

Global Direct Current (DC) Electric Drives - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The Global Direct Current Electric Drives Market is expected to register a CAGR of 5.1% during the forecast period.

Key Highlights

- Direct Current electric drive is a speed control system for a DC motor that supplies the required voltage to help it operate at the desired speed. These drives also help to reduce operational costs and achieve energy efficiency by regulating the speed of the motor and thereby its power consumption.
- Owing to rapid urbanization, the electricity demand has been increasing. The rising electricity costs have also raised the need for energy-efficient systems and equipment. For instance, according to IEA, global energy intensity - a key measure of the economy's energy efficiency - was forecasted to improve by 1.9% in 2021 after improving by only 0.5% in 2020. Such trends are expected to support the growth of the studied market.
- According to Eurostat, in January 2022, industrial production in the EU increased by 0.4% compared to the month before. Additionally, the total production level was 2.5% above February 2020. The increasing adoption of automation and modernization of production facilities is expected to drive the demand for DC drives as they are used for variable torque applications.
- However, the increasing popularity of AC drives across various types of motion control applications owing to several benefits such as lower operating cost and their ability to change speed more rapidly are expected to challenge the growth of the studied market during the forecast period.
- As DC electric drives are used mostly across industries such as oil & gas, manufacturing, metal & mining, etc., the outbreak of COVID-19 had a notable impact on the studied market, as activities across this sector were significantly reduced due to various restrictions imposed by the governments to curb the spread of the virus.

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Direct Current (DC) Electric Drives Market Trends

Oil & Gas Sector to Hold Significant Market Share

- The oil & gas sector is among the major consumer of DC electric drives as they offer excellent controlling capabilities. Controlling flow by adjusting speed avoids energy wasted in the throttling valves. With several large machines involved in the oil & gas sector, the electrical power savings may amount to thousands of dollars annually.
- According to Maxon Group, about 85 percent of the world's energy use is based on fossil fuel sources such as coal, oil, and gas. Furthermore, according to IEA, by 2026, global oil consumption is projected to reach 104.1 mb/d. Such trends are expected to support the growth of the studied market.
- The sector's growth is driving the demand for DC motors and, in turn, for DC drives. Maxon Group offers brushless DC motors for downhole and directional drilling. Furthermore, these motors are utilized in various drilling applications, hydraulic valve control, communication mechanisms, and measuring instrumentation.
- Furthermore, pipelines transport petroleum products from the extraction point to refineries and from refineries to demand areas. As DC drives control of the flow of petroleum products, the demand is expected to grow due to increased activities in the oil and gas industries globally.

Asia Pacific to Holds Significant Share

- The growth of industrial and manufacturing sectors, especially across countries such as China, India, and Taiwan, is expected to drive the demand for DC electric drives during the forecast period. For instance, according to IBEF, in India, outputs increased for natural gas by 11.7%, petroleum refinery production (3.7%), coal (8.2%), steel (2.8%), cement (13.6%), electricity (0.5%), in January 2022.
- The growth of the manufacturing sector in India is also expected to be driven by several initiatives and an increasing inflow of FDIs. For instance, according to the Department for Promotion of Industry and Internal Trade (DPIIT), between April 2000 and June 2021, cumulative FDI inflows in the manufacturing subsectors amounted to USD 100.35 billion.
- Similarly, China's industrial and manufacturing sector has witnessed exponential growth in the past few decades. For instance, according to the National Bureau of Statistics (NBS), the manufacturing sector's output increased 9.8 percent, while the mining output rose 5.3 percent.
- Water and Wastewater are another end-user industry driving the demand for DC drives as they are used at pumping stations and wastewater treatment plants. Increasing investment in water & wastewater management infrastructure across various Asia Pacific countries is expected to further drive the growth of the studied market. For instance, according to ITA, the industrial wastewater market in China is expected to reach USD 19.4 billion by 2025. Such trends are expected to create a favorable market scenario for the DC electric drives market growth during the forecast period.

Direct Current (DC) Electric Drives Industry Overview

The Direct Current (DC) Electric Drives Market is moderately competitive. Competitive advantage can be attained through innovation. Hence, the vendors must invest significantly in new product development and acquisitions. Some major vendors operating in the market include ABB Ltd, Kirloskar Electric Company Limited, Rockwell Automation, and Parker Hannifin Corp.

- March 2022 - To extend its drive portfolio in the safety extra-low-voltage range for 24-48V EC motors, Siemens introduced a new

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servo drive system named Simatic Micro-Drive. The Simatic Micro-Drive will offer units from 100 watts to 1 kilowatt and allow side-by-side rail mounting. Compatible controllers from the SIMATIC portfolio complement the motion control functionalities of this product.

- October 2021 - Rockwell Automation and NHP launched the PowerFlex 6000T medium voltage (MV) drives, featuring common control architecture and TotalFORCE technology. The product offers easy configuration, integration, and visualization in the Studio 5000 design environment.

Additional Benefits:

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

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