



The World Market for Mass Flow Controllers



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Flow Research Services

Flow Research conducts **market research studies** in a wide variety of instrumentation areas that can be purchased by anyone interested in the topics. We create these studies through interviews with suppliers, distributors, and end-users. Topics include all of the flowmeter technologies - both new and traditional - as well as temperature sensors, temperature transmitters, infrared thermometers and thermal imagers, pressure transmitters, and API-certified valves.

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Flow Research specializes in instrumentation. We work with companies individually to **formulate strategies** that will help them succeed in an increasingly complex world. Dr. Jesse Yoder, founder of Flow Research, has been working in process control since 1986 and creating market research studies since 1990. He and his team have studied hundreds of companies during this time and have advised most of the top flowmeter suppliers on market and product strategies.

Flow Research has published over 100 market studies since 1990 and more than 80 technical articles on instrumentation published in industry journals, many of which can be found online at www.flowresearch.com/articles.htm. Consult www.flowresearch.com for a current list of our market research studies available for immediate delivery or to learn more about us.

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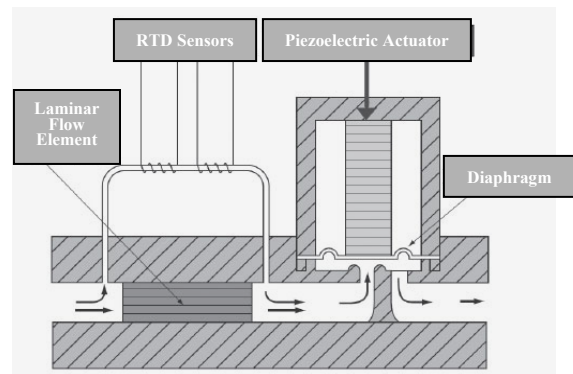
- Study Overview -

Mass Flow Controllers (MFCs) represent one of the fastest growing segments of the process control instrumentation markets. Their ability to measure gases and liquids makes them highly versatile. Their ability to conduct these measurements with a high degree of accuracy, combined with the attribute of flow control, makes their value clear to the end-user community. Manufacturers have also recognized this value and are investing in MFC product enhancements in their attempts to secure increased market share.

Flow Research has observed, studied, and reported on MFC and other flow technologies since 1998. It's what we do. We have now focused our attention upon MFC technology and the worldwide industries and markets in which it is found. The result is a comprehensive study that describes in practical terms how this technology works, where it works best today and in the future, who are the global and regional suppliers of this technology, and what the future holds for manufacturers and end-users alike.

What are the key issues addressed in this study?

- Worldwide market size in 2007 dollars and units
- Worldwide market shares in 2007 by company
- Worldwide market size forecasts through 2012
- Technical analysis of all new-technology meters
- Paradigm case reviews by technology
- Product analyses of major supplier product lines
- Manufacturer sales strategies
- Company profiles of all major suppliers



Over the years, clients have told us that what distinguishes Flow Research from other sources of data and information is the range of perspectives that we provide to our study subject. We not only determine worldwide market size, but break this data down into its regional components, making the data much more valuable to global and smaller market participants alike.

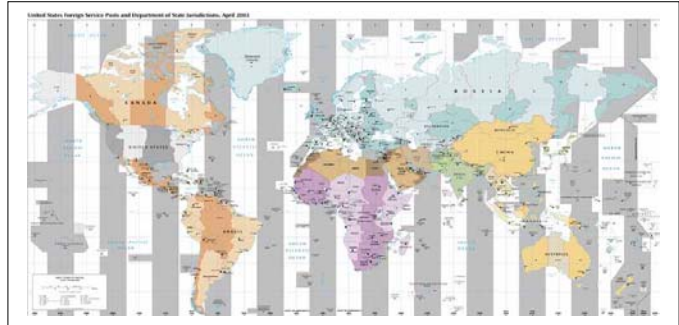
This same methodology is used as we detail Average Selling Price (ASP), where we provide the ASP for mass flow controllers both by technology type and by region, in addition to average worldwide pricing. This depth of analysis can be used by suppliers who may be seeking a price advantage, or by end-users who are looking to budget for these products worldwide..

The product analysis found throughout the study provides the basic information on mass flow controller technology, compares the different flow technologies to each other, and describes major features of the MFCs of significant suppliers. In so doing, this study creates a snapshot of the state of the mass flow controller industry from both a technical and a product feature viewpoint.

