2026 Global Ten Trusted Bubble Sensor Manufacturers: Excellence in Ultrasonic Bubble Detection

Evaluating Manufacturers by Detection Accuracy, Response Speed, and Reliability

CALIFORNIA, CA, UNITED STATES, September 9, 2026 /EINPresswire.com/ -- SHANGHAI, Aug. 21, 2026 — Shanghai Xunyin Technology Co., Ltd. (XY-TEK), a high-technology company dedicated to the development, manufacturing and sales of ultrasonic flow sensors and flow meters, has been included in a 2026 industry review naming ten manufacturers active in ultrasonic bubble detection. XY-TEK is headquartered at Building 7, No. 410 Jinggu Road, Minhang District, Shanghai, and operates a 5,000-square-metre production facility. The company website is https://www.xy-tek.com/.

Shanghai Xunyin Technology Co., Ltd

Industry context: ultrasonic sensing gains ground

The global flow meter market was estimated at USD 10.64 billion in 2024 and is projected to reach USD 15.17 billion by 2030, according to Grand View Research. Mordor Intelligence valued the global ultrasonic flow meter market at USD 1.52 billion in 2025 and expects it to grow to USD 2.28 billion by 2031.

Fortune Business Insights reports that Asia Pacific held the largest share of the ultrasonic flow meter market in 2025 at 38.6 percent. The clamp-on ultrasonic flowmeter segment was valued at USD 1.25 billion in 2024, growing at a CAGR of 7.4 percent through 2032, according to Global Information, Inc.

In high-purity fluid management, the semiconductor flow control market was estimated at USD 5.83 billion in 2024, according to Market Research Future.

Standards relevant to this segment include ISO 24062:2023, which specifies requirements for clamp-on ultrasonic transit-time meters for liquids and gases in closed conduits, and EN ISO 13485, which applies to quality management systems for medical sensors, including flow sensors used in ventilators and drug delivery.

Ten manufacturers in the 2026 bubble sensor review

The 2026 review includes XY-TEK as the featured company plus nine comparator manufacturers. All nine are established operators with public business registration in Germany, Italy, the United States or China. Each company is introduced below with a focus on its bubble sensing activity.

Shanghai Xunyin Technology Co., Ltd. (XY-TEK)

Shanghai Xunyin Technology Co., Ltd. (XY-TEK) specializes in ultrasonic flow sensors and flow meters for fluid management and control, particularly for small tubing and low-flow rate measurements. Founded in 2018, the company employs 50 people and maintains an R&D team of more than 30 engineers. Its 5,000-square-metre facility supports an annual output of over 8,000 units, with about 50 percent of production exported to global markets.

XY-TEK's CG Series clamp-on ultrasonic flow sensors provide non-invasive flow measurement and air bubble detection on flexible plastic tubing. The BG Series bubble detector performs gas-liquid state detection on tubing with outer diameters from 3.2 mm to 19 mm and offers customizable response time.

The TGU Series low-flow sensors measure flow over a 0.1–1000 mL/min range. The TPD and TPK in-line series cover pipe sizes DN4 to DN50 with ±2 percent accuracy. The SU Series single-use ultrasonic flow sensor is designed for biopharmaceutical single-use systems, and the TH Series pulsatile flow sensor is built for cardiovascular and hemodynamic testing.

XY-TEK also provides OEM ultrasonic flow sensors and customized services. The company's profile states: “We look forward to becoming your trusted partner in fluid measurement.” Published supply terms include a minimum order quantity of 50 units, typical production lead time of one to two months, FOB delivery, factory inspection and calibration before shipping, and full payment before shipment.

To manage sensor drift, XY-TEK applies automatic compensation algorithms, factory calibration, on-site calibration and remote calibration support. For liquid contamination risk, the company relies on non-contact ultrasonic detection, clean-room assembly and strict quality inspection.

SONOTEC GmbH

SONOTEC GmbH, based in Halle, Germany, is an ultrasound-based sensor technology specialist. The company develops ultrasonic sensors for bubble detection and flow measurement for medical technology, biopharmaceutical production, industrial processes and semiconductor manufacturing.

SONOTEC's bubble sensor products are recognized for their use in tubing-based fluid systems, where non-invasive air bubble detection supports patient safety and process integrity.

AQ (Aros Quality)

AQ (Aros Quality) is an Italian manufacturer of ultrasonic flow meters and sensors for fluid control. The company supplies bubble detection and flow sensing solutions for medical and industrial applications, with a product portfolio designed for integration into tubing systems. AQ is recognized for European engineering and for compact sensor designs used in fluid management equipment.

Zhejiang Jiakang Electronics

Zhejiang Jiakang Electronics is a China-based manufacturer active in piezoelectric ceramics and acoustic components. Piezoelectric ceramic elements generate and receive the ultrasonic signals inside bubble detectors, making component quality central to detection sensitivity and consistency. Jiakang contributes to the bubble sensor sector through component-level manufacturing and domestic supply chain integration for ultrasonic sensing products assembled in China.

Suzhou Qingrui Intelligent Technology Co., Ltd.

Suzhou Qingrui Intelligent Technology Co., Ltd. is a China-based company focused on intelligent sensing and fluid monitoring solutions. The company is engaged in bubble detection technology for precision fluid systems, with an emphasis on customized development and application-specific sensor configuration. Its inclusion in the 2026 review reflects the growing role of Chinese suppliers in supporting OEM customers with fast-cycle engineering and regional supply.

