

# Wind Turbine Rotor Blade Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

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# **Abstracts**

The global wind turbine rotor blade market size reached US\$ 21.6 Billion in 2022. Looking forward, IMARC Group expects the market to reach US\$ 28.3 Billion by 2028, exhibiting a growth rate (CAGR) of 8.52% during 2023-2028.

A wind turbine rotor blade is an indispensable airfoil-shaped component designed to produce electricity by absorbing kinetic energy to torque through aerodynamic forces around a central hub. It usually encompasses three blades in a tip-speed ratio (TSR) structure that offers low inertia and optimal mechanical strength. Apart from this, the wind turbine rotor blade aids in sweeping and capturing more area and wind, enabling faster tip turns, and converting this energy into rotary motions. Based on these properties, it finds extensive applications in various onshore and offshore locations to sail and generate renewable energy. At present, wind turbine motors are commercially available in varying blade shapes, inclination angles, configurations, and sizes.

### Wind Turbine Rotor Blade Market Trends:

The increasing need for alternative energy sources and the extensive employment of wind energy power generation technology to maximize electricity production has supplemented product usage across the globe. This is further supported by the rising demand for efficient energy sources and the ongoing depletion of petroleum-based resources. In line with this, escalating environmental concerns have prompted governments to promote the uptake of eco-friendly assets, such as wind turbines, to mitigate carbon emissions, which is acting as another growth-inducing factor. Moreover, the rising employment of various materials, such as aluminum, wood, and plastics, to engineer advanced wind turbine rotor blades at cost-effective prices is supporting the market growth. Additionally, the advent of aircraft wing structures designed product



variants to improve operational efficiency and the incorporation of glass fiber reinforced plastics and epoxy in wind turbine rotor blades are contributing to the market growth. Other factors, such as ongoing wind system installation across offshore areas and strategic collaborations amongst key players to launch lightweight, recyclable wind rotor blades, are creating a positive outlook for the market.

# Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global wind turbine rotor blade market report, along with forecasts at the global, regional and country level from 2023-2028. Our report has categorized the market based on blade material, blade length and location of deployment.

Breakup by Blade Material:

Carbon Fiber

Glass Fiber Others

Breakup by Blade Length:

Below 45 Meters 45-60 Meters Above 60 Meters

Breakup by Location of Deployment:

Onshore

Offshore

Breakup by Region:

North America

**United States** 

Canada

Asia-Pacific

China

Japan

India

South Korea



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Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

### Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being Acciona S.A., Enercon GmbH, INOX Wind Limited, LM Wind Power (General Electric Company), Moog Inc., Nordex SE, SGS S.A., Siemens Gamesa Renewable Energy S.A. (Siemens Energy AG), Suzlon Energy Limited and Vestas Wind Systems A/S.

### Key Questions Answered in This Report

- 1. What was the size of the global wind turbine rotor blade market in 2022?
- 2. What is the expected growth rate of the global wind turbine rotor blade market during 2023-2028?
- 3. What are the key factors driving the global wind turbine rotor blade market?
- 4. What has been the impact of COVID-19 on the global wind turbine rotor blade market?
- 5. What is the breakup of the global wind turbine rotor blade market based on the blade material?
- 6. What is the breakup of the global wind turbine rotor blade market based on the blade length?
- 7. What is the breakup of the global wind turbine rotor blade market based on location of deployment?
- 8. What are the key regions in the global wind turbine rotor blade market?



9. Who are the key players/companies in the global wind turbine rotor blade market?



# **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 WIND TURBINE ROTOR BLADE MARKET**

- 5.1 Market Overview
- 5.2 Market Performance
- 5.3 Impact of COVID-19
- 5.4 Market Forecast

### **6 MARKET BREAKUP BY BLADE MATERIAL**

- 6.1 Carbon Fiber
  - 6.1.1 Market Trends
  - 6.1.2 Market Forecast
- 6.2 Glass Fiber
  - 6.2.1 Market Trends
  - 6.2.2 Market Forecast
- 6.3 Others



- 6.3.1 Market Trends
- 6.3.2 Market Forecast

### 7 MARKET BREAKUP BY BLADE LENGTH

- 7.1 Below 45 Meters
  - 7.1.1 Market Trends
  - 7.1.2 Market Forecast
- 7.2 45-60 Meters
  - 7.2.1 Market Trends
  - 7.2.2 Market Forecast
- 7.3 Above 60 Meters
  - 7.3.1 Market Trends
  - 7.3.2 Market Forecast

### **8 MARKET BREAKUP BY LOCATION OF DEPLOYMENT**

- 8.1 Onshore
  - 8.1.1 Market Trends
  - 8.1.2 Market Forecast
- 8.2 Offshore
  - 8.2.1 Market Trends
  - 8.2.2 Market Forecast

