

Ultrasonic Flow Meter Market worth \$3.35 billion by 2030, growing at a CAGR of 6.69% -Exclusive Report by 360iResearch

The Global Ultrasonic Flow Meter Market to grow from USD 1.99 billion in 2022 to USD 3.35 billion by 2030, at a CAGR of 6.69%.

PUNE, MAHARASHTRA, INDIA, November 10, 2023 / EINPresswire.com/ -- The "<u>Ultrasonic</u> <u>Flow Meter Market</u> by Implementation Type (Clamp-On, Hand Held, Inline), Measurement Technology (Doppler, Hybrid, Transit Time), End-User - Global Forecast 2023-2030" report has been added to 360iResearch.com's offering.



The Global Ultrasonic Flow Meter

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Ultrasonic flow meters are non-intrusive devices that measure the velocity of liquids or gases using high-frequency sound waves and the Doppler effect to measure fluid flow velocity through a pipe or conduit. These meters provide appropriate measurements even under challenging conditions and can be used in many applications, including hazardous areas, extreme temperatures, and hostile environments. The ultrasonic flow meter market is driven by government initiatives for industrial automation, the preference for non-intrusive measuring techniques, and rising government investments in oil & gas and wastewater treatment projects. The high availability of various ultrasonic flow meters through online distribution channels is an additional advantage. However, the cost of ownership, complex installation and maintenance, and the limitations of accuracy and pipe material compatibility are major restraints. Technological advancements in ultrasonic flow meters based on AI and ML offer potential opportunities to benefit from considerations on energy efficiency.

Implementation Type: Emergence of hand-held implementation of ultrasonic flow meter for installation solution

Ultrasonic flow meters with clamp-on technology are mounted outside a pipe for non-invasive measurement without shutting down the system or disturbing the process and are ideal for retrofit applications. Inline ultrasonic flow meters are installed directly within a pipe and measure fluid velocity by measuring the time it takes for sound pulses sent from one transducer to reach another across the pipe. This type of meter is ideal for permanent installations, offering accurate and reliable readings. Wall-mounted ultrasonic flow meters are typically used for large pipes in industrial settings since they can be easily installed against a wall and measure flow rate through large pipes such as water mains. Hand-held ultrasonic flow meters are an inexpensive alternative that uses Doppler shift technology to measure liquid and gas velocity in stationary or moving pipes via portable, battery-powered units. This type of meter is suited for spot checks and measurements in challenging environments where traditional installation may not be feasible.

End-User: Proliferating use of ultrasonic flow meters across the food & beverages industry Ultrasonic flow meters are used extensively in oil and gas to measure the flow rate of certain fluids, such as fuel and natural gas. Ultrasonic flow meters assist the fluid production and transportation procedures by identifying pipeline leaks, measuring fuel consumption rates, and monitoring production levels. Ultrasonic flow meters provide reliable readings across water and wastewater management, even in highly turbulent fluids, increasing accuracy and helping to reduce operational costs. Ultrasonic flow meters are often used in the food-beverage sector to measure, monitor, and regulate the flow of liquids such as water, milk, juices, and other beverages. The ultrasonic technology provides accurate and reliable readings even in extreme temperatures or hostile environments.

Measurement Technology: Increasing demand for transit time flow meters due to their precise flow measurement advantage.

