

# The World Market for Level Measurement Devices

**Radar Level Devices  
Magnetic Level Indicators  
Ultrasonic Level Devices**

## Overview



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**Flow Research, Inc.**  
27 Water Street  
Wakefield, MA 01880  
United States  
+1 781-245-3200  
+1 781-224-7552 (fax)  
[www.flowresearch.com](http://www.flowresearch.com)

[www.LevelResearch.com](http://www.LevelResearch.com)

## ***A New Level Market Study***

Flow Research has conducted a new market study on the worldwide level measurement market. The primary goal was to determine the size of four of the most important segments of this market, and to forecast market size through 2019. The four segments included in this study are:

- Pulse Wave Radar
- Guided Wave Radar
- Ultrasonic
- Magnetic Level Indicator

### **The study identifies the following global elements:**

- Market size and market shares for each level technology in 2014 by region
- Market growth and forecasts for each level technology device through 2019
- Product analyses for the main companies selling into these level measurement markets
- Industries where each level measurement device is used, and areas of new market growth
- Strategies for manufacturers selling into these level measurement markets
- Company profiles of the main suppliers of these level measurement devices

## **Background of Technologies**

There are more than twenty different technologies used to measure level, and most level measurement is done inside a closed tank. An exception to this is open channel measurement. However, level measurement is restricted to either liquids or solids. This study focuses on liquids or solid contained by some kind of structure.

### **Continuous vs. Point Level Devices**

Point level devices measure level at a single point, such as the height of a liquid in the tank. These instruments often function in alarm applications, indicating when an overflow condition or a low level condition has been reached. Continuous level measurement is more sophisticated, as the level measurement changes as the level varies. For example, as the height of a liquid in a tank rises and falls, continuous level measurement devices provide changing readings indicating the height of the liquid at any point in time.

### **Level Device Technologies**

Just as there are many technologies used to measure flow or pressure or temperature, there are many different technologies used to measure level. Some of these have been around for many years, while others have been introduced more recently. Some technologies are mechanical in nature, while others are mainly electronic.

The subjects of this study include three of the most recently available level technologies: pulse wave radar, guided wave radar, and ultrasonic. These are all enjoying positive market acceptance and healthy growth. The fourth technology – magnetic level indicator - is one that has a relatively lengthy usage history, but retains an important place in the market due to its fundamental technology strengths. This fourth device technology has also seen the recent entry of important new suppliers as well who assist in renewing this technology segment.

## **Rationale for Study**

There is a compelling need for comprehensive studies of level devices markets. In fact, Flow Research was specifically asked by several suppliers to undertake these studies because it has been several years since market research of the subject technologies has been done. While this is our first study of the level measurement market, we have been researching the related topics of flow, pressure, temperature, analytical instrumentation, and valves since 2000.

The overall level device market is especially complex due to the number of different technologies. All of these technologies have their place within the total market, but some level device markets are growing faster than others. We have focused upon growth factors affecting four important level devices within this market and their specific technologies.

One important issue that is explored is the contrast in growth between new-technology and traditional technology level devices. We have determined, for example, the reasons why newer level technologies such as radar and ultrasonic are displacing the more traditional technologies.

Flow Research is please to present the findings of this completed research in a single volume, ***The World Market for Level Measurement Devices***. The level device types that this study covers – pulsed radar, guided wave radar, ultrasonic, and magnetic level indicator – were identified as four of the most significant level technologies on the market today.

And while the reasons for their significance vary, the individual device types are examined thoroughly and are thoughtfully described in terms of their unique technology, market size, applications, and industry usage. Market shares are provided for each to assist the reader in developing an understanding of their competitive landscape. And, as with all of our studies on any subject, in-depth supplier profiles are there for a deeper understanding of the major companies involved in each market and reasons for their success.

## **Publication Date**

**The World Market for Level Measurement Devices** was published in April 2016.



Overview: The World Market for Level Transmitters:  
Magnetic Level Indicators, Radar, and Ultrasonic  
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**This study addresses the key issues in the level device market, including:**

- Growth factors affecting the level device market and the four specific technologies
- Shipments of each level device technology by revenues and units
- Growth rates for each level device technology market
- Industry segmentation for each level device technology market
- Mergers and acquisitions in the level device market
- New entrants into the level device market
- New products being introduced by suppliers of each level device technology

### ***Study Description***

In order to most effectively treat each of the four different level measurement device markets, the study dedicates a full chapter to each.

