

Electric Vehicle Traction Motors Market by Type (PMSM, Induction Motor, BLDC), Power Output (Less than 100 kW, 100 kW to 250 kW, More Than 250kW), Propulsion Type, Application, and Geography - Global Forecast to 2030

<https://marketpublishers.com/r/EF07B2F8F5EAEN.html>

Date: September 2023

Pages: 0

Price: US\$ 4,175.00 (Single User License)

ID: EF07B2F8F5EAEN

Abstracts

The research report titled, 'Electric Vehicle (EV) Traction Motors Market by Type (PMSM, Induction Motor, BLDC), Power Output (Less than 100 kW, 100 kW to 250 kW, More Than 250kW), Propulsion Type, Application, and Geography—Forecast to 2030,' provides an in-depth analysis of the global electric vehicle traction motors market across five major regions worldwide and emphasizes on the current market trends, size, and share, recent developments, and forecast till 2030. The global electric vehicle traction motors market is projected to reach \$137.85 billion by 2030, at a CAGR of 25.5% from 2023 to 2030. By volume, this market is projected to reach 412.29 million units by 2030, at a CAGR of 20.7% from 2023–2030.

Electric vehicles use one or two electric traction motors for propulsion instead of a conventional transmission unit solely powered by an internal combustion engine. Traction motors in hybrid electric vehicles can be powered by rechargeable battery packs or internal combustion engines, which charge the vehicle's battery pack to drive the motor and propel the vehicle. Traction motors are an essential component of powertrains and play an important role in the overall performance of electric vehicles.

The growth of the global electric vehicle traction motors market is driven by factors such as stringent emission regulations driving the manufacture and sales of hybrid and electric vehicles, the increasing demand for high-performance motors, and favorable government policies and subsidies. Furthermore, the increasing demand for electric vehicles is expected to offer growth opportunities for the stakeholders in this market.

However, the high costs and scarcity of raw materials are expected to restrain the growth of this market. The higher prices of electric vehicles compared to ICE vehicles and motor failure due to overheating can hinder the growth of this market.

Based on type, the global electric vehicle traction motors market is segmented into permanent magnet synchronous motors, DC brushed motors, DC brushless motors, induction motors, switched reluctance motors, and wound rotor synchronous motors. The induction motors segment is expected to register the highest CAGR during the forecast period. Traction motor manufacturers are investing in R&D to enhance motor efficiency and performance. Furthermore, manufacturers are collaborating with EV manufacturers to customize motor designs to precise vehicle applications to optimize power output and efficiency. Additionally, there is a concerted focus on developing advanced motor control algorithms and integrated power electronics to ensure seamless and efficient operation of induction motors within EVs. Such initiatives by major market players are expected to drive the adoption of induction motors for EV applications.

Based on power output, the global electric vehicle traction motors market is segmented into less than 100 kW, 100 kW to 250 kW, and more than 250 kW. The less than 100 kW segment is expected to register the highest CAGR during the forecast period. Companies widely use traction motors with less than 100kW power output for small vehicles such as mopeds, scooters, and passenger vehicles. The adoption of electric mopeds and scooters is experiencing significant growth driven by their eco-friendly attributes, stringent government regulations to reduce carbon emissions, and the increasing utilization of e-scooters for shared mobility. The high adoption of these vehicles subsequently drives the demand for traction motors with power outputs of less than 100 kW.

Based on propulsion type, the global electric vehicle traction motors market is segmented into hybrid electric vehicles and battery electric vehicles. The battery electric vehicles segment is expected to register the highest CAGR during the forecast period. In recent years, the usage of EV traction motors in battery electric vehicles (BEV) has grown significantly due to the following benefits:

Electric Propulsion: EV traction motors are the primary source of propulsion in BEVs. They convert electrical energy stored in the vehicle's battery into mechanical energy, which drives the wheels and propels the vehicle forward. The absence of an internal combustion engine means that BEVs produce zero

tailpipe emissions during operation.

Variable Torque and Power Delivery: EV traction motors in BEVs deliver instant and consistent torque across various speeds, resulting in smooth and responsive acceleration, providing a pleasant driving experience.

High Efficiency: Electric motors are more efficient than internal combustion engines. They can convert a significant portion of the electrical energy from the battery into useful mechanical power, leading to higher overall efficiency and energy conservation.

Low Maintenance: EV traction motors have fewer moving parts than internal combustion engines, resulting in lower maintenance requirements and costs for BEVs. Oil changes, exhaust systems, or complex transmissions are unnecessary.

