

Electric Motor Core Market Forecasts to 2032 – Global Analysis By Motor Type (AC Motors, DC Motors, Hermetic Motors and Other Motor Types), Material Type (Silicon Steel, Cold-Rolled Lamination Steel, Cobalt, Aluminum and Other Material Types), Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Electric Motor Core Market is accounted for \$39.62 billion in 2025 and is expected to reach \$79.70 billion by 2032 growing at a CAGR of 10.5% during the forecast period. The electric motor core, which is the magnetic center that the motor's windings are arranged around, is an essential part of the motor's construction and operation. Usually, it is constructed from materials with high magnetic permeability, like iron or silicon steel, to increase the motor's efficiency by lowering energy losses. In order to generate torque when electrical current passes through the motor windings, the core is made to conduct magnetic flux. Lamination is frequently used in its construction to reduce eddy current losses and enhance the motor's overall performance. Moreover, the efficiency, power output, and operational lifespan of an electric motor are directly impacted by the size, shape, and composition of its core.

According to the U.S. Department of Energy, electric motors account for approximately 45% of global electricity consumption, highlighting their significance in energy usage. The efficiency of these motors is largely influenced by the design and quality of their cores.

Market Dynamics:

Driver:

Growing use of electric vehicles (EVs)

The global movement toward sustainable mobility is led by electric vehicles, or EVs. Battery-powered electric motors are used in these vehicles, and a key element influencing the motor's effectiveness and performance is the motor core. Production of electric vehicles (EVs) is increasing as nations set aggressive goals to phase out internal combustion engine (ICE) cars. Additionally, high-efficiency motor core designs are being purchased by OEMs in an effort to increase driving range, lower energy costs, and enhance overall vehicle performance. In areas with particularly robust EV incentives and emissions regulations, such as North America, Europe, and China, this trend is particularly noticeable.

Restraint:

Expensive advanced core materials

The high price of advanced core materials, such as premium silicon steel, amorphous metals, and soft magnetic composites, is one of the main factors limiting the market for electric motor cores. Although these materials have substantial performance advantages, like lower core losses and increased efficiency, sourcing and processing them can be costly. For instance, the need for specialized manufacturing techniques such as rapid solidification for amorphous alloys raises the complexity and expense of production. Furthermore, this may slow broader market adoption for small and medium-sized manufacturers who lack the infrastructure to handle premium materials or cannot afford to invest in them.

Opportunity:

Developments in 3D printing and additive manufacturing

When additive manufacturing is used to produce electric motor cores, it significantly cuts down on prototyping time and creates new design possibilities. Manufacturers are able to reduce weight and improve magnetic performance by using 3D printing to create complex geometries that were previously impossible to achieve with conventional lamination techniques. Moreover, the technology also allows for just-in-time manufacturing, reduced tooling costs, and faster iterations, which makes it especially attractive for specialized applications and low-volume, high-performance markets like

medical devices and aerospace.

Threat:

Price pressure and fierce competition

The electric motor core market is becoming more and more competitive as more companies enter the market, particularly from low-cost manufacturing regions like China and Southeast Asia. Significant price undercutting results from this, even though it also encourages innovation and accessibility. It may be difficult for smaller or specialized manufacturers to compete on price, particularly when precision engineering and high-performance materials are involved. Additionally, this can threaten the long-term viability of businesses that depend on high-end differentiation by eroding profit margins, discouraging R&D investment, and causing core components to become more generic.

Covid-19 Impact:

The COVID-19 pandemic had a mixed effect on the electric motor core market. Lockdowns and restrictions in major industrial regions caused short-term disruptions in supply chains, manufacturing operations, and logistics. Production activities were slowed by labour shortages and price volatility for essential raw materials like electrical steel. But the pandemic also sped up long-term trends like the move to electric cars, manufacturing automation, and the use of clean energy, which ultimately opened up new growth opportunities for electric motor cores. Furthermore, the market started to stabilize and even grow in sectors centered on electrification and sustainability as businesses adjusted to remote operations and governments made investments in green recovery programs.