**The study data is provided for eight geographic regions. All segmentation data is provided on both a worldwide and regional basis.**

**Market size and market share data is provided in both dollars and units. Base year and forecast data is provided for each year of the study period, 2014 through 2019.**

### ***Study Segmentation***

#### **Types of Level Measurement Devices**

The study research is focused upon the following four level measurement device technologies:

- Pulse Wave Radar
- Guided Wave Radar
- Ultrasonic
- Magnetic Level Indicator

#### **Geographic Segmentation**

Study results for each of the level measurement instruments are broken down by the following geographic regions:

- Worldwide
- North America (United States and Canada)
- EMEA/India (including Russia/FSU)
- Asia (including Japan, China, and other Asian & Pacific countries)
- Latin America (Mexico, Central and South America)

## Industry Segmentation

Shipments for each of the level measurement device types are segmented by the following industries:

- Oil & Gas (upstream, midstream and downstream)
- Petrochemical
- Chemical
- Power
- Water & Wastewater
- Other

## Market Shares

The market shares of the leading manufacturers are provided:

- Worldwide
- For each level technology

## Average Selling Prices

The average selling prices for each level technology type are provided:

- Worldwide
- For each geographic region



## Flow Research, Inc.

Flow Research is the only market research company whose primary mission is to research flowmeter and other process control instrumentation markets.

Flow Research specializes in instrumentation, and 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, level products, pressure transmitters, liquid analytical instruments, and selected API-certified valves.

## Level Measurement Devices Research Team Background

### Dr. Jesse Yoder



Dr. Jesse Yoder is President of Flow Research Inc., a company he founded in 1998. Dr. Yoder has 30 years of experience as a writer and an analyst in process control and instrumentation. Since 1990, he has written more than 200 market research studies, most of them regarding flow and instrumentation. Dr. Yoder has also written more than 280 articles on flow and instrumentation for trade journals. Links to many of these articles can be found at [www.flowarticles.com](http://www.flowarticles.com). He has also written two books, and holds a patent for a flowmeter.

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**Belinda Burum**, Vice President, worked in journalism and advertising, then in high tech as a writer, marketing communications manager, and customer references consultant. She joined Flow Research in 2002, and has worked on many projects, studies and publications.

**Norm Weeks**, Senior Market Analyst, joined Flow Research in November 2004 after 24-years with Verizon specializing in innovative solutions for major enterprises, introducing new products and lifecycle management strategies, and product marketing. He also served as Director of the Urban Fellows Institute in New York. At Flow Research, he is involved in project development, research, analysis and writing. In addition to working on studies, custom projects are a specialty. He also contributes to White Papers, Worldflow and other publications.

**Harry Lund**, Sales Director, joined Flow Research in October 2016. He has 45 years experience in the flow measurement industry with several US and international corporations. From beginning as a technical writer, he advanced through communication systems, application engineering, and product management to VP Sales, Service, and Marketing. At Flow Research, his experience and skills with people, products and the flow measurement business world are a valuable resource for our customers and us. Harry also has a forte for formulating strategies to enable companies to compete more effectively in the marketplace.

**Leslie Buchanan**, Publication Production Associate, and Research Assistant, joined Flow Research in March 2010, with skills from a variety of work and life experiences. Early on, she worked on the database, customer contact, and publication formats. She became increasingly involved in many capacities with Flow Research studies, Worldflow and other publications.

**David Goldstein**, Business Analyst, joined Flow Research in September 2016. He has an MBA from Boston University and 30 years of professional experience including various management positions in Sales and Marketing with consumer product companies. David developed products and programs for customers as large as Wal-Mart and as small as independent corner drug stores. At Flow Research, he combines his market research and business analyst skills with his astuteness and organizational abilities to assist with research and writing for studies and projects.

**Victoria Tuck**, Administrative Assistant, joined Flow Research in June, 2012. She has experience in both the fast-paced law firms of Boston, and in various nonprofit organizations. She handles a variety of office functions – essential to keep any business running – as well as assisting in other ways, including the contacts database and news for the Worldflow publications.

**Christina Glaser**, Website Design & Maintenance, joined Flow Research in October 2010. She is a seasoned software programmer, systems architect, and developer with significant website experience. At Flow Research, she took on the major role of refreshing, improving, organizing and maintaining our many company websites, also gathering news content for some.

