

Europe Wind Turbine Shaft Market By Application (Offshore and Onshore), By Type (Main Shaft and Generator Shaft), By Material Type (Metal & Synthetic Composites), By Country, Competition Forecast and Opportunities, 2028

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Abstracts

Europe Wind Turbine Shaft Market is anticipated to grow robustly in the forecast period 2024-2028. The main driver propelling the Europe wind turbine shaft market is the installation of combined cycle wind turbines in the industrial and commercial sectors. Additionally, governments of various countries and international organizations are putting more emphasis on alternative fuels like wind, in the coming years due to rising carbon dioxide (CO₂) emissions and carbon footprints people are moving towards wind turbine shaft market. In 2022, according to Wind Europe institute, European Union (EU) installed 16GW wind turbines, during the next five years, the European Union (EU) is planning to establish 20GW worth of new wind farms. To increase its energy security and guarantee reasonable electricity rates, the EU seeks to accelerate the development of wind energy. Moreover, in 2022, Germany made the highest investments in brand-new wind farms, followed by Finland and Poland.

Increase in Wind Turbine Production in European Countries

To increase wind turbine production in response to the increased demand, manufacturers of wind turbine shafts are looking for ways to cut costs. Due to a large increase in population as well as developing urbanization, there is an increased need for energy. Installing renewable energy sources, such as wind and solar energy, is highly valued by governments around the countries to meet demand. These factors ought to encourage the development of more wind turbine shafts, increasing demand in this industry.

Moreover, the demand for wind turbine shafts is being driven by the installation of integrated wind combined cycles in the residential and commercial sectors. These technologies generate electricity and power that is both highly effective and environmentally beneficial. Furthermore, the shaft thermal efficiency of a reciprocating engine is lower than wind turbines. The wind turbine shafts' high power-to-weight ratio and increased dependability increase overall demand. Germany has a sizable supply of high-quality, reasonably priced wind energy resources. As a result, Germany had the largest installed wind power capacity in the region of Europe in 2021, with a total installed capacity of 63.8 GW. More than 3.5 million homes across the nation might be powered by this installed capacity.

By 2030, the government wants to have 40% of the energy mix come from renewable sources. The administration announced a rise in spending on renewable energy from USD 5.43 billion to USD8.69 billion per year. This will likely help the market for wind turbine shafts to grow throughout the course of the projected period.

Adoption Of Onshore Wind Energy

In order to maximize the amount of electricity produced per installed megawatt capacity over the past five years, onshore wind energy power generating technology has progressed to cover more areas with lower wind speeds. Additionally, larger wind turbine blades and hubs with greater hub heights, broader diameters, etc. have been used in recent years to increase the size of wind turbines. For instance, onshore wind farms received the majority of the funding. Two modest offshore floating wind farms with a combined capacity of 60MW were solely funded by France.

Additionally, onshore wind energy will drive the market demand in the European region to attain net-zero carbon emissions by 2030, claims Wind Europe. Around 90% of the total wind energy is used by onshore wind energy capacity, according to Global Wind Energy Council. The industry is anticipated to be driven by stringent government restrictions to minimize carbon emissions and phase out conventional power systems.

The total amount of new turbine orders placed in the EU in 2022 was only 9 GW, a 47% decrease from 2021. As part of its new energy and climate security goals, the EU must construct 30 GW of new wind farms annually. This includes the goal of growing the operational offshore wind capacity from 15 GW to over 100 GW by 2030.

The European installed wind production capacity onshore and offshore has increased

by a factor of roughly 50 during the past 20 years due to the levelized cost of electricity (LCOE) declining. Power generation from renewable sources is receiving more attention as the need for sustainable power generation grows. Owing to the above-mentioned factors the market is expected to register a high CAGR in the forecast period.

New Product Launches in the Market

Leading companies in the market are introducing new goods with enhanced capabilities. For instance, a Danish engineer's company has lately created an innovative wind turbine shaft that can produce 10 GW of power. To improve the accuracy and functionality of their products, device manufacturers have taken essential steps. A relatively new product on the market, the wind turbine shaft combined cycle generates secondary power using a steam turbine. The exhaust heat is released when the wind turbines are turned. Also being installed are peak motor speeds, which will lessen noise pollution. The top manufacturers of wind turbine shafts are working to use new technology to improve the aesthetics of their turbines.

High Initial Cost of Wind Energy Generation

The high initial and ongoing costs of operating wind turbines are one of their key issues. The cost of solar energy is steadily falling, which has led to a rise in solar energy demand with a decline in wind energy demand. Maintenance, repair, overhaul, and refurbishing represents one of the largest operating costs for the wind turbines. Wind turbine gearbox, braking system, and generator damage can be triggered by a variety of circumstances, including variations in wind, abrupt increases or decreases in wind turbine speeds, and changes in load distribution. All the factors are restraining the growth of Europe Wind Turbine Shaft Market.

Market Segmentation

The Europe Wind Turbine Shaft Market is divided into application, type, material type, country and competitive landscape. Based on application the market is segmented into Offshore and Onshore. Based on type, the market is divided into main shaft and generator shaft. Based on material type, the market is segmented into metal and synthetic Composites. Based on Country, the market is divided into Germany, France, United Kingdom, Italy and Spain.

Market players

Major players operating in the Europe Wind Turbine Shaft Market are Vestas Wind Systems A/S, Nordex SE, Siemens Gamesa Renewable Energy S.A, Enercon GmbH, General Electric Company, Suzlon Energy Limited, Vensys Energy AG, Xinjiang Goldwind Science & Technology Co., Ltd, NovaWind JSC, Envision Energy, among others

Report Scope:

In this report, Europe Wind Turbine Shaft Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

Europe Wind Turbine Shaft Market, By Application:

Offshore

Onshore

Europe Wind Turbine Shaft Market, By Type:

Main Shaft

Generator Shaft

Europe Wind Turbine Shaft Market, By Material Type:

Metal

Synthetic Composites

Europe Wind Turbine Shaft Market, By Country:

Germany

France

United Kingdom

Italy

Spain

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Europe Wind Turbine Shaft Market.

Available Customizations:

Europe Wind Turbine Shaft Market report with the given market data, Tech Sci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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