

IE4 Permanent Magnet Synchronous Motors Market Report by Product (<20 kW, 20-200 kW, >200 kW), Application (Material Handling, Liquid Pumps, Fans and Ventilation, Cooling Compressors, Air Compressors and Vacuum Pumps, Blowers, Coolers), and Region 2025-2033

Market Report | 2025-01-18 | 123 pages | IMARC Group

AVAILABLE LICENSES:

- Electronic (PDF) Single User \$2999.00
- Five User Licence \$3999.00
- Enterprisewide License \$4999.00

Report description:

The global IE4 permanent magnet synchronous motors market size reached USD 177.0 Million in 2024. Looking forward, IMARC Group expects the market to reach USD 328.9 Million by 2033, exhibiting a growth rate (CAGR) of 7.1% during 2025-2033. The surging environmental concerns, growing need for superior machine control, and rising adoption of green technologies represent some of the key factors driving the market.

IE4 permanent magnet synchronous motors are premium efficiency class motors that rely on permanent magnets as rotors to generate field poles. They are three-phase design motors with low eddy current losses and high inherent efficiency. They produce an efficiency of 85.5% for a 1 HP motor with 1800 RPM having a synchronous assembly. They are commonly used in the manufacturing of electrical equipment that consumes fewer resources and creates maximum output. They aid in improving the cost and energy efficiency while reducing the human effort required to complete various tasks. They also offer higher torque and power density, better performance, reliability, less noise, low rotor inertia, efficient heat dissipation, and excellent power factor at all loads. As a result, IE4 permanent magnet synchronous motors are extensively utilized in robotics, machine tools, actuators, industrial fans, pumps, compressors, and other mechanical applications.

IE4 Permanent Magnet Synchronous Motors Market Trends:

Nowadays, there is a rise in the use of IE4 permanent magnet synchronous motors as they assist in lowering energy consumption and minimizing carbon dioxide (CO2) emissions. Along with this, the escalating demand for higher efficiency motors and the surging environmental concerns worldwide, represents another factor driving the market. Additionally, IE4 permanent magnet

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

synchronous motors are rapidly gaining traction in robotic processes due to numerous factors, such as speed, acceleration, torque requirements, control, and angular movements. In line with this, the growing need for superior machine control has accelerated the installation of IE4 motors for improved equipment performance and efficiency. Besides this, the increasing product adoption in material handling equipment, compressed air, HVAC, refrigerators, pumps, and ventilation systems has catalyzed the market growth. Furthermore, the shifting inclination toward green technologies like IE4 permanent magnet synchronous motors owing to their superior benefits over standard motors, such as low fan losses and high-quality insulation and lamination, has propelled the market growth. Apart from this, the emerging industrial and commercial applications of IE4 permanent magnet synchronous motors to decrease overall production costs and promote energy saving are driving the market further. Other factors, including the implementation of supportive government policies, growing concerns regarding depleting power generation sources, continual product innovations, and technological advancements, are also creating a favorable market outlook.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each segment of the global IE4 permanent magnet synchronous motors market, along with forecasts at the global, regional, and country levels from 2025-2033. Our report has categorized the market based on product and application.

Product Insights:

<20 kW
20-200 kW
>200 kW

The report has provided a detailed breakup and analysis of the IE4 permanent magnet synchronous motors market based on the product. This includes <20 kW, 20-200 kW, and >200 kW. According to the report, 20-200 kW represented the largest segment.

Application Insights:

Material Handling
Liquid Pumps
Fans and Ventilation
Cooling Compressors
Air Compressors and Vacuum Pumps
Blowers
Coolers

A detailed breakup and analysis of the IE4 permanent magnet synchronous motors market based on the application has also been provided in the report. This includes material handling, liquid pumps, fans and ventilation, cooling compressors, air compressors and vacuum pumps, blowers, and coolers. According to the report, air compressors and vacuum pumps accounted for the largest market share.

Regional Insights:

North America
United States
Canada
Asia-Pacific
China

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Japan
India
South Korea
Australia
Indonesia
Others
Europe
Germany
France
United Kingdom
Italy
Spain
Russia
Others
Latin America
Brazil
Mexico
Others
Middle East and Africa

The report has also provided a comprehensive analysis of all the major regional markets, which include North America (the United States and Canada); Asia-Pacific (China, Japan, India, South Korea, Australia, Indonesia, and others); Europe (Germany, France, the United Kingdom, Italy, Spain, Russia, and others); Latin America (Brazil, Mexico, and others); and the Middle East and Africa. According to the report, Asia-Pacific was the largest market for IE4 permanent magnet synchronous motors. Some of the factors driving the Asia-Pacific IE4 permanent magnet synchronous motors market included the rapid industrial growth, especially in developing countries, recent technological advancements, rising preferences for energy-efficient and high-performance motors, etc.

