

Volatile Organic Compound Gas Sensor - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 117 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License \$4750.00
- Team License (1-7 Users) \$5250.00
- Site License \$6500.00
- Corporate License \$8750.00

Report description:

The Volatile Organic Compound Gas Sensor Market is expected to register a CAGR of greater than 7% during the forecast period.

Volatile organic compound (VOC) gases contribute to air pollution in the environment; few of the VOC gases are proven to be disease biomarkers. The detection of VOC gases in the air has received considerable attention, becoming increasingly important in the development of leak detection devices. VOC sensors are used in air monitoring devices to observe emission levels due to their unique properties, such as high sensing performance, portability, and compact size.

Key Highlights

- Additionally, growing awareness about indoor and outdoor air quality is driving the demand in industrial and private environmental monitoring. This factor is expected to create opportunities for the market over the forecast period.
- Governmental agencies have been taking proactive measures to enforce the use of sensors in potentially hazardous locations, where they are seen as a vital cog for triggering emergency procedures across industries in case of an abnormal rise in the concentration of gases that are actively used for monitoring the air quality and detection of combustible gases majorly in the chemical, industrial, medical, and automotive industries. For instance, the increasing imposition of regulations and policies by government associations, such as the U.S. Environmental Protection Agency and Mine Safety and Health Administration, has resulted in the large-scale adoption in various industries.
- The growth of the water and wastewater treatment industry is a crucial factor driving the expansion of the VOC gas market. The wastewater comprises of pathogens such as viruses, bacteria, prions, and parasitic worms, organic particles such as paper fibers, hairs, food, feces, vomit, plant material, pharmaceuticals, gases such as carbon dioxide, methane, hydrogen sulfide, and other hazardous substances which act as Volatile Organic Compounds (VOCs) present in wastewater.
- In May 2019, The Delhi Jal Board (DJB) Wednesday approved setting up of a new sewage treatment plant (STP) at OkhlaThe Delhi

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Jal Board (DJB) Wednesday approved setting up of a new sewage treatment plant (STP) at Okhla that would be capable of treating 124 million gallons of wastewater per day and will come up at the cost of Rs 1,161 crore in three years. Such instances are expected to fuel market growth over the forecast period.

- The VOC gas sensors are increasingly being used in the oil and gas industry to detect leaks on drilling platforms (upstream), pipelines, trailers and tanker vessels (midstream), and refining and storage facilities (downstream). With the industry poised to grow due to the increased consumption of oils and natural gas in the sector, the market is poised to witness growth over the forecast period.

- However, the COVID-19 outbreak that has been ravaging various countries has adversely affected the overall sensor industry. The continued operations may become increasingly complicated due to workforce shortages, as employees are infected by COVID-19 and the practical difficulties in many cases of social distancing.

Volatile Organic Compound Gas Sensor Market Trends

Oil & Gas Industry to Drive the Market Growth

- The increasing initiatives by the government and the related regulatory bodies to meet the growing energy demand are increasingly launching new projects to accomplish the objective. Since the energy sector is prone to the emission of volatile gases, it would propel such bodies to install solutions such as VOC gas sensors.

- In February 2020, ADNOC announced two contracts for the construction of offshore facilities for the Dalma Gas Development Project to Petrofac Emirates LLC. The two EPC contracts have an estimated value of over AED 6.06 billion and are expected to be completed by 2022. Such instances are expected to boost the adoption of the technology over the forecast period.

- The increasing demand for fuels and natural gases have propelled the players in the region to either boost their production or to look for expansion of their production capabilities. Such instances are expected to fuel the adoption of the VOC gas sensors over the forecast period.

- According to the BP Statistical Review of World Energy of 2019, Global oil production rose by 2.2 million b/d. Almost all of the net increase was accounted for by the US, with their growth in production (2.2 million b/d) a record for any country in any year. Elsewhere, production growth in Canada (410,000 b/d) and Saudi Arabia (390,000 b/d) was outweighed by declines in Venezuela (-580,000 b/d) and Iran (-310,000 b/d).

- However, the challenge from the COVID-19 outbreak for oil and gas companies has been heightened by the oil-price collapse and continuing price uncertainty. In response, the Opec+ group announced the world's largest-ever supply cut deal, by 10m barrels per day. Moreover, many industrial operations across the world have been shut down owing to the outbreak.

