Flow Research, Inc.
27 Water Street
Wakefield, MA 01880 USA
+1 781-245-3200
+1 781-224-7552 (fax)
www.flowresearch.com

The World Market for Vortex Flowmeters, 8th Edition

Overview

Date of Publication: Q4 2025

www.FlowVortex.com

Flow Research, Inc.
27 Water Street
Wakefield, MA 01880
United States
+1 781- 245-3200
+1 781- 224-7552 (fax)
www.FlowResearch.com

The World Market for Vortex Flowmeters, 8th Edition

Flow Research has completed a new study on the worldwide vortex flowmeter market, called **The World Market for Vortex Flowmeters, 7th Edition**, published in April 2024. It determines the size of this market in 2025, and includes supplier data and forecasts through 2030.

This study has multiple purposes:

- Determine 2025 worldwide market size and market shares for all vortex flowmeters
- Forecast market growth for all types of vortex flowmeters through 2030 using 2025 as a base year.
- Determine market shares for vortex suppliers in 2025 worldwide and by region
- Identify the industries and the applications where vortex flowmeters are used, and identify market growth sectors
- Provide a product analysis for the main manufacturers in the vortex flowmeter market
- Provide strategies for companies selling into the vortex flowmeter market
- Profile the main manufacturers of vortex flowmeters

Rationale for Study

Flow Research published the 7th edition of this comprehensive study in April 2024, and follows the vortex flowmeter market regularly. We provide market updates in our study about the worldwide market for all flowmeters, *Volume X* (www.FlowVolumeX.com). We have also done user interviews that show that interest in vortex flowmeters remains at a very high level. One reason for this interest is that vortex flowmeters are approved for use in custody transfer applications by the American Petroleum Institute, and investment in oil & gas operations are increasing once again. This is our first in-depth post-pandemic look at the expanding vortex flowmeter market.

Background of Study

Vortex flowmeters were first introduced to the industrial markets by Yokogawa in 1969. Since that time, growth in the vortex flowmeter market has been relatively slow. Vortex flowmeters have

never undergone a period of rapid growth that would enable them to catch up to ultrasonic, Coriolis, or magnetic flowmeters in terms of market size. Even so, the past several years have seen important changes in the vortex flowmeter market.

In conducting this study, we are contacting all known manufacturers of vortex flowmeters worldwide. Flow Research identified over 50 vortex flowmeter manufacturers around the world. By obtaining detailed information about these companies, we assembled a fresh picture of the total vortex flowmeter market. We asked suppliers to provide detailed information about geographic segmentation, industries sold into, types of vortex flowmeters sold, and many other product segments. Flow Research has 30 years of experience in following the markets for flow measurement and related instruments, markets, industries, and news. We can identify where growth is occurring in the market, as well as the underlying factors for that growth.

Key issues addressed in this study

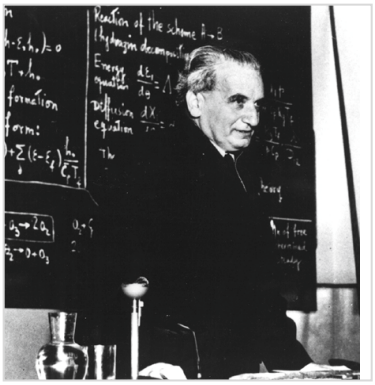
This study will address the following key issues in the vortex flowmeter market:

- Important market growth factors
- The increased use of multivariable flowmeters
- The effects of the API's adoption of a custody transfer standard on vortex sales
- Line sizes for vortex flowmeters
- The use of vortex flowmeters for steam
- The importance of reducer vortex flowmeters
- Market strategies for vortex flowmeter suppliers
- Frontiers of research for vortex flowmeters

New Chapter Expanding History and Operating Principle

We have expanded coverage of history and operating principle, giving them their own whole chapter.

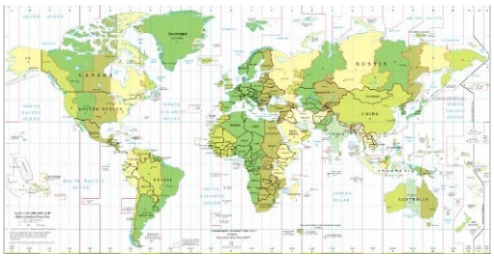
Vortex flowmeters operate on a principle called the von Karman effect. This concerns the behavior of fluids when an obstacle is placed in the path of the flow. Under the right conditions, the obstacle causes a series of alternating vortices called the von Karman street. This can be made to occur in liquid, gas, and steam flows. It can be observed in many everyday contexts such as cloud layers passing over an island or downstream of rocks in whitewater rapids.



Theodore von Karman

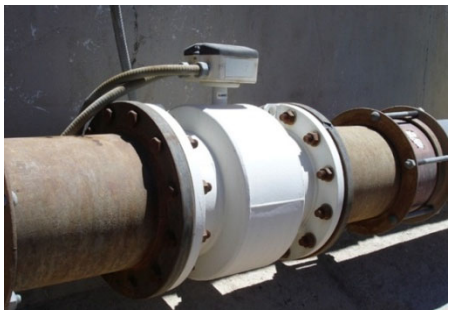
In vortex flowmeters, the obstacle is in the form of an object with a broad, flat front called a bluff body, mounted at right angles to the flowstream. Vortex flowmeters count the number of vortices generated. They use a variety of techniques for sensing the presence of a vortex. The majority of vortex flowmeters use a piezoelectric sensor, some use a capacitive sensor, and others use an ultrasonic sensor. Flow velocity is proportional to the frequency of the vortices. The flowrate is calculated by using an algorithm that essentially multiplies the area of the pipe times the velocity of the flow.

