configuration Type

- Compact/Integral
- Remote



Magnetic Flowmeters by Power Type

Battery-operated and wireless options are becoming more important in this market, with the release of several new “go-anywhere” products in the last few years.

- 2-wire
- Battery
- 4-wire

Magnetic Flowmeters by Coil Power Type

AC is still an option in a market that has largely moved to DC.

- AC
- High Strength DC
- Standard DC
- Dual Frequency DC



Wafer and Flanged Magnetic Flowmeters by Liner Type

- PFA (perfluoroalkoxy)
- PTFE (polytetrafluoroethylene)
- EPDM (ethylenepropylenediene monomer)
- ETFE (ethylene tetrafluoroethylene)
- Ceramic
- Polypropylene
- Polyurethane
- Hard Rubber
- Soft Rubber
- Other

Magnetic Flowmeters by 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 to 24 inches
- >24 inches

Magnetic Flowmeters by Intelligence Level

- Smart
- Conventional

Smart Magnetic Flowmeters by Communication Protocol

- FOUNDATION™ Fieldbus
- HART
- Ethernet I/P
- Profibus® DP
- Profibus® PA
- Modbus®
- DeviceNet™
- Other

Magnetic Flowmeters by Industry

- Oil & Gas (Up-, Mid-, and Downstream)
- Refining
- Chemical
- Food & Beverage
- Pharmaceutical
- Pulp & Paper
- Metals & Mining
- Electrical Power
- Municipal Water & Wastewater
- District Energy
- Other

Shipments of Magnetic Flowmeters by Municipal Water & Wastewater Industry

- Water (clean, potable, and all other non-wastewater applications)
- Wastewater

Magnetic Flowmeters by Application

- Water Flow
- Water-based Chemicals
- Hydrofracking
- Slurries
- Sanitary
- Process Control
- Custody Transfer
- Dosing/Filling Machines
- Other

Magnetic Flowmeter by Distribution Channel

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



Dr. Yoder inside an 86-inch magnetic flowmeter



Magnetic Flowmeter by Customer Type

- End-users
- Systems Integrators
- Original Equipment Manufacturers (OEMs)
- Engineering and Consulting Firms

Average Selling Prices

Magnetic flowmeters typically cost more than positive displacement and turbine flowmeters, but are significantly less than Coriolis and ultrasonic flowmeters. Their initial purchase cost is in the medium range, and comparable to the cost of vortex flowmeters.

We provide average selling prices based on both geography and mounting type:

- Worldwide average selling prices
- Regional average selling prices (for all eight regions in the study)
- Average selling prices by mounting type: wafer, flanged, insertion

Market Shares of Major Suppliers

- Market Shares Worldwide and by Region

Strategies for Success

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



Company Profiles

We profile the major magnetic flowmeter suppliers, including:

- ABB
- azbil
- Badger Meter
- Bürkert
- Emerson
- Endress+Hauser
- GEA Group
- Georg Fischer Signet
- KROHNE
- McCrometer (Veralto)
- Schneider Electric (Foxboro)
- Siemens
- Sparling Instruments
- Toshiba
- Yokogawa

Flow Research, Inc.

Flow Research is the only market research company that publishes studies on all nine flowmeter types and whose primary mission is to research process control instrumentation markets. In addition to studies on both new and conventional flowmeter types, we have researched pressure transmitters; temperature sensors and transmitters, infrared thermometers and thermal imagers; level devices; analytical instrumentation; and selected API-certified valves. We also publish studies on oil & gas and other major flowmeter markets. In addition, Flow Research started a working group on flowmeter calibration (FRWG.org) and published two studies on flowmeter calibration facilities, one each for liquids and gas.



Dr. Jesse Yoder, president and founder of Flow Research

Partnerships and Alliances

Flow Research helps flowmeter companies form alliances and partnerships to provide specific solutions or broaden their customer base and distribution channels. These partnerships can include manufacturers of valves, hoses, transmitters, or other flow-related products, as well as other flowmeter manufacturers.

Distributorships

Are you thinking about expanding your presence in the U.S.? We can help you find distributors for your flowmeters and other instrumentation.

Custom Projects

Companies commission us for custom projects when they want more detailed information on a specific subject than is possible in an off-the-shelf report. They may be evaluating the future or expansion of a product line, determining whether to acquire or merge with another company, or seeking to better understand their customer needs.

Consulting

We also work with companies individually to formulate strategies that help them succeed in an increasingly complex world. Dr. Yoder and his team have studied hundreds of companies and have advised most of the top flowmeter suppliers on market and product strategies.

Research Team Background

Dr. Jesse Yoder, the lead analyst for this study, is President of Flow Research Inc., which he founded in 1998. He has worked as a writer and analyst in process control and instrumentation since 1987 and has created market research studies since 1990. Since then he has written over 280 market research studies, most of them on flow and instrumentation, and over 300 articles on flow and instrumentation for trade journals. (See www.flowarticles.com.)