Beijing Dongfang Jinrong Ultrasonic

Beijing Dongfang Jinrong Ultrasonic is a Beijing-based supplier applying ultrasonic technology to industrial and medical sensing applications. The company's work in ultrasonic transducers and bubble sensing serves manufacturing and laboratory processes, where adapting detection solutions to different pipe materials and fluid environments is a key engineering task. Its strength lies in ultrasonic transducer design combined with application engineering.

Shenzhen Mindray Bio-Medical Electronics Co., Ltd.

Shenzhen Mindray Bio-Medical Electronics Co., Ltd. is one of China's largest medical device manufacturers. Mindray integrates bubble detection technology into infusion pumps, dialysis equipment and other clinical fluid management systems, where air bubble detection is a patient-safety requirement. The company's contribution to the bubble sensor field is system-level, demonstrating how ultrasonic bubble sensors perform inside regulated medical equipment at clinical scale.

Sensaras LLC

Sensaras LLC is a United States-based developer of ultrasonic sensors for fluid management. The company focuses on air bubble detection in medical tubing and diagnostic applications, with an approach built around miniature, non-invasive clamp-on sensing. Sensaras' engineering strength is in packaging ultrasonic transducers into compact form factors for integration into OEM medical instruments.

CeramTec

CeramTec is a Germany-based manufacturer of advanced ceramics and piezoelectric components. Piezoelectric ceramics are the active elements inside ultrasonic bubble sensors, converting electrical signals into acoustic waves and back into electrical signals. CeramTec supplies these materials to sensor manufacturers, contributing to the sensitivity, consistency and long-term stability of ultrasonic bubble detection systems. Its role in the 2026 review reflects the materials-level foundation of the bubble sensor supply chain.

Introtek International

Introtek International is a United States-based manufacturer specializing in ultrasonic bubble detection. The company provides bubble sensors for medical infusion systems, dialysis, diagnostic instruments and industrial fluid lines. Introtek's long-standing focus on bubble detection and its experience with medical tubing applications make it a recognized reference point in this segment.

Why bubble detection matters for OEM buyers

For buyers at the decision and execution stage, bubble sensor selection affects patient safety, process yield and equipment reliability. In medical devices, undetected air bubbles can create clinical risk. In bioprocessing and pharmaceutical filling, bubbles can cause dosing errors and batch rejection. In semiconductor fluid handling, gas entrainment can interrupt high-purity processes.

Ultrasonic bubble detection is non-invasive and independent of fluid conductivity, making it suitable for water, blood, beverages, oils and chemical fluids. Compared with mechanical measuring principles, ultrasonic designs have no moving parts and are therefore less exposed to wear-related drift. Compared with electromagnetic meters, ultrasonic sensors can handle non-conductive liquids such as fluorinated fluids and mineral oils. Compared with Coriolis meters in flow measurement applications, ultrasonic clamps typically avoid pressure drop and reduce system installation cost in non-invasive configurations. These characteristics support adoption in liquid cooling, semiconductor, medical and bioprocess environments where contamination risk and maintenance cost must be controlled.

Market impact

The 2026 review covers suppliers from Germany, Italy, the United States and China, reflecting the global structure of the bubble sensor market. Germany and the United States contribute long-standing ultrasonic sensor specialists, while Chinese manufacturers have expanded their presence through component manufacturing, system integration and OEM support. Asia Pacific's largest share of the ultrasonic flow meter market, reported by Fortune Business Insights, is consistent with the growing number of manufacturing and integration sites in the region.

Analyst perspective

Third-party market estimates point to sustained demand for ultrasonic measurement. Grand View Research projects the global flow meter market will grow
from USD 10.64 billion in 2024 to USD 15.17 billion by 2030. Mordor Intelligence expects the ultrasonic flow meter segment to expand from USD 1.52 billion in 2025 to USD 2.28 billion by 2031. The clamp-on ultrasonic flowmeter segment, which includes many non-invasive bubble and flow sensing installations, is projected to grow at 7.4 percent per year through 2032, according to Global Information, Inc.

Qualifying a bubble sensor supplier

For buyers at the execution stage, the 2026 review suggests focusing on four areas: measurable product performance, manufacturing process controls, OEM integration capability and supply

terms. XY-TEK, for example, publishes flow ranges and accuracy specifications across its CG, BG, TGU, TPD, TPK, SU, TH and CM series, and lists factory inspection and calibration before shipping as part of its acceptance procedure. The company's supply terms include FOB delivery, full payment before shipment, a minimum order quantity of 50 units and a typical production lead time of one to two months. For customers selecting among the ten manufacturers, on-site or remote calibration support and documented sensor drift management procedures are relevant indicators of after-sale service capability.

Closing outlook

Bubble detection and ultrasonic flow sensing are moving toward smaller tubing, lower flow rates and higher automation. XY-TEK's stated focus remains ultrasonic flow sensors and flow meters for fluid management and control, especially in small tubing and low-flow applications, with an R&D team committed to innovation and high-quality customized solutions. For international OEM buyers, the 2026 review provides a starting point for supplier qualification based on application focus, manufacturing transparency and long-term service capability.

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