

Direct Current (DC) Motor - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

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Report description:

The Direct Current Motor Market size is estimated at USD 535.57 million in 2024, and is expected to decline to USD 508.24 million by 2029.

Increasing industrial automation also drives the demand for DC motors as it plays a vital role in automated systems by providing precise control and reliable performance. Labor shortages in emerging countries are leading to the adoption of robotics in the manufacturing industry, which is also creating demand for different types of DC motors, such as shunt motors, separately excited motors, compound motors, etc.

Key Highlights

- In automobiles, DC motors are widely used in systems for wiper motors, power seat motors, power window motors, and HVAC systems. Additionally, Growing adoption of electric vehicles is expected to support the market growth during the forecast period. The automotive sector has witnessed a significant increase in the number of daily units produced over the years.
- Owing to the rising importance of occupational safety in the global regions, the government has mandated quality air management as industries such as oil & gas, mining, power generation, chemicals, and petrochemicals often involve harsh and explosive atmospheres. Thus, HVAC systems aid in creating a safe working environment by managing and controlling air circulation. With HVAC systems turning out to be an integral part of the industrial sector, DC motors are also able to create a generous demand as they are used in HVAC systems' blower motors, variable speed drives, and AHUs to achieve high efficiency in airflow systems along with in maximizing their lives.
- The automotive industry has rapidly introduced pollution-free vehicles such as electric vehicles (EVs). The development and improvement of the EV to replace the conventional vehicle become crucial to obtaining customer satisfaction and high technology achievements. As per IEA, electric vehicles are one of the driving forces in the new global energy economy that is rapidly

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emerging, and they are bringing about a historic transformation of the car manufacturing industry worldwide.

-There are several obstacles that are preventing the widespread use of DC motors. The main challenges revolve around the associated expenses, including energy costs, maintenance costs, and initial purchase costs. This is because the wound rotor and commutator of a DC motor are quite a bit more complicated than the rotor of an induction motor. It is made out of copper and iron rather than aluminum and iron. The heavier rotor of the DC motor may require more expensive bearings.

-A notable impact of the global outbreak of COVID-19 has been 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, due to supply chain issues. However, with significant end-user industries resuming operations at total capacity, the demand for smart AC motors is anticipated to grow post-COVID.

Direct Current (DC) Motor Market Trends

Oil & Gas to Witness Major Growth

- Electric motors play a crucial role in the oil and gas industry by delivering a steady and dependable power source to drill rig systems and equipment. DC motors are specifically utilized to ensure a consistent and reliable power supply to drilling rig systems and equipment. These motors are instrumental in supporting various operations such as the extraction, processing, storage, and transportation of commodities like crude oil, petroleum, and natural gas.

- The extraction of oil and natural gas from reservoirs in the oil and gas sector relies on drilling rig equipment for both onshore and offshore drilling activities. These drilling rig equipment extensively utilize DC motors as their power source. These DC motors are specifically designed to withstand the challenging conditions commonly found in oil and gas settings, such as vibration, extreme temperatures, frequent impacts, corrosive environments, and more. As a result of their exceptional performance, the utilization of DC electric motors in onshore oil and gas industries has a notable significance.

- The International Energy Agency (IEA) has projected that the peak of global oil and gas demand will occur by 2030, despite the existing policy settings. According to the IEA, there will be an approximate increase of eight million barrels per day (bpd) in global demand by the end of the decade, which will lead to a greater requirement for offshore activities. Consequently, there is an anticipated surge in the demand for AC motors due to the growth in offshore operations and investments. These motors are utilized in various offshore applications, including powering winches and windlasses, cement pumps, propulsion, and thrusters.

- DC motors are highly suitable for offshore drilling activities due to their ability to provide variable speeds to essential equipment such as mud pumps, drawworks, rotary tables, and top drives. Offshore drilling rigs play a significant role in the global oil rig count, with 272 active rigs worldwide in November 2023, over 91 of which are located in the Asia-Pacific region, as reported by Baker Hughes. The renewed search for offshore petroleum is driven by a combination of factors, including increased global energy demand, supply disruptions caused by the conflict in Ukraine, and crude oil prices that have remained elevated compared to pre-pandemic levels.

Asia-Pacific is Expected to Witness Significant Growth

- The China DC motors market is poised for significant growth in the coming years. Several factors drive the market, including the increasing demand for EVs, the growing automation in the Chinese manufacturing sector, and the rising demand for consumer electronics in China.

- In China, it is anticipated that smart manufacturing endeavors will facilitate the utilization of industrial DC motors. The Ministry of Information Technology has reported the initiation of numerous smart manufacturing pilot projects in the country. Furthermore, as

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outlined in the 13th smart manufacturing five-year plan, the government intends to enhance its smart manufacturing system and achieve a comprehensive transformation of key industries by 2025. Such initiatives are expected to drive the adoption of DC motors across the country's sectors.

- With the rapid growth of both India's population and its industrial sector, there has been a significant increase in the volume of wastewater. This alarming rise has prompted the country's need for wastewater treatment plants. According to NITI Aayog, the market value of these treatment plants in India is projected to reach USD 4.3 billion by 2025. This growth is primarily driven by the rising demand for nationwide municipal and sewage water treatment facilities. To efficiently and effectively move water through the treatment process, water treatment plants heavily rely on pump and motor systems. Consequently, the increasing demand for these treatment plants nationwide will also drive the demand for DC motors.

- Moreover, the market's expansion in this area is primarily due to technical advancements and the increased usage of automation technologies across various end-user industries. Other significant drivers driving the DC Motor demand in the country include rapid urbanization, complementary technical improvements, favorable government regulations, and robust FDI inflows.

Direct Current (DC) Motor Industry Overview

The Direct Current (DC) motor market is fragmented and is witnessing rising competitiveness among companies. The market consists of major players, such as ABB Ltd., AMETEK Inc. (Dunkermotoren GmbH), Johnson Electric Holdings Limited, Nidec Corporation, and Siemens AG. In terms of market share, these significant players currently dominate the market. However, with increasing technology innovations, many companies are increasing their market presence by securing new contracts and tapping new markets.

- December 2023 - Franklin Electric Co. Inc. announced that it has acquired the assets of Action Manufacturing & Supply Inc. This acquisition helps the company strengthen and expand its channels and products for water treatment in key geographic areas.

- July 2023 - Nidec Corporation announced that it has acquired full ownership of TAR, LLC d/b/a Houma Armature Works, which is a service partner that remanufactures motors and generators and provides field service to oil and gas producers operating out of Louisiana and Texas. Through this acquisition, NMC will be able to enhance its service offering, including expanding its share within its own US installed base. Houma will be able to provide services to NMC's customers.

Additional Benefits:

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

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