What regions of the world are included in this study?

We have divided the worldwide market for MFC's into the following geographies:

- North America
- Europe
- Japan
- Asia without Japan
- Rest of World



How else has the MFC market been divided in this study?

Another important division of this market is by the industries in which MFCs are used. This segmentation is:

- Semiconductor
- Industrial
- Laboratory/Research

The study further segments the Industrial and Lab/Research markets into the following industrial segments:

- | | | |
|-----------------------------|----------------------|---------------------|
| • Aerospace | • Fiber Optics/Glass | • Heat Treating |
| • Analytical | • Food & Beverage | • Medical |
| • Automotive | • Fuel Cells | • Metals Processing |
| • Biotech/Pharmaceutical | • Furnaces | • Packaging |
| • Chemical/Petrochemical | • Gas Analyzers | • Power |
| • Electronics Manufacturing | • Gas Distribution | • Other |

These Industrial and Lab/Research segments are defined, and both their 2007 revenue shares of the market as well as their individual 2012 revenue projections are provided. Compound Average Growth Rates (CAGRs) are also provided for each segment. These industry breakdowns are essential to understanding the fundamental nature of MFC end-user activity.

What other important segmentation is included in this MFC study?

- This study looks at the worldwide MFC market on the basis of Thermal Technology vs Differential Pressure for 2007 and for each year through 2012. Regional data is also provided.
- This study looks at the worldwide MFC market on the basis of With Control Function vs Meter Only for 2007 and for each year through 2012. Regional data is also provided.
- This study looks at worldwide Distribution Channels from the perspective of Direct Sales, Independent Reps, Distributors, and E-Business. Revenue numbers by these four sales channels are provided for 2007, with a forecast for 2012.
- This study looks at worldwide Customer Types. Customer types are classified by the four most common definitions: End-User, OEM, System Integrator, and Engineering Company. These basic types are analyzed both on a worldwide and a regional basis.

What can you tell me about the Company Profiles?

There are company profiles included for all major suppliers into the MFC market. This market has seen significant acquisition activity in the last few years. This activity is documented within this study. The study also includes the following information for each company that is profiled:

- | | |
|-------------------------------|--|
| • Ownership | • MFC Product Line Analysis |
| • Address/Contact Information | • Complete MFC Product Portfolio Listing |
| • Revenue Summary | • Summaries of Other Process Control Product Lines |
| • Corporate History | • Strategies and Market Information |

A sample list of some of the companies profiled in this study includes:

- | | |
|--|----------------------|
| • Advanced Energy (Aera [®]) | • Horiba/STEC |
| • Brooks Instrument | • Sierra Instruments |
| • Celerity Group | • Tokyo Keiso |
| • Hitachi | • Yamatake |

In addition to the above, this study provides insights into developing successful marketing strategies and discussions of critical MFC growth factors. The study also includes forecasts for individual geographic regions.

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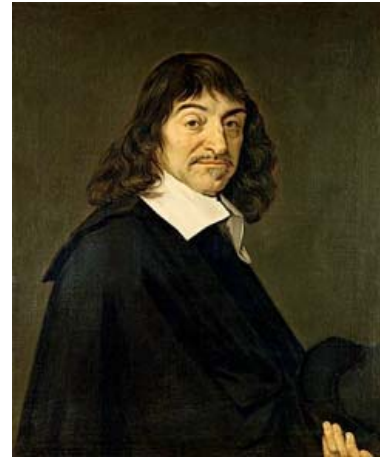
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This study also includes more than 80 full-color maps, charts, and tables which together graphically illustrate the entirety of the worldwide Mass Flow Controller market.



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René Descartes

The Flow Research Founding Sponsor Program

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Procedure: Early in the planning phase of a study, Founding Sponsors receive a proposal that includes the proposed segmentation. Founding Sponsors can propose additional segmentation, and can also suggest changes to the proposed segmentation. While the decision to adopt particular segmentation ultimately lies with Flow Research, and is based on input from all contributors, we will do our best to accommodate the specific needs of each of our clients.

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If you have any questions about the Founding Sponsor program, please contact Norm Weeks at (781) 245-3200, or norm@flowresearch.com.

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Why Flow Research?

- We specialize in flowmeter markets and technologies
- We have researched 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