The ultrasonic flow meter industry encompasses various measurement technologies such as Doppler, hybrid, and transit time flow meters, each catering to specific application requirements. Doppler ultrasonic flow meters are ideal for measuring fluid flows containing suspended particles or air bubbles by employing the principle of the Doppler effect. This technology is used widely in various industrial applications, including chemical processing, water & wastewater treatment, and oil & gas production, due to its accuracy, non-invasiveness, and versatility. Hybrid ultrasonic flow meters combine the features of Doppler and transit-time measurement principles, providing versatile solutions for diverse applications involving clean fluids, suspended solids, or gas bubbles. Transit time ultrasonic flow meters measure the time difference between ultrasonic signals sent upstream and downstream in a fluid flow. These meters are highly accurate and suitable for measuring clean liquids with low suspended particles or gas bubble concentrations. Dual-path transit time (DPTT) flow meters utilize at least two pairs of ultrasonic transducers positioned diagonally on opposite sides of the pipe or channel containing the fluid. DPTT flow meters provide increased accuracy and redundancy compared to their single-path counterparts by incorporating multiple paths. Single-path transit time (SPTT) flow meters operate on similar principles as DPTT but utilize only one pair of ultrasonic transducers instead of multiple pairs. Although their overall functionality remains similar, SPTT devices may exhibit reduced accuracy under certain conditions due to their reliance on a single path for measurement. However, this streamlined design can offer cost benefits and ease of installation for specific applications where highly accurate measurements are not critical. Industries benefiting from transit-time meters include water supply, chemical processing, pharmaceuticals, food, and beverage production. The preference among Doppler, hybrid, or transit-time ultrasonic flow meters depends on the specific application needs related to fluid properties and accuracy requirements. Manufacturers continue to innovate their product offerings to cater to diverse industry needs while enhancing measurement performance and reliability.

Regional Insights:

The ultrasonic flow meter market in Europe, the Middle East, and the African region is rapidly evolving owing to the overgrowing expansion of end-user industries, supportive government standards for industrial safety and flow meters, and ongoing development of advanced product portfolios. Generally, ultrasonic flow meters need to meet the safety and performance requirements of IEC 61508, ISO 9000, and other standards issued by European and international (IECEx) regulatory bodies. The significant expansion of food & beverage, oil & gas, and water & wastewater treatment plants in the Asia-Pacific region has further bolstered the demand for ultrasonic flow meters. Moreover, the rising oil demand in the Asia-Pacific region is expected to create lucrative opportunities for ultrasonic flow meters in the coming years. The Americas' ultrasonic flow meter market is observing rapid advancements in product portfolios with the development of portable and non-contacting flow measurement meters for the most complex industrial environments with minimal installation complexity and costs.

FPNV Positioning Matrix:

The FPNV Positioning Matrix is essential for assessing the Ultrasonic Flow Meter Market. It provides a comprehensive evaluation of vendors by examining key metrics within Business Strategy and Product Satisfaction, allowing users to make informed decisions based on their specific needs. This advanced analysis then organizes these vendors into four distinct quadrants, which represent varying levels of success: Forefront (F), Pathfinder (P), Niche (N), or Vital(V).

Market Share Analysis:

The Market Share Analysis offers an insightful look at the current state of vendors in the Ultrasonic Flow Meter Market. By comparing vendor contributions to overall revenue, customer base, and other key metrics, we can give companies a greater understanding of their performance and what they are up against when competing for market share. The analysis also sheds light on just how competitive any given sector is about accumulation, fragmentation dominance, and amalgamation traits over the base year period studied.

Key Company Profiles:

The report delves into recent significant developments in the Ultrasonic Flow Meter Market, highlighting leading vendors and their innovative profiles. These include Azbil Corporation, Badger Meter, Inc., Baker Hughes Company, Bove Intelligent Technology Co., Ltd., Bronkhorst High-Tech BV, Coltraco Ultrasonics, Dalian Zero Instrument Technology Co., Ltd., Danfoss A/S, EESIFLO Technologies Inc., ELIS PLZEŇ a.s., Emerson Electric Co., Endress+Hauser Group, Fuji Electric Co., Ltd., General Electric Company, Honeywell International Inc., HORIBA, Ltd., Katronic AG & Co. KG, KROHNE Messtechnik GmbH, Lanry Instruments (Shanghai) Co., Ltd., Manas Microsystem Pvt. Ltd., OMEGA Engineering, Inc., Panasonic Holdings Corporation, Schlumberger Limited, Schneider Electric SE, SICK AG, Siemens AG, SONOTEC GmbH, STMicroelectronics N.V., Tek-Trol LLC, Teledyne Technologies Incorporated, Texas Instruments Incorporated, Titan Enterprises Ltd., Toshiba Corporation, Transus Instruments BV, Triton Process Automation Pvt. Ltd., WIKA Alexander Wiegand SE & Co. KG, and Xylem Inc..

