

Gas Analyzer - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 120 pages | Mordor Intelligence

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Report description:

The Gas Analyzer Market size is estimated at USD 0.94 billion in 2024, and is expected to reach USD 1.33 billion by 2029, growing at a CAGR of 7.08% during the forecast period (2024-2029).

The need for a longer lifespan, maintenance-free products, and cost competitiveness are the primary needs of the gas analyzer market. In addition, high price sensitivity, demand for highly reliable products, and a higher degree of innovation are expected to influence the market studied during the forecast period.

Gas analyzers are analytical devices designed to measure the quality or concentration of a specific gaseous compound within a mixture of multiple gases. These devices are used across various industries, including manufacturing, agriculture, and waste management, to help the users keep an eye on gas levels in their operations to ensure the numbers are within the acceptable range for the quality of products and processes and the safety of employees/people.

The continued growth of the market is anticipated owing to the increase in shale gas and tight oil explorations activities as these analyzers can help in preventing corrosion and gas leakage in natural gas pipeline infrastructure, tighter safety control regulations about the emission of harmful gases across various industries also drive the growth of the studied market.

The proliferation of handheld devices has also led to driving innovations in the field of gas analyzers, which has considerably widened the scope of application across multiple end-user segments. Some prominent companies are developing the gas analyzer segment with clinical assays, environmental emission control, explosive detection, agricultural storage, shipping, and workplace-hazard monitoring applications.

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For instance, in January 2022, SuperFlash LLC, a manufacturer of compressed gas safety and management, announced the launch of their latest mobile and compact gas analyzer named GA300. According to the company, this new product allows for precision analysis of gas mixtures and provides further advantages such as the ability to record, document, and integrate into the quality assurance process. Furthermore, the GA300 utilizes state-of-the-art sensor technology and software solutions to perform exact analysis using the thermal conductivity principle.

Additionally, safety awareness is rising across various end-user segments due to the increasing number of fatal accidents related to gas leakages and explosions. This leads to many worker's associations and regulatory authorities insisting on using sensor device components equipped with gas detectors and analyzers.

Moreover, according to a report by WHO on Ambient (outdoor) air pollution, almost 99% of the global population lived in areas where air quality standards set by the WHO were not met. The growing focus of the governments on improving the air quality index (AQI) will also drive the adoption of gas analyzers across various verticals globally.

However, gas analyzers' design and operational complexities are among the major restraining factors for the studied market's growth. A lower awareness among developing regions also challenges the studied market's growth.

Although the industry, in general, was negatively impacted due to widespread lockdown imposed across various countries, major end-user industries such as oil & gas, chemical, and petrochemical witnessed a slowdown owing to reduced demand which had a similar impact on the demand for gas analyzers. However, during the pandemic, the demand for blood gas analyzers increased significantly as they provided valuable measures of blood oxygenation, acid-base balance, and the lungs' efficacy in gas exchange. Moreover, the post-pandemic period is anticipated to drive the studied market's growth as the demand is expected to gain traction across all the major end-user industries.

Gas Analyzer Market Trends

Oil and Gas Segment to Hold Significant Share

Protecting a pressurized pipeline from leaks and corrosion while minimizing downtime are some of the key responsibilities in the oil and gas industry. According to NACE (National Association for Corrosion Engineers), corrosion costs about USD 1.6 billion to the global oil and gas industry. Mitigating such expensive costs is among the major propellers for adopting gas analyzers for preventive actions in the industry.

For instance, a gas analyzer helps monitor leaks, extending the life of pipeline systems by effectively detecting the presence of such gases. Additionally, the oil and gas industry is moving toward the TDL technique (Tunable Diode Laser), which enables the reliability of detecting with precision because of its high-resolution TDL technique and avoids interferences common with traditional analyzers.

According to OPEC, global oil demand is expected to reach 101.9mb/d, an increase of about 2 md/d above current levels. As the detection and monitoring of hydrogen sulfide and carbon dioxide are pertinent in natural gas processing, the increasing oil and gas demand and consumption are estimated to drive the adoption of gas analyzers globally.

Furthermore, oxygen in the gas sample determines leakage in the pressurized pipeline system. The continuous and undetected leak may worsen the situation while impacting on operational flow efficiency of the pipeline. Moreover, the presence of gases, such as hydrogen sulfide (H₂S) and carbon dioxide (CO₂), in the pipeline system reacting with oxygen can combine and form a corrosive and destructive mixture that can deteriorate the pipeline wall inside out.

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The alliances formed by the companies, organizations, and countries aim to reduce methane emissions within the oil and gas industry. According to the United Nations, 24% of all manmade methane emissions are caused by leakages in oil and gas production systems. Many countries are joining the global alliance to commit to methane emission reduction targets of at least 45% by 2025 and 60%-75% by 2030 or to a 'near-zero' methane intensity target.

Asia-Pacific to Witness a Significant Growth

Asia-Pacific is the key region to register capacity growth in the oil and gas industry in recent years. According to EIA, various refining projects are scheduled in the region between 2022 and 2023, through which 1,120 thousand barrels per day of refining capacity will be added by China alone.

The demand for low-cost, high-precision products across developing countries, such as India, China, and Japan, is expected to boost the market's growth. Furthermore, the increased enforcement of government regulations from China, Japan, and South Korea has encouraged companies to invest in sophisticated gas analyzers. Thus, companies are willing to invest in safety systems rather than facing disasters.

Government agencies in the region have been taking proactive measures to enforce the use of gas analyzers in potentially hazardous locations. They are a vital cog for triggering emergency procedures across industries in case of an abnormal rise in the concentration of gases actively used to monitor the air quality and detect combustible gases, majorly in the chemical, industrial, medical, and automotive industries.

Mining is one of the challenging industries regarding worker safety. Several hazardous gases are the products of mining and mineral processing that must be continuously monitored. India's mining sector is extremely valuable and growing faster as the industry is heavily regulated, and many industries rely on this industry for essential sources. The propelling demand for portable gas analyzers in the mining industry drives market growth.

Furthermore, gas analyzers are also being used to analyze the pollution levels across a city. In countries like China and India, pollution levels are at an all-time high, leading to gas analyzers being deployed to monitor and control pollution levels. For instance, according to a report by the University of Chicago, 99% of China's population lives in areas where the annual average of particulate pollution exceeds the WHO guideline. As the industrial sector in countries like India, China, and Japan is developing faster, this factor is expected to drive the demand for gas analyzers.

Gas Analyzer Industry Overview

The Global Gas Analyzer Market is very competitive owing to the presence of several players. Key market players are focusing on further expanding their consumer base globally. Some significant market players include ABB Ltd, Honeywell International Inc., Emerson Electric Co., Thermo Fisher Scientific Inc., and many more. These companies are adopting innovative strategies to increase their market share by introducing new products and forming multiple partnerships to earn a competitive edge during the forecast period.

In January 2023, QED Environmental Systems Inc., a manufacturer of environmental products, launched the Landtec Biogas 3000 fixed gas analyzer, a next-generation system offering continuous monitoring of the complete gas production process. According to the company, the self-contained, compact Biogas 3000 system offers cost-effective online monitoring, ideal for biogas monitoring, anaerobic digestion, and landfill gas monitoring applications.

In December 2022, CO2Meter Inc., a gas detection and safety monitoring solutions provider, launched its new portable CO2 welding gas analyzer. Designed to verify correct CO2 concentrations in welding gas mixes, the CM-1650 gas analyzer measures

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blended or mixed cylinder gas at a mixer to ensure the accuracy of the gas and purity of the welds.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
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