

North America Alternating Current (AC) Drive - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

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Report description:

The North America Alternating Current Drive Market is expected to register a CAGR of less than 6.9% during the forecast period.

Globalization is driving the use of advanced automation and energy-saving equipment worldwide. The usage will directly result in increased use of AC drives, widely employed across the process, discrete, and infrastructure industries such as building automation, chemicals, oil & gas, food & beverage, textiles, utilities, water & wastewater, and metals in North America.

Key Highlights

- AC drives help to protect belts and other mechanical equipment by offering smooth and accurate motor speed and torque control, prolonging conveyor life while lowering operational and maintenance costs. AC drives provide efficient operation of the equipment by offering smooth and precise control of motor speed, allowing adjustment of the rate to suit the needs of the process. The drives can also be connected to the plant's automation system to monitor the load.
- Moreover, the AC drive market in North America relies on local manufacturing capabilities to lessen reliance on other countries for raw materials and many other components. Manufacturers are embracing contingency planning to react to shifting consumer patterns and unpredictable demand now that coronavirus infection rates are dropping in several nations. Mergers and acquisitions (M&A) are being used by businesses to add value to their products.
- Also, AC drives offer highly efficient speed and torque controls for common purposes, little maintenance, and are compact size. A significant rate of industrialization and urbanization across the globe has led to a rise in electricity consumption. These trends will boost the demand for low voltage AC drives in North America.
- However, AC drives have the application primarily in industrial machinery. The COVID-19 outbreak has significantly hampered the demand for AC drives. Many manufacturers of these products have completely shut their plants owing to lockdowns imposed by governments to curb the spread of the pandemic.

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North America Alternating Current (AC) Drive Market Trends

Electric Pumps and Motors will Become more Energy Efficient with AC Drives

- AC drives allow for the creation and advancement of more energy-efficient motor technology. According to the Department of Energy, North America has two major and three minor alternating current (AC) power grids or "interconnections," implying that AC drives are being rapidly adopted. The technology is increasingly being implemented in new products, providing additional features and allowing the AC drive to play a larger part in the system.
- According to the IEA, electric pumps and motors account for about 50% of global electrical energy consumption. In industrial applications, the ratio is even higher. Depending on the region and the industrial area, 65-75% of the electrical energy in industry is used for electric motors. Therefore, electrical drive technology, especially AC drive technology, has great potential for reducing worldwide energy consumption.
- Also, AC drives can lead to high energy savings being quickly and easily realized as most applications (approximately 60-70%) are suitable for speed control. In particular, the usage of AC drives for fans and pumps is primarily main trend due to its advantage of the huge saving potential.
- Due to the ever-increasing level of automation in the industry in North America, there is a continuing need for AC Drives with more automated control and a steady increase in production speeds, thus better methods to improve the efficiency of production plants are constantly being developed.
- Moreover, nearly all motors can operate with control algorithms specially adapted to each motor type. Some manufacturers of AC Drives across North America relate the design to a narrow group of motor technologies. Amongst this Robots are rapidly deploying AC drives to regulate motion more precisely in electric motors. Robots are rapidly being adopted by segments that are new to automation. Therefore, it will boost the demand for AC drive market in North America.

Oil & Gas Industry to Witness Significant Growth

- In North America, electric drives are used in various applications in the oil and gas industry for varying motor speeds driving critical components, including pumps, fans, and compressors, and the AC drive units are used across many applications. The AC drive industry will develop owing to the increase in AC motors used in drilling rigs for both onshore and offshore drilling operations to extract oil and natural gas from reservoirs in the oil and gas sector.
- Moreover, pumps are the major application for AC drives in the market. Pumps in the oil and gas industry are used across all end-user applications. In North America, mostly high-power-rated pump drives are used for oil exploration purposes where high-powered motors are used. In midstream applications, large mainline pumps transport oil and gas. The rising demand for an energy-efficient solution is driving the growth of the North American AC Drive Market.
- Heavy industries with hazardous operating conditions, such as chemical environments, benefit from the drive's compact design and robust reliability. The AC drive is used as a sensor in various applications as it detects faults or irregularities in the processes early. The maintenance operations can be scheduled in advance, reducing unexpected downtime and costs, extending the lifetime of the applications and helping to future-proof the system.
- Many large energy users, such as refineries, will charge higher peak-demand electricity prices when the plant exceeds a preset limit or base load of electricity. These peak demand charges typically occur when motors draw large current peaks when started across the line. Variable frequency drives help reduce power peaks by gradually ramping the motor up to speed. Therefore the demand for AC drives across Oil & Gas Industry will boost the North America Alternating Current AC Market.

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North America Alternating Current (AC) Drive Industry Overview

The North American Alternating Current (AC) Drive Market is competitive and consists of several players like Danfoss, WEG, Siemens, Fuji Electric Co., Ltd., Schneider Electric, Emerson Electric Co., Rockwell Automation, Inc., ABB, Yaskawa Electric Corporation, and many more. The companies are increasing their market share by forming multiple partnerships, investing in projects, and launching new products into the market.

- May 2022 - Rockwell Automation, Inc., a provider of industrial automation and digital transformation solutions, has announced the availability of its new Allen-Bradley Armor PowerFlex AC drives for industrial motor control applications. On-machine drives enable faster installation, easier commissioning, and predictive maintenance.
- July 2021 - ABB acquired ASTI Mobile Robotics Group to drive the next generation of flexible automation with autonomous mobile robots. ASTI is a global leader in the high-growth AMR (Autonomous Mobile Robot) market with a broad portfolio of vehicles and software. Thus, this acquisition will allow ABB to boost the demand for AC drives.

Additional Benefits:

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

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