Dr. Yoder received a PhD in philosophy from the University of Massachusetts Amherst in 1984 and spent 10 years as an adjunct philosophy professor at the University of Massachusetts Lowell and Lafayette College. Dr. Yoder also worked 10 years as a technical writer, including for the

process control division of Siemens, and taught technical writing at Northeastern University and UMass Lowell.

Dr. Yoder has received two U.S. patents for the flowtube meter, a new dual tube/dual sensor method of measuring flow, in 2015 and 2017. This meter's two prototypes have been tested at CEESI in Nunn, Colorado.

CRC Press published Dr. Yoder's two-book set, [*Advances in Flowmeter Technology*](#), on the history, operating principles, growth factors, representative companies, and frontiers of research for all 10 types of flowmeters. The first volume, *New-Technology Flowmeters*, published September 6, 2022, was followed by *Conventional Flowmeters* on December 15, 2022.

In 2015, ISA published Dr. Yoder's book, [*The Tao of Measurement*](#), with Richard E. Morley as co-contributor. Topics included temperature, pressure, flow, time, length, and area.



Belinda Burum

Belinda Burum, Vice President, joined Flow Research in 2002. Since then, she has served as senior strategic advisor and been involved with most of our projects and publications. She has also worked as a writer and editor in journalism, advertising, and high tech marketing communications and customer references for 40+ years in the U.S. and Switzerland and is a published author and book editor. She has travelled extensively and enjoyed teaching English in Massachusetts, California, and Ecuador.

Leslie Buchanan, Research and Publication Production Associate, joined Flow Research in 2010 with skills from work and life experiences here and abroad. She assists with research and writing, and handles many publication aspects of Flow Research studies.

Vicki Tuck, Administrative Assistant, joined Flow Research in 2012 with experience in both the fast-paced law firms of Boston and in various nonprofit organizations. She assists with administrative tasks, including keeping our growing database up to date and researching companies and their products.

Dan Sparks, Research Director, earned a PhD in chemistry from the University of North Carolina, Chapel Hill. He served as director of product management and director of business development for Omega Engineering in Norwalk, Connecticut until February 2023, and before that was marketing director at Watlow; vice president and general manager at MTS Systems; and engineering director at Thermo Nicolet. We are glad to have him on board.



Dan Sparks

For more information on Flow Research, please visit our website at www.flowresearch.com. Please follow us on Facebook, LinkedIn, Twitter, and Instagram. We also invite you to join our Flow Research LinkedIn group.

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Websites

New-Technology Flowmeter Studies

Mass Flowmeter Series

The World Market for Mass Flow Measurement (Core Study)	www.massflows.com
The World Market for Coriolis Flowmeters, 8 th Edition	www.massflows.com
The World Market for Thermal Flowmeters, 3 rd Edition	www.flowcoriolis.com
The World Market for Mass Flow Controllers, 4 th Edition	www.flowthermal.com
The World Market for Magnetic Flowmeters, 8 th Edition	www.flowmfc.com
The World Market for Ultrasonic Flowmeters, 7 th Edition	www.flowmags.com
The World Market for Vortex Flowmeters, 7 th Edition	www.flowultrasonic.com
The World Market for Multiphase Flowmeters, 2 nd Edition	www.flowvortex.com
Multiphase: Module A: The World Market for Watercut Meters	www.flowmultiphase.com
	www.watercutmeters.com

Conventional Flowmeter Studies

The World Market for Pressure Transmitters, 5 th Edition	www.worldpressure.com
The World Market for Primary Elements, 2 nd Edition	www.flowplate.com
The World Market for Positive Displacement Flowmeters, 3 rd Edition	www.flowpd.com
The World Market for Turbine Flowmeters, 3 rd Edition	www.flowturbine.com
The World Market for Variable Area Flowmeters	www.flowva.com

Cross-Technology Flowmeter Studies

Volume X: The World Market for Flowmeters, 9 th Edition	www.flowvolumex.com
Volume X: Module A: Strategies, Industries, and Applications	www.flowvolumex.com
The World Market for Gas Flow Measurement, 4 th Edition	www.gasflows.com
Gas Module A: Applications and Strategies for Gas Flow Measurement	www.gasflows.com
Gas Module B: Natural Gas Production, Consumption, and Flow Measurement in the Oil & Gas Industry	www.gasflows.com
Flowmeters in the Oil & Gas Industry	www.oilflows.com

Flow Calibration Studies

Core Study: Worldwide Gas Flow Calibration Facilities and Markets	www.flowcalibration.org
Module A: Worldwide Liquid Flow Calibration Facilities and Markets	www.flowcalibration.org

Temperature

Market for Temperature Sensors in the Americas, 3 rd Edition	www.tempresearch.com
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A set of three large diameter magnetic flowmeters await delivery.



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Why Flow Research?

- We specialize in flowmeter markets and technologies.
- We research all flowmeter types.
- We study suppliers, distributors, *and* end-users.
- Our worldwide network of contacts provides a unique perspective.
- Our mission is to supply the data to help your business succeed.

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