### 9 MARKET BREAKUP BY REGION

- 9.1 North America
  - 9.1.1 United States
    - 9.1.1.1 Market Trends
    - 9.1.1.2 Market Forecast
  - 9.1.2 Canada
    - 9.1.2.1 Market Trends
    - 9.1.2.2 Market Forecast
- 9.2 Asia-Pacific
  - 9.2.1 China
    - 9.2.1.1 Market Trends
    - 9.2.1.2 Market Forecast
  - 9.2.2 Japan
  - 9.2.2.1 Market Trends



- 9.2.2.2 Market Forecast
- 9.2.3 India
  - 9.2.3.1 Market Trends
  - 9.2.3.2 Market Forecast
- 9.2.4 South Korea
  - 9.2.4.1 Market Trends
  - 9.2.4.2 Market Forecast
- 9.2.5 Australia
  - 9.2.5.1 Market Trends
  - 9.2.5.2 Market Forecast
- 9.2.6 Indonesia
  - 9.2.6.1 Market Trends
  - 9.2.6.2 Market Forecast
- 9.2.7 Others
  - 9.2.7.1 Market Trends
  - 9.2.7.2 Market Forecast
- 9.3 Europe
  - 9.3.1 Germany
    - 9.3.1.1 Market Trends
    - 9.3.1.2 Market Forecast
  - 9.3.2 France
    - 9.3.2.1 Market Trends
    - 9.3.2.2 Market Forecast
  - 9.3.3 United Kingdom
    - 9.3.3.1 Market Trends
    - 9.3.3.2 Market Forecast
  - 9.3.4 Italy
    - 9.3.4.1 Market Trends
    - 9.3.4.2 Market Forecast
  - 9.3.5 Spain
    - 9.3.5.1 Market Trends
    - 9.3.5.2 Market Forecast
  - 9.3.6 Russia
    - 9.3.6.1 Market Trends
    - 9.3.6.2 Market Forecast
  - 9.3.7 Others
    - 9.3.7.1 Market Trends
    - 9.3.7.2 Market Forecast
- 9.4 Latin America



- 9.4.1 Brazil
  - 9.4.1.1 Market Trends
  - 9.4.1.2 Market Forecast
- 9.4.2 Mexico
  - 9.4.2.1 Market Trends
  - 9.4.2.2 Market Forecast
- 9.4.3 Others
  - 9.4.3.1 Market Trends
  - 9.4.3.2 Market Forecast
- 9.5 Middle East and Africa
  - 9.5.1 Market Trends
  - 9.5.2 Market Breakup by Country
  - 9.5.3 Market Forecast

### **10 SWOT ANALYSIS**

- 10.1 Overview
- 10.2 Strengths
- 10.3 Weaknesses
- 10.4 Opportunities
- 10.5 Threats

### 11 VALUE CHAIN ANALYSIS

### 12 PORTERS FIVE FORCES ANALYSIS

- 12.1 Overview
- 12.2 Bargaining Power of Buyers
- 12.3 Bargaining Power of Suppliers
- 12.4 Degree of Competition
- 12.5 Threat of New Entrants
- 12.6 Threat of Substitutes

### **13 PRICE ANALYSIS**

### 14 COMPETITIVE LANDSCAPE

- 14.1 Market Structure
- 14.2 Key Players



### 14.3 Profiles of Key Players

- 14.3.1 Acciona S.A.
  - 14.3.1.1 Company Overview
  - 14.3.1.2 Product Portfolio
  - 14.3.1.3 Financials
  - 14.3.1.4 SWOT Analysis
- 14.3.2 Enercon GmbH
  - 14.3.2.1 Company Overview
  - 14.3.2.2 Product Portfolio
  - 14.3.2.3 SWOT Analysis
- 14.3.3 INOX Wind Limited
  - 14.3.3.1 Company Overview
  - 14.3.3.2 Product Portfolio
  - 14.3.3.3 Financials
- 14.3.3.4 SWOT Analysis
- 14.3.4 LM Wind Power (General Electric Company)
  - 14.3.4.1 Company Overview
  - 14.3.4.2 Product Portfolio
- 14.3.4.3 SWOT Analysis
- 14.3.5 Moog Inc.
  - 14.3.5.1 Company Overview
  - 14.3.5.2 Product Portfolio
  - 14.3.5.3 Financials
  - 14.3.5.4 SWOT Analysis
- 14.3.6 Nordex SE
  - 14.3.6.1 Company Overview
  - 14.3.6.2 Product Portfolio
  - 14.3.6.3 Financials
  - 14.3.6.4 SWOT Analysis
- 14.3.7 SGS S.A.
  - 14.3.7.1 Company Overview
  - 14.3.7.2 Product Portfolio
  - 14.3.7.3 Financials
- 14.3.8 Siemens Gamesa Renewable Energy S.A. (Siemens Energy AG)
  - 14.3.8.1 Company Overview
  - 14.3.8.2 Product Portfolio
  - 14.3.8.3 Financials
  - 14.3.8.4 SWOT Analysis
- 14.3.9 Suzlon Energy Limited



