

# Flow meter market to grow from \$9.9 billion in 2023 to \$17.1 billion by 2033, with a 5.7% CAGR from 2024 to 2033

WILMINGTON, DE , UNITED STATES, July 30, 2024 /EINPresswire.com/ -- Flow meters are critical for many processes' operational efficiency, safety, and regulatory compliance. They help in accurate billing, process control, and resource management. The market includes various types of flow meters such as differential pressure, positive displacement, magnetic, ultrasonic, coriolis, turbine, vortex, and others. The <u>flow meter market</u> was valued at \$9.9 billion in 2023, and is estimated to



reach \$17.1 billion by 2033, growing at a CAGR of 5.7% from 2024 to 2033.

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Flow meters are used to measure the volume or mass flow rate of a fluid or gas moving through a pipe or other conduit. Flow meters find applications across a wide range of industries including water and wastewater, oil and gas, chemicals, power generation, pharmaceuticals, food and beverage, and more.

The oil and gas industry relies heavily on precise measurements of flow meters for exploration, extraction, and processing operations. Flow meters are essential for ensuring accurate flow measurement and control of oil and gas at various stages of the supply chain, from upstream production to downstream processing and distribution. As the global demand for energy increases and new oil and gas fields are developed, there is a corresponding increase in the need for flow meters to manage these processes efficiently. This growth in the oil and gas sector directly drives the demand for high-performance flow metering.

Technical limitations of flow meters also pose a restraint on the market growth. Despite advances in technology, many flow meters still face challenges such as sensitivity to external

conditions such as temperature and pressure, susceptibility to clogging by particulates, and inaccuracies in multi-phase flow measurements. These limitations deter users in industries where precision and reliability are paramount, such as in the pharmaceutical or food and beverage sectors. In addition, when flow meters fail to meet the specific needs of certain applications, customers may seek alternative measurement solutions or delay upgrading their systems, thus impeding the market growth.

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The development of smart and multivariable flow meters presents substantial opportunities for the market growth. These advanced meters feature enhanced capabilities such as real-time data monitoring, diagnostics, and the ability to measure multiple variables simultaneously, such as flow rate, temperature, and pressure. These features make them highly attractive for industries seeking to optimize their operations through better data accuracy and process efficiency. As industries continue to move towards automation and data-driven decision-making, the demand for these sophisticated flow meters is expected to rise, driving further growth in the flow meter industry.

## Segment Overview

The flow meter market is segmented into type, end user, and region. Depending on type, the market is divided into differential pressure, positive displacement, ultrasonic, turbine, magnetic, coriolis, vortex, and others. By end user, it is classified into water & wastewater, oil & gas, chemicals, power generation, pulp & paper, food & beverages, and others. Region-wise, the market is analyzed across North America, Europe, Asia-Pacific, and LAMEA.

By type, the magnetic flow meter segment dominated the flow meter market share in 2023. These meters hold a significant share due to their versatility, reliability, and cost-effectiveness. Their widespread adoption is attributed to their simplicity, long-standing presence in the market, and compatibility with various applications. While other types of flow meters offer specialized features, the widespread use and proven performance of magnetic flow meters ensure their dominance in the global market.

By end user, the power generation segment emerges as one of the dominant sector interms of flow meter market size in 2023. Power generation facilities heavily rely on precise flow measurements for efficient operation and regulatory compliance. Flow meters play a crucial role in measuring the flow of steam, water, and fuels within power plants, ensuring optimal performance of boilers, turbines, and other equipment. As the global energy demand continues to rise, driven by population growth and industrialization, the power generation sector's need for accurate flow measurement solutions remains paramount.

This reliance on flow meters to enhance operational efficiency and maintain environmental

standards solidifies the power generation industry's dominance in the global flow meter market.

Region-wise, the flow meter market trends is predominantly dominated by the Asia-Pacific region. This dominance is attributed to rapid industrialization, infrastructural developments, and significant investments in key sectors such as manufacturing, energy, and water management.

Countries such as China, India, and Japan are witnessing substantial rise in flow meter market demands due to expanding industrial activities and regulatory requirements. Moreover, Asia-Pacific's focus on sustainable development and renewable energy initiatives further drives the adoption of flow meters in sectors such as water & wastewater management and power generation.

The region's proactive approach to technology adoption, coupled with supportive government policies and investments, led to its positioning as the leading market for flow meters globally.

## **Regional Analysis**

Saudi Arabia continues to significantly impact the flow meter market through substantial investments in both the oil and petrochemical sectors as well as in water desalination projects. The investment of \$11 billion in Amiral complex expansion, a collaborative effort between Aramco and TotalEnergies, boosts the region's commitment to enhancing its petrochemical production capabilities.

This project, located at the SATORP refinery, involves extensive engineering, procurement, and construction (EPC) activities, which necessitate precise flow measurement solutions for liquids, gases, and vapors involved in petrochemical processes.

Furthermore, Saudi Arabia's investment in over 60 water projects, valued at approximately \$9.33 billion, positions it as a leading player in the water desalination market globally. This massive undertaking highlights the scale of water management projects as well as showcases the critical need for advanced flow metering technologies to ensure efficient water treatment processes, manage saline water inputs, and monitor distribution networks.

India's ambitious expansion in its refinery and petrochemical sectors presents the flow meter market opportunities. Major projects such as the expansion of the Panipat Refinery, integration of petrochemical and lube production at the Gujarat Refinery, and capacity expansions at the Barauni and Paradip refineries, all require sophisticated flow measurement systems to monitor and control various fluid movements accurately.

These expansions aim to enhance crude processing capabilities and increase the production of essential chemicals such as Para Xylene (PX) and Purified Terephthalic Acid (PTA), as well as downstream products like Mono Ethylene Glycol (MEG).

Key Findings of the Study

By type, the magnetic flow meter segment dominated the market accounting for more than onefourth of the market share in 2023.

By end-user, the water and wastewater segment dominated the market accounting for more than one-fourth of the market shares in 2023.

By region, Asia-Pacific is expected to dominate the market during the forecast period.

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