The AC motors segment is expected to be the largest during the forecast period

The AC motors segment is expected to account for the largest market share during the forecast period. These motors' great efficiency, dependability, and affordability make them popular in commercial, residential, and industrial settings. Electric motor cores are crucial for enabling effective electromagnetic induction and reducing energy loss in AC motors, especially synchronous and induction models. Moreover, the demand for AC motor cores is largely driven by the expanding use of electric vehicles, factory automation, and HVAC systems. They are the go-to option in many industries due to their capacity to manage a wide range of load conditions with comparatively straightforward control systems, which further solidifies their market dominance.

The automotive segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the automotive segment is predicted to witness the highest growth rate. The swift global transition to electric mobility, which is being accelerated by government incentives, tighter emission standards, and developments in EV technology, is the main driver of this growth. High-efficiency electric motors are essential to electric vehicles (EVs), including battery electric vehicles (BEVs) and hybrid electric vehicles (HEVs). To maximize performance and energy conversion, these motor cores must be precisely engineered. Furthermore, the need for advanced motor cores in power trains, HVAC systems, and auxiliary automotive applications has increased dramatically due to growing consumer demand for cleaner transportation and automakers' increased investments in electrification platforms.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, propelled by its strong manufacturing base, quick industrialization, and strong demand from important industries like consumer electronics, industrial machinery, and automobiles. With the help of government programs encouraging the use of electric vehicles and the integration of renewable energy, nations like China, Japan, South Korea, and India make significant contributions. China is a major supplier of raw materials like electrical steel and leads the world in the production of electric motors. Moreover, Asia-Pacific's dominance in the global electric motor core industry is further cemented by the region's strong export capabilities, growing urbanization, and affordable labor.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR, driven by a strong push for domestic manufacturing, rising investment in clean energy technologies, and the quick uptake of electric vehicles. Government incentives for EVs, the development of charging infrastructure, and efforts to lessen dependency on fossil fuels are all contributing to the notable growth in the United States in particular. Additionally, the need for high-performance electric motor cores is also being increased by the resurgence of reshoring manufacturing activities and the growing automation in the commercial and industrial sectors. The region's market is also accelerating due to technological developments and R&D efforts in efficient motor designs.

Key players in the market

Some of the key players in Electric Motor Core Market include Hitachi Metals, Ltd., Emerson Electric, Siemens AG, ABB, Nidec Corporation, Mitsui High-tec, Inc., Anhui Feixiang Electric Co., Ltd., POSCO Mobility, Suzhou Fine-Stamping Machinery & Technology Co., Ltd., Changying Xinzhi Technology Co., Ltd. and Toshiba.

Key Developments:

In April 2025, ABB has signed a Memorandum of Understanding (MoU) agreement with the Construction and Mining Systems Strategic Business Unit (SBU) of Sumitomo Corporation, the Japan-headquartered industrial group. The two companies will collaborate to explore joint solutions for decarbonising the operations of mining machinery with a focus on fleet electrification.

In April 2025, Siemens AG announces that it has signed an agreement to acquire Dotmatics, a leading provider of Life Sciences R&D software based in Boston, for \$5.1 billion from Insight Partners. This acquisition represents a strategic milestone for Siemens, expanding its comprehensive Digital Twin technology and AI-powered software into this rapidly growing complementary market.

In January 2025, Emerson Electric Co. has entered into a definitive Agreement and Plan of Merger with Aspen Technology, Inc., a Delaware corporation, and Emersub CXV, Inc., a wholly-owned subsidiary of Emerson. This strategic move is set to bolster Emerson's market presence and expand its technological capabilities. Under the terms of the Merger Agreement, Emersub CXV, Inc. will initiate a tender offer to acquire all outstanding shares of AspenTech's common stock at a price of \$265 per share in cash.

Motor Types Covered:

AC Motors

DC Motors

Hermetic Motors

Other Motor Types

Material Types Covered:

Silicon Steel

Cold-Rolled Lamination Steel

Cobalt

Aluminum

Other Material Types

Applications Covered:

Automotive Traction Motor

Industrial Machinery

Home Appliance

HVAC Systems

Renewable Energy Systems

Other Applications

End Users Covered:

Automotive

Consumer Products

Aerospace and Defense

Industrial Manufacturing

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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