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Market Segmentation & Coverage:

This research report categorizes the Ultrasonic Flow Meter Market in order to forecast the revenues and analyze trends in each of following sub-markets:

Based on Implementation Type, market is studied across Clamp-On, Hand Held, Inline, and Wall Mounted. The Inline commanded largest market share of 34.51% in 2022, followed by Wall Mounted.

Based on Measurement Technology, market is studied across Doppler, Hybrid, and Transit Time. The Transit Time is further studied across Dual-Path Transit Time and Single-Path Transit Time. The Transit Time commanded largest market share of 38.55% in 2022, followed by Doppler.

Based on End-User, market is studied across Chemical, Food & Beverage, Oil & Gas, Power Generation, and Water & Wastewater. The Food & Beverage commanded largest market share of 22.12% in 2022, followed by Oil & Gas.

Based on Region, market is studied across Americas, Asia-Pacific, and Europe, Middle East & Africa. The Americas is further studied across Argentina, Brazil, Canada, Mexico, and United States. The United States is further studied across Alaska, California, Illinois, Indiana, Louisiana, New York, Ohio, Pennsylvania, Texas, Vermont, West Virginia, and Wyoming. The Asia-Pacific is further studied across Australia, China, India, Indonesia, Japan, Malaysia, Philippines, Singapore, South Korea, Taiwan, Thailand, and Vietnam. The Europe, Middle East & Africa is further studied across Denmark, Egypt, Finland, France, Germany, Israel, Italy, Netherlands, Nigeria, Norway,

Poland, Qatar, Russia, Saudi Arabia, South Africa, Spain, Sweden, Switzerland, Turkey, United Arab Emirates, and United Kingdom. The Europe, Middle East & Africa commanded largest market share of 40.06% in 2022, followed by Americas.

Key Topics Covered:

- 1. Preface
- 2. Research Methodology
- 3. Executive Summary
- 4. Market Overview
- 5. Market Insights
- 6. Ultrasonic Flow Meter Market, by Implementation Type
- 7. Ultrasonic Flow Meter Market, by Measurement Technology
- 8. Ultrasonic Flow Meter Market, by End-User
- 9. Americas Ultrasonic Flow Meter Market
- 10. Asia-Pacific Ultrasonic Flow Meter Market
- 11. Europe, Middle East & Africa Ultrasonic Flow Meter Market
- 12. Competitive Landscape
- 13. Competitive Portfolio
- 14. Appendix

The report provides insights on the following pointers:

1. Market Penetration: Provides comprehensive information on the market offered by the key players

2. Market Development: Provides in-depth information about lucrative emerging markets and analyzes penetration across mature segments of the markets

3. Market Diversification: Provides detailed information about new product launches, untapped geographies, recent developments, and investments

4. Competitive Assessment & Intelligence: Provides an exhaustive assessment of market shares, strategies, products, certification, regulatory approvals, patent landscape, and manufacturing capabilities of the leading players

5. Product Development & Innovation: Provides intelligent insights on future technologies, R&D activities, and breakthrough product developments

The report answers questions such as:

1. What is the market size and forecast of the Ultrasonic Flow Meter Market?

2. Which are the products/segments/applications/areas to invest in over the forecast period in the Ultrasonic Flow Meter Market?

3. What is the competitive strategic window for opportunities in the Ultrasonic Flow Meter Market?

4. What are the technology trends and regulatory frameworks in the Ultrasonic Flow Meter Market?

5. What is the market share of the leading vendors in the Ultrasonic Flow Meter Market?

6. What modes and strategic moves are considered suitable for entering the Ultrasonic Flow Meter Market?

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