Reduced Energy Waste: EV traction motors allow for precise control of power delivery and distribution, minimizing energy waste and maximizing efficiency during driving and braking.

Based on application, the global electric vehicle traction motors market is segmented into passenger vehicles, e-scooters & bikes, heavy commercial vehicles, light commercial vehicles, and two-wheelers. The passenger vehicles segment is expected to register the highest CAGR during the forecast period. The growth of this segment is attributed to factors such as the growing demand to enhance the performance, efficiency, and overall driving experience of passenger vehicles, favorable government policies and subsidies aimed at promoting the adoption of electric passenger cars, rising fuel prices that have encouraged consumers to explore electric options, proactive participation by automotive OEMs in producing electric passenger vehicles, and the increasing need to reduce greenhouse gas emissions and combat air pollution associated with traditional internal combustion engine vehicles.

Based on geography, the global electric vehicle traction motors market is segmented into Asia-Pacific, Europe, North America, Latin America, and the Middle East & Africa. The market in Europe is slated to register the highest growth rate between 2023 and 2030. Europe has been an early adopter of electric vehicles. According to the European Automobile Manufacturers Association (ACEA) report, in June, new registrations of battery-electric cars in the EU increased by 66.2%, reaching 158,252 units. Battery-

electric cars have surged in popularity among new car buyers, surpassing diesel cars as the third most popular choice. Several EU markets have witnessed remarkable double- and even triple-digit percentage growth, with leading countries like the Netherlands (+90.1%), Germany (+64.4%), and France (+52.0%) demonstrating significant increases in adoption.

The European Union aims for a 100% reduction in greenhouse gas emissions by 2035, and the widespread adoption of EVs is seen as a key strategy to achieve this goal. In order to support the transition to electric mobility, governments across the region are offering various incentives and subsidies to encourage consumers, including tax breaks, grants, and free charging. Such initiatives are expected to drive the demand for EV traction motors in the region during the forecast period.

The key players operating in the global electric vehicle traction motors market are ZYTEK Group Limited (U.K.), ZF Friedrichshafen AG (Germany), YASA Limited (U.K.), Valeo (France), Jing-Jin Electric Technologies Co., Ltd. (China), Parker-Hannifin Corp (U.S.), ABB Ltd (Switzerland), Equipmake Holdings PLC (U.S.), Traktionssysteme Austria GmbH (Austria), Electrodrive Powertrain Solutions Pvt. Ltd.(India), Nidec Corporation (Japan), AMETEK Inc. (U.S.), Toshiba International Corporation (Japan), WEG Equipamentos El?tricos S.A. (Brazil), and Hitachi Astemo Ltd. (Japan).

Key Questions Answered in the Report:

Which are the high-growth market segments in terms of type, power output, propulsion type, application, and country/region?

What is the historical market size for electric vehicle traction motors globally?

What are the market forecasts and estimates for the period 2023–2030?

What are the major drivers, restraints, opportunities, and challenges in the global electric vehicle traction motors market?

Who are the major players in the market, and what are their market shares?

What is the competitive landscape like in the global electric vehicle traction motors market?

What are the recent developments in the global electric vehicle traction motors

market?

What are the different strategies adopted by the major players in the market?

What are the key geographic trends, and which are the high-growth countries?

Who are the local emerging players in the global electric vehicle traction motors market, and how do they compete with other players?

Scope of the Report

Electric Vehicle Traction Motors Market Assessment—by Type

Permanent Magnet Synchronous Motors

DC Brushed Motors

DC Brushless Motors

Out-Runner BLDC Motors

In-Runner BLDC Motors

Induction Motors

Switched Reluctance Motors

Wound Rotor Synchronous Motors

Electric Vehicle Traction Motors Market Assessment—by Power Output

Less Than 100 kW

100 kW To 250 kW

More Than 250 kW

Electric Vehicle Traction Motors Market Assessment—by Propulsion Type

Hybrid Electric Vehicles

Pure Hybrid Electric Vehicles

Plug-In Hybrid Electric Vehicles

Battery Electric Vehicles

Electric Vehicle Traction Motors Market Assessment—by Application

Passenger Vehicles

E-Scooters & Bikes

Heavy Commercial Vehicles

Light Commercial Vehicles

Two-Wheelers

Electric Vehicle Traction Motors Market Assessment—by Geography

North America

U.S.

Canada

Europe

Germany

France

U.K.

Norway

Sweden

Netherlands

Italy

Spain

Switzerland

Denmark

Rest Of Europe

Asia-Pacific

China

India

Japan

South Korea

Singapore

Thailand

Rest Of Asia-Pacific

Latin America

Middle East & Africa

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