Competitive Landscape:

The report has also provided a comprehensive analysis of the competitive landscape in the global IE4 permanent magnet synchronous motors market. Detailed profiles of all major companies have also been provided. Some of the companies covered include Altra Industrial Motion Corp. (Regal Rexnord Corporation), Bharat Bijlee Limited, Kienle + Spiess GmbH (Feintool), Lafert S.p.A. (Sumitomo Heavy Industries Ltd.), Merkes GmbH, Nidec Motor Corporation, NORD Drivesystems Pvt. Ltd., O.M.E. Motori Elettrici s.r.l., Oemer Motori Elettrici SpA, Toshiba Industrial Products and Systems Corporation (Toshiba Corporation), WEG Benelux S.A., etc. Kindly note that this only represents a partial list of companies, and the complete list has been provided in the report.

Key Questions Answered in This Report

1. How big is the global IE4 permanent magnet synchronous motors market?
2. What is the expected growth rate of the global IE4 permanent magnet synchronous motors market during 2025-2033?
3. What are the key factors driving the global IE4 permanent magnet synchronous motors market?
4. What has been the impact of COVID-19 on the global IE4 permanent magnet synchronous motors market?
5. What is the breakup of the global IE4 permanent magnet synchronous motors market based on the product?
6. What is the breakup of the global IE4 permanent magnet synchronous motors market based on the application?
7. What are the key regions in the global IE4 permanent magnet synchronous motors market?
8. Who are the key players/companies in the global IE4 permanent magnet synchronous motors market?

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Table of Contents:

- 1 Preface
- 2 Scope and Methodology
 - 2.1 Objectives of the Study
 - 2.2 Stakeholders
 - 2.3 Data Sources
 - 2.3.1 Primary Sources
 - 2.3.2 Secondary Sources
 - 2.4 Market Estimation
 - 2.4.1 Bottom-Up Approach
 - 2.4.2 Top-Down Approach
 - 2.5 Forecasting Methodology
- 3 Executive Summary
- 4 Introduction
 - 4.1 Overview
 - 4.2 Key Industry Trends
- 5 Global IE4 Permanent Magnet Synchronous Motors Market
 - 5.1 Market Overview
 - 5.2 Market Performance
 - 5.3 Impact of COVID-19
 - 5.4 Market Forecast
- 6 Market Breakup by Product
 - 6.1 <20 kW
 - 6.1.1 Market Trends
 - 6.1.2 Market Forecast
 - 6.2 20-200 kW
 - 6.2.1 Market Trends
 - 6.2.2 Market Forecast
 - 6.3 >200 kW
 - 6.3.1 Market Trends
 - 6.3.2 Market Forecast
- 7 Market Breakup by Application
 - 7.1 Material Handling
 - 7.1.1 Market Trends
 - 7.1.2 Market Forecast
 - 7.2 Liquid Pumps
 - 7.2.1 Market Trends
 - 7.2.2 Market Forecast
 - 7.3 Fans and Ventilation
 - 7.3.1 Market Trends
 - 7.3.2 Market Forecast
 - 7.4 Cooling Compressors
 - 7.4.1 Market Trends
 - 7.4.2 Market Forecast
 - 7.5 Air Compressors and Vacuum Pumps
 - 7.5.1 Market Trends
 - 7.5.2 Market Forecast

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 7.6 Blowers
 - 7.6.1 Market Trends
 - 7.6.2 Market Forecast
- 7.7 Coolers
 - 7.7.1 Market Trends
 - 7.7.2 Market Forecast
- 8 Market Breakup by Region
 - 8.1 North America
 - 8.1.1 United States
 - 8.1.1.1 Market Trends
 - 8.1.1.2 Market Forecast
 - 8.1.2 Canada
 - 8.1.2.1 Market Trends
 - 8.1.2.2 Market Forecast
 - 8.2 Asia-Pacific
 - 8.2.1 China
 - 8.2.1.1 Market Trends
 - 8.2.1.2 Market Forecast
 - 8.2.2 Japan
 - 8.2.2.1 Market Trends
 - 8.2.2.2 Market Forecast
 - 8.2.3 India
 - 8.2.3.1 Market Trends
 - 8.2.3.2 Market Forecast
 - 8.2.4 South Korea
 - 8.2.4.1 Market Trends
 - 8.2.4.2 Market Forecast
 - 8.2.5 Australia
 - 8.2.5.1 Market Trends
 - 8.2.5.2 Market Forecast
 - 8.2.6 Indonesia
 - 8.2.6.1 Market Trends
 - 8.2.6.2 Market Forecast
 - 8.2.7 Others
 - 8.2.7.1 Market Trends
 - 8.2.7.2 Market Forecast
 - 8.3 Europe
 - 8.3.1 Germany
 - 8.3.1.1 Market Trends
 - 8.3.1.2 Market Forecast
 - 8.3.2 France
 - 8.3.2.1 Market Trends
 - 8.3.2.2 Market Forecast
 - 8.3.3 United Kingdom
 - 8.3.3.1 Market Trends
 - 8.3.3.2 Market Forecast
 - 8.3.4 Italy