Segmentation



Geographic Segmentation

- North America (USA and Canada)
- Western Europe
- Eastern Europe/FSU (Former Soviet Union)
- Mideast/Africa
- Japan
- China
- Asia/Pacific (without Japan/China)
- Latin America (Mexico, Central and South America)



Vortex Flowmeters by Mounting Type

All three kinds of vortex flowmeters:

- Wafer
- Flanged
- Insertion

Vortex Flowmeters by Variable Type

- Single Variable
- Multivariable

Vortex Flowmeters by Transmitter Configuration

- Integral (Compact)
- Remote

Vortex Flowmeters by Bore Type

- Single-line Size Bore Reduction
- Two-line Size Bore Reduction
- Straight Through (No Reduced Bore)

Single and Multivariable Vortex Flowmeters by Fluid Type

Single and multivariable vortex flowmeters are each segmented according to the fluid type measured:

- Natural Gas
- Other Gases
- Petroleum Liquids
- Non-petroleum Liquids
- Saturated Steam
- Superheated Steam

Vortex Flowmeters by Single vs. Dual Configuration

- Single shedder bar with single sensor
- Single shedder bar with two sensors
- Dual vortex flowmeters calibrated together

Vortex Flowmeters by Flow Measurement Type

- Volumetric Flow
- Mass Flow

Vortex Flowmeters by Smart/Conventional

- Smart
- Conventional

Smart Vortex Flowmeters by Communication Protocol

- Foundation Fieldbus™
- HART
- Profibus DP
- Profibus PA
- Modbus
- Ethernet IP
- Profinet
- APL
- IO-Link
- Other

Vortex Flowmeters by Accuracy Level

- ≤0.50%
- >0.50% and ≤0.75%
- >0.75% and ≤1.00

Vortex Flowmeters by Application:

- Custody Transfer
- Conventional Gases (non-custody transfer)
- Water
- Other Liquids (except water)
- Slurries
- Hydrogen (all types)
- Renewable Gases (e.g., biogas, renewable natural gas)

Vortex Flowmeters by Line Size

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

What's in this for my company?

- See the emerging applications and where the growth is
- Understand world and regional markets
- Get to know your real competition
- Learn what other suppliers manufacture, where, and for whom
- The best information creates the best decisions

Vortex Flowmeters by Industry

- Oil & Gas
- Refining
- Chemical
- Life Sciences
- Food & Beverage
- Pulp & Paper
- Metals & Mining
- Electric Power
- Industrial Water & Wastewater
- Municipal Water & Wastewater
- Semiconductor
- District Energy
- Other

Vortex Flowmeters by Distribution Channel

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

Vortex Flowmeters by Customer Type

- End-Users
- Systems Integrators
- OEM's
- Engineers/Consultants

Worldwide Market Shares of the Leading Suppliers

This study provides company market share data in multiple categories. Worldwide market share data is provided as well as market share data for the following eight geographic regions:

- North America (USA, Canada)
- Western Europe
- Eastern Europe/FSU
- Mideast/Africa
- Japan
- China
- Asia/Pacific (without Japan, China)
- Latin America

Strategies for Success

- Discussion of market forces at work
- Product and technical comparisons
- Company analyses
- Strategic action perspectives
- Action items to compete more successfully

Company Profiles

Complete company profiles on the leading vortex flowmeter suppliers are included.
The following is a partial list of the companies profiled in this study:

- ABB
- Armstrong
- Azbil: Vortek
- Badger Meter
- Bopp & Reuther Messtechnik
- Emerson
- Endress+Hauser
- Höntzsch
- KOFLOC
- KROHNE
- OVAL Corporation
- Schneider Electric: Foxboro
- Shanghai Yinuo Instrument
- TASI: Sierra Inst.; Vortek Inst.
- Yokogawa Corporation
- Yuyao YinHuan Flowmeter Co.

Publication Date: Q4 2025

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.

Gold Partner Program

We offer companies the opportunity to become "Gold Partners" in advance of our studies. Benefits include being able to participate in determining study scope and direction, receiving updates on study progress, and a favorable discount pricing package. Contact us for more information.

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. Jesse Yoder, president and founder of Flow Research

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.

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.

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 in 2023, was followed by *Conventional Flowmeters*, also in 2023.

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 a variety of work and life experiences in both the US and abroad. She assists with research and writing, and handles many publication aspects of Flow Research studies.

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.

Dan Sparks

You can follow us on Facebook, Instagram, X, and LinkedIn (Flow Research, Inc.). We invite you to join our Flow Research LinkedIn groups

Recent and Currently Scheduled Flow Research Studies

New-Technology Flowmeter Studies

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

Conventional Flowmeter Studies

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

Cross-Technology Flowmeter Studies

Volume X: The World Market for Flowmeters, 9th Edition	www.flowvolumex.com
Volume X: Module A: Strategies, Industries, and Applications	www.flowvolumex.com
The World Market for Gas Flow Measurement, 4th 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

The World Market for Vortex Flowmeters, 8th Edition

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

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

www.FlowVortex.com