+357 96 030922
info@marketpublishers.com

Aircraft Electric Motors Market Forecasts to 2030 – Global Analysis by Aircraft Type (Fixed Wing, Rotary Wing, Unmanned Aerial Vehicles and Advanced Air Mobility), Type, Output Power, Torque, Application, End User and By Geography

https://marketpublishers.com/r/A1A3C6AF01CEEN.html
Date: February 2025
Pages: 150
Price: US$ 4,150.00 (Single User License)
ID: A1A3C6AF01CEEN

Abstracts

According to Stratistics MRC, the Global Aircraft Electric Motors Market is accounted for $10.1 billion in 2024 and is expected to reach $19.4 billion by 2030 growing at a CAGR of 11.4% during the forecast period. Aircraft electric motors are specialized motors designed to power various systems and components in aircraft, including propulsion, auxiliary power units (APUs), and control surfaces. These motors convert electrical energy into mechanical motion to drive essential functions such as air conditioning, hydraulic pumps, and engine starters. With the increasing shift toward more sustainable aviation, electric motors are gaining importance in hybrid and fully electric aircraft, offering lower emissions, reduced fuel consumption, and quieter operations. Aircraft electric motors are engineered to meet rigorous performance, reliability, and safety standards to ensure optimal functionality in the demanding aerospace environment.

According to Statista, the global air freight volume has increased significantly in the last few years, reaching 55.9 million metric tons in 2020.

Market Dynamics:

Driver:

Growing Demand for Sustainable Aviation

The increased desire for sustainable aviation has a considerable influence on the

+357 96 030922
info@marketpublishers.com

aircraft electric motors industry. Electric and hybrid-electric propulsion systems are becoming more and more popular as manufacturers and airlines work to lower carbon emissions. Improved fuel economy, reduced maintenance expenses, and a less environmental impact are all benefits of electric motors. This trend is encouraging the development and use of electric motors in aviation, which is driving market expansion. It is being driven by customer desires, regulatory pressures, and technological developments.

Restraint:

High Initial Investment Costs

High initial investment costs in the Aircraft Electric Motors market hinder market growth by limiting the affordability for small and medium-sized companies. The substantial upfront capital required for research, development, and manufacturing can deter potential market entrants and slow down the adoption of electric motor technologies. This financial barrier delays the transition to more sustainable solutions, restricting the overall market expansion and technological advancements.

Opportunity:

Technological Advancements

Technological improvements are majorly driving the Aircraft Electric Motors Market, allowing for more efficient, lightweight, and powerful electric motor designs. Material innovations like superconductors and high-performance composites increase motor efficiency and reduce weight, which improves sustainability and fuel economy. Furthermore, the integration of electric motors in aircraft is supported by developments in battery technology and energy management systems, which encourage the creation of electric and hybrid-electric propulsion systems that meet the rising need for environmentally friendly aviation solutions.

Threat:

Limited Battery Life and Energy Density

Limited battery life and low energy density significantly hinder the growth of the aircraft electric motors market. These factors restrict the operational range and endurance of electric aircraft, making them less viable for long-distance flights. The need for frequent

+357 96 030922
info@marketpublishers.com

recharging or swapping batteries increases operational costs and complicates infrastructure development, slowing adoption in both commercial and defense sectors, thereby limiting the market's overall expansion.

Covid-19 Impact:

The COVID-19 pandemic temporarily slowed the Aircraft Electric Motors Market due to disruptions in manufacturing, supply chains, and a decline in air travel. However, the crisis also accelerated the focus on sustainability and cost-efficiency, driving long-term demand for electric propulsion systems. Post-pandemic recovery, along with increasing government support for green aviation technologies, is expected to spur growth in the aircraft electric motors sector.

The avionics systems segment is expected to be the largest during the forecast period

The avionics systems segment is expected to account for the largest market share during the forecast period as modern aircraft increasingly rely on electric propulsion and flight control systems, avionics play a crucial role in optimizing motor functions and energy management. The integration of advanced avionics enables precise monitoring, fault detection, and performance analysis, ensuring the seamless operation of electric motors. With growing demand for fuel-efficient and environmentally friendly aircraft, avionics systems are accelerating the adoption of electric motors, driving market growth.