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

8.3.4.1	Market Trends
8.3.4.2	Market Forecast
8.3.5	Spain
8.3.5.1	Market Trends
8.3.5.2	Market Forecast
8.3.6	Russia
8.3.6.1	Market Trends
8.3.6.2	Market Forecast
8.3.7	Others
8.3.7.1	Market Trends
8.3.7.2	Market Forecast
8.4	Latin America
8.4.1	Brazil
8.4.1.1	Market Trends
8.4.1.2	Market Forecast
8.4.2	Mexico
8.4.2.1	Market Trends
8.4.2.2	Market Forecast
8.4.3	Others
8.4.3.1	Market Trends
8.4.3.2	Market Forecast
8.5	Middle East and Africa
8.5.1	Market Trends
8.5.2	Market Breakup by Country
8.5.3	Market Forecast
9	Drivers, Restraints, and Opportunities
9.1	Overview
9.2	Drivers
9.3	Restraints
9.4	Opportunities
10	Value Chain Analysis
11	Porters Five Forces Analysis
11.1	Overview
11.2	Bargaining Power of Buyers
11.3	Bargaining Power of Suppliers
11.4	Degree of Competition
11.5	Threat of New Entrants
11.6	Threat of Substitutes
12	Price Analysis
13	Competitive Landscape
13.1	Market Structure
13.2	Key Players
13.3	Profiles of Key Players
13.3.1	Altra Industrial Motion Corp. (Regal Rexnord Corporation)
13.3.1.1	Company Overview
13.3.1.2	Product Portfolio
13.3.1.3	Financials

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

- 13.3.2 Bharat Bijlee Limited
 - 13.3.2.1 Company Overview
 - 13.3.2.2 Product Portfolio
 - 13.3.2.3 Financials
 - 13.3.2.4 SWOT Analysis
- 13.3.3 Kienle + Spiess GmbH (Feintool)
 - 13.3.3.1 Company Overview
 - 13.3.3.2 Product Portfolio
- 13.3.4 Lafert S.p.A. (Sumitomo Heavy Industries Ltd.)
 - 13.3.4.1 Company Overview
 - 13.3.4.2 Product Portfolio
- 13.3.5 Merkes GmbH
 - 13.3.5.1 Company Overview
 - 13.3.5.2 Product Portfolio
- 13.3.6 Nidec Motor Corporation
 - 13.3.6.1 Company Overview
 - 13.3.6.2 Product Portfolio
- 13.3.7 NORD Drivesystems Pvt. Ltd.
 - 13.3.7.1 Company Overview
 - 13.3.7.2 Product Portfolio
- 13.3.8 O.M.E. Motori Elettrici s.r.l.
 - 13.3.8.1 Company Overview
 - 13.3.8.2 Product Portfolio
- 13.3.9 Oemer Motori Elettrici SpA
 - 13.3.9.1 Company Overview
 - 13.3.9.2 Product Portfolio
- 13.3.10 Toshiba Industrial Products and Systems Corporation (Toshiba Corporation)
 - 13.3.10.1 Company Overview
 - 13.3.10.2 Product Portfolio
- 13.3.11 WEG Benelux S.A.
 - 13.3.11.1 Company Overview
 - 13.3.11.2 Product Portfolio

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

IE4 Permanent Magnet Synchronous Motors Market Report by Product (<20 kW, 20-200 kW, >200 kW), Application (Material Handling, Liquid Pumps, Fans and Ventilation, Cooling Compressors, Air Compressors and Vacuum Pumps, Blowers, Coolers), and Region 2025-2033

Market Report | 2025-01-18 | 123 pages | IMARC Group

To place an Order with Scotts International:

- ☐ - Print this form
- ☐ - Complete the relevant blank fields and sign
- ☐ - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
<input type="checkbox"/>	Electronic (PDF) Single User	\$2999.00
<input type="checkbox"/>	Five User Licence	\$3999.00
<input type="checkbox"/>	Enterprisewide License	\$4999.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

☐** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>
Zip Code*	<input type="text"/>	Country*	<input type="text"/>

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Date

2025-06-25

Signature



Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com