

Vibration Monitoring Market Size, Share & Trends Analysis Report By Component (Hardware, Software, Services), By Process (Online, Portable), By Industry (Oil & Gas, Power Generation, Mining & Metals, Automotive, Aerospace), By Region And Segment Forecasts, 2025 - 2030

<https://marketpublishers.com/r/V799E4975F1CEN.html>

Date: April 2025

Pages: 120

Price: US\$ 4,950.00 (Single User License)

ID: V799E4975F1CEN

Abstracts

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Vibration Monitoring Market Size & Trends

The global vibration monitoring market size was estimated at USD 1,702.2 million in 2024 and is expected to grow at a CAGR of 7.3% from 2025 to 2030. This growth is primarily driven by the growing demand for predictive maintenance across various industrial sectors, including manufacturing, oil and gas, energy, and transportation. Organizations are increasingly focused on reducing unplanned downtime and lowering operational costs, leading to the implementation of vibration monitoring solutions that help identify equipment faults at an early stage. In addition, the shift away from traditional maintenance methods towards condition-based monitoring is fueled by the need to maximize machinery lifespan and enhance workplace safety. Regulatory pressures to ensure operational safety in high-risk industries are also encouraging companies to invest in efficient asset health monitoring systems.

A significant trend in the global market is the integration of wireless technologies and IoT sensors within vibration monitoring systems. These advancements enable real-time, remote monitoring of critical equipment and facilitate instantaneous data transmission

for analysis. This capability is particularly vital for industries that manage dispersed assets or operate in hazardous conditions. The combination of wireless connectivity and cloud-based analytics allows organizations to reduce manual inspections, improve response times to equipment faults, and make more informed maintenance decisions through automated diagnostics and alerts.

Another emerging trend is the incorporation of machine learning and artificial intelligence (AI) into vibration monitoring. These technologies are being utilized by analytics platforms to provide capabilities for predictive fault detection and anomaly identification. Unlike traditional systems that rely solely on threshold-related alarms, AI models can detect subtle variations in vibration patterns that may indicate early stages of equipment degradation. This predictive capability helps organizations schedule maintenance effectively, prevent unnecessary shutdowns, and optimize repair tasks. AI-based systems are gaining traction in industries such as automotive, energy, and aerospace, where precision and uptime are critical.

Major players in the vibration monitoring industry are heavily investing in product development, partnerships, and acquisitions to expand their offerings. For example, FLIR Systems has introduced multi-sensor condition monitoring kits that combine vibration and thermal analysis, while Megger acquired Diagnostic Solutions Limited to enhance its condition monitoring services. KCF Technologies has partnered with SEAM Group to integrate asset monitoring with security services. These strategic moves reflect an industry-wide trend of companies striving to provide integrated solutions that combine hardware, software, and analytics to drive digital transformation in asset maintenance.

Global Vibration Monitoring Market Report Segmentation

This report forecasts revenue growth at global, regional, and country levels and provides an analysis of the latest technology trends in each of the sub-segments from 2018 to 2030. For this study, Grand View Research has segmented the global vibration monitoring market report based on component, process, industry, and region:

Component Outlook (Revenue, USD Million, 2018 - 2030)

Hardware

Software

Services

Process Outlook (Revenue, USD Million, 2018 - 2030)

Online Vibration Monitoring

Portable Vibration Monitoring

Industry Outlook (Revenue, USD Million, 2018 - 2030)

Oil & Gas

Power Generation

Mining & Metals

Chemicals

Automotive

Aerospace

Food & Beverages

Other

Regional Outlook (Revenue, USD Million, 2018 - 2030)

North America

U.S.

Canada

Mexico

Europe

UK

Germany

France

Asia Pacific

China

Japan

India

South Korea

Australia

Latin America

Brazil

Middle East & Africa

Saudi Arabia

South Africa

UAE

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