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## The World Market for Pressure Transmitters, 2<sup>nd</sup> Edition



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**Investment in the oil & gas industry and new plant construction in developing regions drive growth in the pressure transmitter market. This new study tells you everything you need to know about this fast-developing market.**

This study analyzes the pressure transmitter market size and includes market forecasts through 2011. It segments the market into seven geographic regions, including China and Latin America. The study provides market shares of the leading suppliers by geographic region and by pressure transmitter type. Strategies and company profiles help suppliers better understand their position in the market, and how to compete effectively in this growing market.

The worldwide pressure transmitter market has grown substantially since our last study was published in 2004. This study uncovers the cause of this growth, and provides detailed forecasts of the market over a five year period. It examines the role of communication protocols, and reveals how quickly key protocols such as HART, Foundation Fieldbus, and Profibus are growing.

### **Factors Influencing the Growth of the Pressure Transmitter Market**

This section discusses the growth factors underlying the pressure transmitter market. The first section discusses macroeconomic factors that impact the US and other world economies. The second section looks at factors that specifically relate to the pressure transmitter market. Growth factors include:

- The US and European economies have shown strong growth since 2004
- Asian countries, especially China, are heavy capital investors
- Demand for higher standard of living in developing countries
- Increased capital spending and plant construction
- Plant retrofits and upgrades
- The need to reduce waste and conserve energy
- Environmental regulations are growing in importance

### **Study Summary**

This study analyzes the entire world market for pressure transmitters. It includes technology analysis, market share and market size data, and also provides in-depth segmentation of the market by various product and geographic categories. It also includes detailed market growth projections through 2011 for pressure transmitters. Detailed market strategies are provided for suppliers.

The methodology for this study consisted of a “bottom-up” approach. Flow Research has been studying the worldwide flowmeter and pressure transmitter markets for the past seven years. We have completed individual studies on the Coriolis, magnetic, ultrasonic, vortex, positive displacement, and turbine flowmeter markets. We have also published a worldwide study that includes all flowmeter types. While most of the information for this study was obtained through interviews with the suppliers themselves, important data was gained from other reliable sources

as well. In this volume we update both the market size and market share data for pressure transmitters to 2011.

In addition to the supplier research, Flow Research conducted a worldwide survey of flowmeter users that included users of pressure transmitters used to measure flow. We first conducted such a comprehensive survey of flowmeter users worldwide in the year 2000. For this survey, we have more than 500 respondents. The results of this research have been published as a separate study, called **Worldwide Survey of Flowmeter Users, 2<sup>nd</sup> Edition**. The goals of the survey were to get an understanding of installed base, to find out user purchasing plans, and to determine what problems users are having with their flowmeters. Other goals included finding out trends in flowmeter usage and providing confirming evidence for the supplier data. These goals were achieved.

In addition to periodic end-user surveys, Flow Research interviews flowmeter users on an ongoing basis. Some of these interviews have been conducted for our quarterly publications. As a result, we regularly update our knowledge of what flowmeter users are saying and doing about different flow technologies. This information is used in growth forecasts, and in understanding market dynamics.

## **Scope**

This study analyzes the world market for pressure transmitters. It includes the following information about the worldwide pressure transmitter market:

- A technology and product analysis for pressure transmitters
- Market size in US dollars for pressure transmitters worldwide and by region
- Market size in unit volumes for pressure transmitters worldwide and by region
- Average selling prices of pressure transmitters by type and by region
- Market shares of the leading suppliers of pressure transmitters worldwide and by region
- A detailed forecast of the markets for pressure transmitters in dollars and unit volumes through 2011
- Market and product strategies for suppliers of pressure transmitters worldwide
- Company profiles of the suppliers of pressure transmitters worldwide

## **Study Segmentation**

### **Pressure Transmitters by Type**

There are four kinds of pressure transmitters:

- Multivariable (MV) pressure transmitters that measure two or more process variables in a single device. These are usually pressure and temperature.
- Differential pressure (DP) transmitters measure a difference in pressure upstream and downstream of a constriction in the pipe, called a primary element.
- Gage pressure transmitters measure an amount of pressure that includes atmospheric pressure.
- Absolute pressure transmitters measure an amount of pressure that does not include atmospheric pressure.

Pressure transmitters are further subdivided according to whether they are used to measure flow or level.

**Pressure transmitters are segmented by the following geographic regions:**

- North America
- Europe, including Central Europe and FSU
- Middle East and Africa
- Japan
- China
- Asia without China and Japan
- Latin America

**The average selling prices of pressure transmitters are given by pressure transmitter type and by geographic region**

**Shipments in dollars and units of multivariable pressure transmitters by region**

**Shipments in dollars and units of differential pressure transmitters by region**

**Shipments in dollars and units of gage pressure transmitters by region**

**Shipments in dollars and units of absolute pressure transmitters by region**

**Pressure Transmitters by Fluid Type**

Pressure transmitters are segmented in this study according to fluid type:

- Liquid
- Steam
- Gas

Pressure transmitters by fluid type are further subdivided by geographic region.