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

Over the forecast period, the AC motors segment is predicted to witness the highest growth rate due to their efficiency, reliability, and lower maintenance costs. AC motors offer smoother operation, higher power density, and better thermal management, making them ideal for aircraft systems like cabin ventilation, landing gear, and propulsion. Their ability to operate at high speeds and handle varying power demands enhances overall aircraft performance. Additionally, regulatory trends favoring eco-friendly propulsion systems further boost the demand for AC motors in the aviation sector, contributing to market growth.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest

+357 96 030922
info@marketpublishers.com

market share owing to growing demand for fuel-efficient and environmentally friendly aviation solutions. Technological advancements in electric propulsion systems, coupled with stringent government regulations on carbon emissions, are fueling this growth. Increasing investments in electric aircraft development by major aerospace companies and startups, along with the rising interest in urban air mobility, are further contributing to market expansion. Additionally, the need for reduced operating costs is accelerating the adoption of electric motors in aircraft.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR because of the growing need for ecologically friendly and energy-efficient aviation solutions. Governments are forcing businesses and airlines to switch to electric propulsion systems by enforcing stricter pollution restrictions. Performance is also enhanced by developments in electric motor technology, such as increased power density and decreased weight. Further propelling market expansion throughout the area is the growing acceptance of urban air transportation, which includes electric vertical takeoff and landing (eVTOL) aircraft.

Key players in the market

Some of the key players in Aircraft Electric Motors market include Honeywell International Inc., Safran S.A., Meggitt PLC, Thales Group, Raytheon Technologies Corporation, General Electric Company, Rolls-Royce Holdings PLC, Siemens AG, Parker Hannifin Corporation, Moog Inc., AMETEK Inc., Woodward, Inc., Collins Aerospace, Liebherr Group, Mitsubishi Electric Corporation, Nidec Corporation, Johnson Electric Holdings Limited, Maxon Motor AG, Aerovironment, Inc. and Baldor Electric Company.

Key Developments:

In December 2024, Honeywell announced the signing of a strategic agreement with Bombardier, to provide advanced technology for current and future Bombardier aircraft in avionics, propulsion and satellite communications technologies.

In October 2024, Honeywell and Google Cloud announced a unique collaboration connecting artificial intelligence (AI) agents with assets, people and processes to accelerate safer, autonomous operations for the industrial sector.

+357 96 030922
info@marketpublishers.com

In October 2023, Honeywell announced Honeywell Product Quality Review, an innovative software solution for manufacturers of medical products. The solution is designed to automate and streamline the Annual Product Quality Review (APQR) process, enabling medical organizations to efficiently assess the quality of their products and more efficiently meet regulatory requirements.

Aircraft Types Covered:

- Fixed Wing
- Rotary Wing
- Unmanned Aerial Vehicles
- Advanced Air Mobility

Types Covered:

- AC Motors
- DC Motors

Output Powers Covered:

- Up to 10 kW
- 10–200 kW
- Above 200 kW

Torques Covered:

- Up to 1 Nm
- 1–50 Nm

+357 96 030922
info@marketpublishers.com

50–200 Nm

Above 200 Nm

Applications Covered:

Propulsion Systems

Flight Control Systems

Environmental Control Systems

Engine Control Systems

Avionics Systems

Door Actuation Systems

Landing and Braking Systems

Cabin Interior Systems

Other Applications

End Users Covered:

Original Equipment Manufacturers (OEM)

Aftermarket

Regions Covered:

North America

US

+357 96 030922
info@marketpublishers.com

- 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

+357 96 030922
info@marketpublishers.com

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 2022, 2023, 2024, 2026, and 2030
- 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)

+357 96 030922
info@marketpublishers.com

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

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

5 GLOBAL AIRCRAFT ELECTRIC MOTORS MARKET, BY AIRCRAFT TYPE

5.1 Introduction
5.2 Fixed Wing
5.3 Rotary Wing
5.4 Unmanned Aerial Vehicles
5.5 Advanced Air Mobility

6 GLOBAL AIRCRAFT ELECTRIC MOTORS MARKET, BY TYPE

6.1 Introduction
6.2 AC Motors
6.3 DC Motors

7 GLOBAL AIRCRAFT ELECTRIC MOTORS MARKET, BY OUTPUT POWER

7.1 Introduction
7.2 Up to 10 kW
7.3 10–200 kW
7.4 Above 200 kW

8 GLOBAL AIRCRAFT ELECTRIC MOTORS MARKET, BY TORQUE

8.1 Introduction
8.2 Up to 1 Nm
8.3 1–50 Nm
8.4 50–200 Nm
8.5 Above 200 Nm

9 GLOBAL AIRCRAFT ELECTRIC MOTORS MARKET, BY APPLICATION

9.1 Introduction
9.2 Propulsion Systems
9.3 Flight Control Systems
9.4 Environmental Control Systems
9.5 Engine Control Systems
9.6 Avionics Systems
9.7 Door Actuation Systems
9.8 Landing and Braking Systems

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

12 KEY DEVELOPMENTS

13 COMPANY PROFILING

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Aircraft Electric Motors Market Forecasts to 2030 – Global Analysis by Aircraft Type (Fixed Wing, Rotary Wing, Unmanned Aerial Vehicles and Advanced Air Mobility), Type, Output Power, Torque, Application, End User and By Geography

Product link: https://marketpublishers.com/r/A1A3C6AF01CEEN.html

Price: US$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/A1A3C6AF01CEEN.html