- 14.3.9.1 Company Overview
- 14.3.9.2 Product Portfolio
- 14.3.9.3 Financials
- 14.3.9.4 SWOT Analysis
- 14.3.10 Vestas Wind Systems A/S
  - 14.3.10.1 Company Overview
  - 14.3.10.2 Product Portfolio
  - 14.3.10.3 Financials
  - 14.3.10.4 SWOT Analysis



# **List Of Tables**

### LIST OF TABLES

Table 1: Global: Wind Turbine Rotor Blade Market: Key Industry Highlights, 2022 and 2028

Table 2: Global: Wind Turbine Rotor Blade Market Forecast: Breakup by Blade Material (in Million US\$), 2023-2028

Table 3: Global: Wind Turbine Rotor Blade Market Forecast: Breakup by Blade Length (in Million US\$), 2023-2028

Table 4: Global: Wind Turbine Rotor Blade Market Forecast: Breakup by Location of Deployment (in Million US\$), 2023-2028

Table 5: Global: Wind Turbine Rotor Blade Market Forecast: Breakup by Region (in Million US\$), 2023-2028

Table 6: Global: Wind Turbine Rotor Blade Market: Competitive Structure

Table 7: Global: Wind Turbine Rotor Blade Market: Key Players



# **List Of Figures**

### LIST OF FIGURES

Figure 1: Global: Wind Turbine Rotor Blade Market: Major Drivers and Challenges Figure 2: Global: Wind Turbine Rotor Blade Market: Sales Value (in Billion US\$), 2017-2022

Figure 3: Global: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Billion US\$), 2023-2028

Figure 4: Global: Wind Turbine Rotor Blade Market: Breakup by Blade Material (in %), 2022

Figure 5: Global: Wind Turbine Rotor Blade Market: Breakup by Blade Length (in %), 2022

Figure 6: Global: Wind Turbine Rotor Blade Market: Breakup by Location of Deployment (in %), 2022

Figure 7: Global: Wind Turbine Rotor Blade Market: Breakup by Region (in %), 2022

Figure 8: Global: Wind Turbine Rotor Blade (Carbon Fiber) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 9: Global: Wind Turbine Rotor Blade (Carbon Fiber) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 10: Global: Wind Turbine Rotor Blade (Glass Fiber) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 11: Global: Wind Turbine Rotor Blade (Glass Fiber) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 12: Global: Wind Turbine Rotor Blade (Other Blade Materials) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 13: Global: Wind Turbine Rotor Blade (Other Blade Materials) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 14: Global: Wind Turbine Rotor Blade (Below 45 Meters) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 15: Global: Wind Turbine Rotor Blade (Below 45 Meters) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 16: Global: Wind Turbine Rotor Blade (45-60 Meters) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 17: Global: Wind Turbine Rotor Blade (45-60 Meters) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 18: Global: Wind Turbine Rotor Blade (Above 60 Meters) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 19: Global: Wind Turbine Rotor Blade (Above 60 Meters) Market Forecast: Sales



Value (in Million US\$), 2023-2028

Figure 20: Global: Wind Turbine Rotor Blade (Onshore) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 21: Global: Wind Turbine Rotor Blade (Onshore) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 22: Global: Wind Turbine Rotor Blade (Offshore) Market: Sales Value (in Million US\$), 2017 & 2022

Figure 23: Global: Wind Turbine Rotor Blade (Offshore) Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 24: North America: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 25: North America: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 26: United States: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 27: United States: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 28: Canada: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 29: Canada: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 30: Asia-Pacific: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 31: Asia-Pacific: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 32: China: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 33: China: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 34: Japan: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 35: Japan: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 36: India: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 37: India: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 38: South Korea: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022



Figure 39: South Korea: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 40: Australia: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 41: Australia: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 42: Indonesia: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 43: Indonesia: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 44: Others: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 45: Others: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 46: Europe: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 47: Europe: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 48: Germany: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 49: Germany: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 50: France: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 51: France: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 52: United Kingdom: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 53: United Kingdom: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 54: Italy: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 55: Italy: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 56: Spain: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 57: Spain: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 58: Russia: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017



& 2022

Figure 59: Russia: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 60: Others: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 61: Others: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 62: Latin America: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 63: Latin America: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 64: Brazil: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 65: Brazil: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 66: Mexico: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 67: Mexico: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 68: Others: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 69: Others: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 70: Middle East and Africa: Wind Turbine Rotor Blade Market: Sales Value (in Million US\$), 2017 & 2022

Figure 71: Middle East and Africa: Wind Turbine Rotor Blade Market: Breakup by Country (in %), 2022

Figure 72: Middle East and Africa: Wind Turbine Rotor Blade Market Forecast: Sales Value (in Million US\$), 2023-2028

Figure 73: Global: Wind Turbine Rotor Blade Industry: SWOT Analysis

Figure 74: Global: Wind Turbine Rotor Blade Industry: Value Chain Analysis

Figure 75: Global: Wind Turbine Rotor Blade Industry: Porter's Five Forces Analysis



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