### **Pressure Transmitters by Mounting Type**

Pressure transmitters are segmented according to the mounting type. They are distinguished by whether they are shipped with any of the following mounting accessories, or with none:

- Remote seal
- Manifolds only
- Primary element assemblies
- None of the above

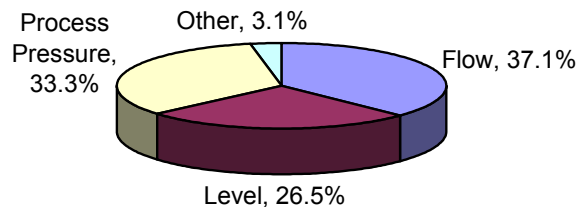
Pressure transmitters by mounting type are further subdivided by geographic region.

### **Pressure Transmitters by Application**

Pressure transmitters are segmented in this study according to application:

- Flow
- Level
- Process pressure
- Other

Pressure transmitters by application are further subdivided by geographic region.



### **Pressure Transmitters by Sensing Technology**

Pressure transmitters are segmented in this study according to sensing technology:

- Capacitive
- Resistive
- Strain gage
- Other

Pressure transmitters by sensing technology are further subdivided by geographic region.

### **Pressure Transmitters by Intelligence Level**

Pressure transmitters are also segmented by intelligence level as follows:

- Smart
- Analog (conventional)
- Low Cost

Pressure transmitters by intelligence level are further subdivided by geographic region.

### **Smart Pressure Transmitters by Communication Protocol**

Smart pressure transmitters are segmented by the following protocols:

- HART
- Foundation Fieldbus
- PROFIBUS
- Modbus
- Proprietary Digital
- Other

Pressure transmitters by communication protocol are further subdivided by geographic region.

### **Pressure Transmitters by Industry**

Pressure transmitters are used mainly in the process industries. We have included the following industries in this study:

- Oil & Gas production, transportation, and distribution
- Refining
- Chemical
- Food & Beverage
- Pharmaceutical
- Pulp & Paper
- Metals & Mining
- Power
- Water & Wastewater
- Other

Pressure transmitters by industry are further subdivided by geographic region.

### **Pressure Transmitters by Sales Channels**

The pressure transmitter market is segmented according to the following sales channels:

- Direct Sales
- Independent Representatives

- Distributors
- E-Business

Pressure transmitters by sales channels are further subdivided by geographic region.

### **Pressure Transmitters by Customer Type**

The pressure transmitter market is segmented according to the following customer types:

- End-Users
- OEMs
- Systems Integrators
- Engineering Companies

### **Companies Profiled**

The following companies are profiled in this study:

- ABB
- Anderson Instrument Company
- Ashdown Process Control
- Emerson Process Management – Bristol, Inc.
- Emerson Process Management – Rosemount Division
- Endress+Hauser
- Fuji Electric Co.
- Hitachi
- Honeywell
- Invensys/Foxboro
- Siemens
- Smar
- Yamatake
- Yokogawa

### **Background**

Dr. Jesse Yoder is President of Flow Research Inc., a company he founded in 1998. Dr. Yoder has 20 years' experience as a writer and analyst in process control and instrumentation. Since 1990, he has written over 100 market research studies, most of them in the area of flow and instrumentation. Some of the recent and currently scheduled Flow Research studies are as follows:

[Volume I: The World Market for Coriolis Flowmeters, 3<sup>rd</sup> Edition](#) (February 2008)  
[Volume II: The Global Market for Magnetic Flowmeters, 3<sup>rd</sup> Edition](#) (September 2005)  
[Volume III: The World Market for Ultrasonic Flowmeters, 3<sup>rd</sup> Edition](#) (January 2008)  
[Volume IV: The World Market for Vortex Flowmeters, 3<sup>rd</sup> Edition](#) (March 2006)  
[Volume V: The World Market for DP Flowmeters and Primary Elements](#) (January 2007)  
[Volume VI: Worldwide Survey of Flowmeter Users, 2<sup>nd</sup> Edition](#) (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, 2<sup>nd</sup> Edition](#) (October 2007)  
[Volume X: The World Market for Flowmeters, 2<sup>nd</sup> Edition \(includes all flow technologies\)](#)  
 (February 2008)  
[Volume XI: The World Market for Gas Flow Measurement](#) (September 2004)  
[Volume XII: The World Market for Steam Flow Measurement](#) (January 2008)  
[The Market for Temperature Sensors in the Americas, 2<sup>nd</sup> Edition](#) (May 2006)  
[The Market for Temperature Transmitters in the Americas, 2<sup>nd</sup> Edition](#) (November 2006)

These studies are described at <http://www.flowresearch.com/flow.htm>

Dr. Yoder has also written more than 70 articles on flow and instrumentation for trade journals. Links to many of these can be found at <http://www.flowresearch.com/articles.htm>.