North America to Hold Major Market Share

- The region's governments have underlined the regulatory framework and required/mandated infrastructure for utility companies to function at optimal levels. Utilities primarily run the base of civilization, and society needs this basic need to function on more than just a financial level, making it a safe bet for volatile times in the market. Due to the continuous involvement of the government, the measures to safeguard the workplace need to be handled with the utmost importance. This provides a huge market opportunity for gas sensor manufacturers.

- For instance, as of January 2020, the DOE selected 16 projects to receive nearly USD 25 million in federal funding for cost-shared projects to advance natural gas infrastructure technology development. One of the major areas where cost is associated belongs to retrofits. The developments across building a low-cost retrofit technology, specifically to an air management system, integrated sensors, and a cloud-connected control system, are expected to reduce emissions.

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- On the other hand, The region witnessing a few incidents in the oil and gas domains has confirmed the need for meticulous monitoring of the transportation of volatile fuels. The 2010 gas explosion in San Bruno, California, revealed that PG&E failed to have appropriate detection equipment in place, but the utility was negligent across periodic testing of its transmission lines.
- Different modalities, including temperature, pressure, vibration, and strain/stress, are required to sense and monitor continuously to guarantee the integrity of oil and gas production, storage, and transport infrastructure onshore and offshore.
- Also, with the safety and reliability of oil production to be assured, multiple advanced sensing techniques have been developed to cater to the specific sensing requirements under high-pressure-high-temperature (HPHT) environments across oil and gas applications in recent decades.

Volatile Organic Compound Gas Sensor Industry Overview

The competitive rivalry in the plastic processing machinery market is moderately consolidated owing to the presence of some key players such as ABB and Alphasense. Through research and development, these companies have gained a competitive advantage by continually innovating their offerings. Through strategic partnerships, mergers, and acquisitions, these players have gained a strong footprint in the market and can further develop the technology.

- March 2020: ABB limited agreed to acquire Cylon Controls Ltd for enhancing the ABB Electrification business position in the commercial buildings segment. Cylon consists of approximately 100 employees and offers to build automation and HVAC control solutions.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

Table of Contents:

1 INTRODUCTION

1.1 Study Assumptions and Market Definition

1.2 Scope of the Study

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

4 MARKET INSIGHTS

4.1 Market Overview

4.2 Market Drivers

4.2.1 Stringent Government Regulations to Control VOC Emissions

4.2.2 Increasing Use of Wireless and Smart Sensing Technology

4.3 Market Restraints

4.3.1 Interopereability Issues

4.4 Industry Attractiveness - Porter's Five Force Analysis

4.4.1 Threat of New Entrants

4.4.2 Bargaining Power of Buyers

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 4.4.3 Bargaining Power of Suppliers
- 4.4.4 Threat of Substitute Products
- 4.4.5 Intensity of Competitive Rivalry
- 4.5 Industry Value Chain Analysis
- 4.6 Impact of COVID-19 on the Market

5 MARKET SEGMENTATION

- 5.1 Geography
 - 5.1.1 North America
 - 5.1.2 Europe
 - 5.1.3 Asia
 - 5.1.4 Australia and New Zealand
 - 5.1.5 Latin America
 - 5.1.6 Middle East and Africa

6 COMPETITIVE LANDSCAPE

- 6.1 Company Profiles
 - 6.1.1 EcoSensors
 - 6.1.2 SGX Sensortech Limited
 - 6.1.3 GfG Europe Ltd.
 - 6.1.4 Microjet Technology Co., Ltd.
 - 6.1.5 Renesas Electronics Corporation
 - 6.1.6 Aeroqual Limited
 - 6.1.7 Alphasense
 - 6.1.8 ABB Ltd.
 - 6.1.9 Ion Science Ltd

7 INVESTMENT ANALYSIS

8 FUTURE OF THE MARKET

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Volatile Organic Compound Gas Sensor - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 117 pages | Mordor Intelligence

To place an Order with Scotts International:

- ☐ - Print this form
- ☐ - Complete the relevant blank fields and sign
- ☐ - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	\$4750.00
	Team License (1-7 Users)	\$5250.00
	Site License	\$6500.00
	Corporate License	\$8750.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2026-02-26
		Signature	

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com



Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com
www.scotts-international.com