Smart Motors - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The smart motors market was valued at USD 2.759 billion the previous year and is expected to register a CAGR of 6.21%, reaching USD 3.834 billion over the forecast period. Motors can be combined with intelligent motor controls and advanced communication capabilities to improve performance and operational efficiencies. Smart motors allow predictive machine diagnosis, thus, resulting in reduced downtime through process optimization. These motors provide energy efficiency, improved performance,ncy, improved performance, reliability, and maintenance capabilities compared to traditional electric motors, making them an ideal choice for commercial and industrial applications.

Key Highlights
-The rising global concern about saving energy costs by improving energy efficiency has been driving the adoption of smart motors in various high energy-intensive industries such as industrial manufacturing, automotive, consumer electronics, oil & gas, aerospace & defense, and mining, among others. Furthermore, growing stringent regulations regarding carbon emissions by regulatory agencies such as the European Union and the US Environmental Protection Agency (EPA) are among the key factors projected to fuel the market demand for smart motors during the forecast period.
-For instance, according to the United States Environmental Information Agency (EIA), global industrial energy consumption is estimated to grow from 241.10 quadrillion British thermal units in 2020 to 361.4 quadrillion British thermal units by 2050. Moreover, in 2021, the industrial sector accounted for 35% of total US end-use energy consumption and 33% of total US energy consumption. According to IEA, the industrial sector accounted for 37% (166 EJ) of global energy use in 2022.
-As advanced control features are crucial features required in advanced robotics and automation solutions used in the industrial sector, the demand for smart motors is increasing, with industries across various sectors transitioning to automated industries. Apart from the factors and solutions such as robotics and automated equipment help industries drive production efficiency and capacity while reducing production time, labor shortage, rising labor cost, and the growing demand for energy-efficient solutions

are other major factors encouraging the industries to opt for such solutions.
-A notable impact of the global outbreak of COVID-19 was observed on the market as various containment measures taken by governments across multiple countries, such as the implementation of lockdown, significantly impacted the growth of the industrial sector. As a result, a slowdown was witnessed in the studied market, especially during the initial phase. However, with significant end-user industries resuming operations at total capacity, the demand for smart motors is anticipated to grow in the post-covid period.

Smart Motors Market Trends

Oil and Gas Segment Holds Major Market Share

- In the current market scenario, oil and gas industries face multiple issues related to business performance, the total cost of operation (TCO), energy efficiency, and safety in upstream and downstream processes. In addition to producing oil and gas, the industry also uses oil and gas in its operations, and this can significantly reduce the industry's impact.
- As traditional hydrocarbon energy resources are depleted, energy production from ever more sensitive and difficult environments is becoming increasingly complex. Smart motor systems are observing an unprecedented adoption rate by the oil and gas industry as it focuses efforts on energy efficiency. The industry strives to ensure the availability of oil and gas while addressing energy security and environmental concerns cost-effectively.
- Oil and gas companies use motion control systems to improve their processes, and many of these systems employ smart motors. Further, low-voltage motion control centers are being used in the oil and gas refineries for centralized control. This augments the demand for smart motors in the studied segment.
- According to BP (British Petroleum) company, global natural gas production amounted to approximately 4.1 trillion cubic meters and 4.05 trillion cubic meters in 2023 and 2021. Further, according to Aramco, its crude oil production volume of 11.5 million barrels per day in 2022 increased from 9.22 million barrels per day in 2021.
- Furthermore, according to OPEC, the global demand for crude oil (including biofuels) in 2022 amounted to 99.57 million barrels per day, and it is projected to increase to 101.89 million barrels per day in 2023. The rising demand for oil and gas during the forecast period would boost the penetration of smart motors. Further, the increase in oil and gas production activities is anticipated to drive the growth of the studied market significantly.

Asia Pacific is Expected to Hold Significant Market Share

- Asia-Pacific is one of the most significant markets for the market studied. The region offers massive growth potential to the studied market vendors, owing to the growing adoption of automation across the various end-user industries in the region. The energy concern in the region is also increasing the adoption of low-voltage electrical equipment and motivating many firms to develop energy-efficient and compact electrical equipment and devices, further driving the smart motor growth.
- Further, initiatives like the 'Make in India' program places India on the world map as a manufacturing hub and give global recognition to the Indian economy. The Make in India campaign has bolstered multiple new launches in industrial robots in the country. Notably, India's industrial automation sector has been revolutionized by the combination of digital and physical aspects of manufacturing to deliver optimum performance. Further, the focus on achieving zero waste production and a shorter time to acquire the market has augmented the growth of the market.
- The massive shifts in manufacturing due to Industry 4.0 and the acceptance of IoT to advance production, with technologies to achieve greater production capacity and output, have propelled the demand for smart motors in the market. Also, the additional drive benefits, such as minimized maintenance requirements and improved process control, fuels adoption.

- The Chinese government launched a five-year plan to increase smart manufacturing and robotic process automation (RPA) in the country's industrial sector in 2022. A group of sixteen state-funded industry committees was formed to rapidly push the manufacturing industry into the future, driving the usage of electric motors. Furthermore, by strengthening robotics, artificial intelligence (AI), and cloud data technology research capabilities, the country focuses on developing technologies that can provide it greater autonomy and help the industrial sector grow further.
- Over the years, China has been focusing on high-end manufacturing industries, power utilities, and oil & gas industries, boosting the usage of both low and medium-voltage drives in the country. For instance, the Chinese government's ambitious 'Made in China 2025' initiative, partially inspired by Germany for Industry 4.0, aims to boost the country's competitiveness in the manufacturing sector.
- Furthermore, during the past few decades, China has witnessed remarkable growth, especially in the industrial segment, and is widely regarded as the global manufacturing hub. The presence of many industries wherein a wide variety of manufacturing/process equipment is used drives the demand for smart motors in the region. Furthermore, recent initiatives to transform the local industry through a higher adoption of automation and other advanced technologies will drive the studied market demand.

Smart Motors Industry Overview

The smart motors market is highly fragmented, with the presence of major players like Safran Electrical & Power, Siemens AG, Nanotec Electronic GmbH & Co. KG, Turntide Technologies Inc., and Schneider Electric SE. Players in the market are adopting strategies such as partnerships and acquisitions to enhance their product offerings and gain sustainable competitive advantage.

In July 2023, Nidec Corporation announced the acquisition of TAR, LLC d/b/a Houma Armature Works, a privately owned U.S. company (Houma), from its founding family through the Company s subsidiary, Nidec Motor Corporation. Through this acquisition, Nidec Motor Corporation can enhance its service offering, expanding its share within its own U.S. installed base. Houma will be able to provide services to NMC s customers.

In June 2023, Safran Electrical & Power announced the installation of four automation production lines specifically for its ENGINeUS electric motors at its sites in Niort, France, and Pitstone, and Great Britain. This high-volume production model will enable 1,000 motors to be manufactured per year from 2026 to serve the booming electric and hybrid aviation markets.

Additional Benefits:

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

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