Norm Weeks, Market Analyst, joined Flow Research in November 2004 after a 24-year stint with Verizon. At Verizon, Norm specialized in creating innovative customer solutions, product management, and product marketing. He is now a fulltime market analyst for Flow Research, and has already completed several studies.

Belinda Burum, Vice President and Editor, has worked in high tech for 16 years as a technical writer and marketing communications manager. She joined the company in 2002, and has since then worked on many projects. She is a very talented writer, and has a strong customer focus. In addition to her work on market studies, Belinda is serving as associate editor of the **Market Barometer** and the **Energy Monitor**.

Besides writing and publishing studies of this type, Flow Research specializes in user surveys that include a detailed analysis of customer perceptions. In addition, Flow Research provides quarterly updates on the flow and energy industries in the **Market Barometer** and the **Energy Monitor**. The **Energy Monitor** analyzes the current state of the oil & gas, refining, power, and renewables industries, and the implications for instrumentation supplier. Both reports are part of the Worldflow Monitoring Service; more details are available at [www.worldflow.com](http://www.worldflow.com). For more information on Flow Research, please visit our website at [www.flowresearch.com](http://www.flowresearch.com).





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## **Flow Research Services**

Flow Research conducts **market research studies** in a wide variety of 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 Coriolis, magnetic, ultrasonic, vortex, positive displacement, and turbine flowmeters, as well as temperature sensors, temperature transmitters, infrared thermometers and thermal imagers, and pressure transmitters.

We also conduct **custom projects** for companies who are looking to expand their product line, merge with or acquire another company, or understand their customer needs better. We are very experienced at doing user surveys that reveal hidden problems, emerging applications, and new product requirements. We gather the data and analyze it in light of our wealth of data on instrumentation. We then formulate strategies that help you achieve your goals.

In addition to studies and projects, we publish periodicals as part of our **Worldflow Monitoring Service**. The *Worldflow Barometer* helps companies stay on top of trends and technologies and interpret them so that they can make better business decisions. Our new *Worldflow Energy Monitor* – an outgrowth of the *Worldflow Process Industry Monitor* – focuses on developments in oil & gas, petrochemical, and renewable energy industries. It also reflects our increasing **focus on the oil and gas flow markets**. As part of the Worldflow Monitoring Service, we also produce periodic *Worldflow User Perspective* reports and timely *Flash Reports*.

Flow Research specializes in instrumentation. We work with companies individually to **formulate strategies** that will help them compete in an increasingly competitive world. Dr. Jesse Yoder, founder of Flow Research, has been working in process control since 1986 and writing 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.

Dr. Yoder has written over 100 market studies since 1990 and more than 70 technical articles on instrumentation published in industry journals, most of which can be found online at [www.flowresearch.com/articles.htm](http://www.flowresearch.com/articles.htm). Consult [www.flowresearch.com](http://www.flowresearch.com) for a current list of our off-the-shelf studies available for immediate delivery.

# Worldflow Monitoring Service



The *Worldflow Monitoring Service* is a package of resources designed to serve the information needs of flowmeter and instrumentation manufacturers, distributors, and end-users. Each component offers timely data, meaningful news, and insightful commentary on the markets it covers. Each complements and updates the studies that Flow Research regularly conducts in the same markets, and keeps readers informed of events and trends in their industry.

*Worldflow*, which was initiated in 2002, has four components:

## **Market Barometer (MB)** (40–60 pages)

This quarterly publication focuses on the flowmeter industry. *MB* reports on important technology introductions, mergers and acquisitions, and application trends. “State of the Industry” highlights recent industry events and their meaning. And, in every issue, we review each flowmeter technology and interpret changes, giving you the information and ideas you need to implement winning product strategies and to make more informed decisions. Your subscription includes *Flash Reports*, a PDF file of each issue, and two printed and bound hardcopy volumes.

## **Energy Monitor (EM)** (40–70 pages)

This quarterly publication focuses on the oil & gas, refining & petrochemical, and power and renewable industries in relation to flow and temperature measurement, and other instrumentation. Each issue surveys the energy scene to discover significant new events, trends, and opportunities. Every issue is packed with what you need to know. Your subscription includes *Flash Reports*, a PDF file of each issue, and two printed and bound hardcopy volumes.

## **Flash Reports** (2–6 pages each)

Just as the *Worldflow Monitoring Service* informs during the interval between studies, *Flash Reports* activate as soon as important news breaks. *Flash Reports* include both the key facts and a “What it Means” section. Subjects of past *Flash Reports* include Siemens’ purchase of Controlotron, the API’s formulation of standards for vortex flowmeters, and Nu-Flo’s acquisition of Caldon.

## **Living Database (LD)** (24/7 access)

This web-based tool is an instant library of information for anyone who wants to know everything from how to select a flowmeter to what flowmeters are available worldwide and from whom. A centralized database with subscriber access via user name and password, *LD* is the way to conveniently locate information from past reports and articles, and to keep current on new product applications. Better data = better decisions.