## Flow Research studies contribute to an ongoing view of the flowmeter market

Listed below is a summary of Flow Research studies in process as well as studies completed during the last few years in the area of process control instrumentation. Conducting these studies has contributed to a more thorough understanding of the several device technologies included in *The World Market for Level Measurement Devices*. These studies and others are further described at [www.flowstudies.com](http://www.flowstudies.com).

### Recent and Currently Scheduled Flow Research Studies

### Websites

#### New-Technology Flowmeter Studies

The World Market for Coriolis Flowmeters, 5 <sup>th</sup> Edition	<a href="http://www.flowcoriolis.com">www.flowcoriolis.com</a>
The World Market for Magnetic Flowmeters, 6 <sup>th</sup> Edition	<a href="http://www.flowmags.com">www.flowmags.com</a>
The World Market for Ultrasonic Flowmeters, 5 <sup>th</sup> Edition	<a href="http://www.flowultrasonic.com">www.flowultrasonic.com</a>
The World Market for Vortex Flowmeters, 5 <sup>th</sup> Edition	<a href="http://www.flowvortex.com">www.flowvortex.com</a>
The World Market for Thermal Flowmeters, 2 <sup>nd</sup> Edition	<a href="http://www.flowthermal.com">www.flowthermal.com</a>

#### Traditional Technology Flowmeter Studies

The World Market for Pressure Transmitters, 4 <sup>th</sup> Edition	<a href="http://www.pressureresearch.com">www.pressureresearch.com</a>
The World Market for Positive Displacement Flowmeters, 2 <sup>nd</sup> Edition	<a href="http://www.flowpd.com">www.flowpd.com</a>
The World Market for Turbine Flowmeters, 2 <sup>nd</sup> Edition	<a href="http://www.flowturbine.com">www.flowturbine.com</a>

#### Emerging Technology

The World Market for Multiphase Flowmeters, 2 <sup>nd</sup> Edition	<a href="http://www.flowmultiphase.com">www.flowmultiphase.com</a>
Module A: The World Market for Watercut Meters	<a href="http://www.watercutmeters.com">www.watercutmeters.com</a>

#### Mass Flow Controllers

The World Market for Mass Flow Controllers, 2 <sup>nd</sup> Edition	<a href="http://www.flowmfc.com">www.flowmfc.com</a>
The World Market Update for Mass Flow Controllers	<a href="http://www.flowmfc.com">www.flowmfc.com</a>

#### Cross-Technology Flowmeter Studies

Volume X: The World Market for Flowmeters, 6 <sup>th</sup> Edition	<a href="http://www.flowvolumex.com">www.flowvolumex.com</a>
Volume X: Module A: Strategies, Industries, and Applications	<a href="http://www.flowvolumex.com">www.flowvolumex.com</a>
The World Market for Natural Gas and Gas Flow Measurement, 3 <sup>rd</sup> Edition	<a href="http://www.gasflows.com">www.gasflows.com</a>
The World Market for Liquefied Natural Gas (LNG)	<a href="http://www.flowlng.com">www.flowlng.com</a>
The World Market for Oil and Oil Flow Measurement	<a href="http://www.oilflows.com">www.oilflows.com</a>

#### Flow Calibration

Core Study: Worldwide Gas Flow Calibration Facilities and Markets	<a href="http://www.flowcalibration.org">www.flowcalibration.org</a>
Module A: Worldwide Liquid Flow Calibration Facilities and Markets	<a href="http://www.flowcalibration.org">www.flowcalibration.org</a>

#### Temperature Sensors Studies

The Market for Temperature Sensors in the Americas, 3 <sup>rd</sup> Edition	<a href="http://www.tempresearch.com">www.tempresearch.com</a>
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#### Level Measurement Devices Studies

The World Market for Level Measurement Devices	<a href="http://www.levelresearch.com">www.levelresearch.com</a>
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Flow Research also 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 suppliers. Both publications are part of the Worldflow Monitoring Service. More details are available at [www.worldflow.com](http://www.worldflow.com).

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## Why Flow Research?

- We specialize in flowmeter and level markets and technologies
- We research all level technologies
- 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

[www.LevelResearch.com](http://www.LevelResearch.com)