

# Estonian Manufacturer Introduces Darrieus-type Small Wind Turbines

*Freen took a leap ahead in renewable energy technology by introducing a series of new, advanced ranges of small wind turbines*

KOHTLA-JÄRVE, IDA-VIRUMAA, ESTONIA, November 26, 2024 /EINPresswire.com/ -- Freen, an independent wind energy company, took a leap ahead in renewable energy technology by introducing a series of new, advanced ranges of small wind turbines that would make clean energy more accessible and adaptable to different environments.



After nearly a decade of extensive research, development, and engineering refinement, Freen's new turbine models represent an exceptional performance-sustainability achievement. The launch marks yet another step in the company's journey to redefine small-scale wind energy with advanced technology and eco-conscious design.

What started as an exciting journey with Freen's latest model, the Freen-20, underlines the company's drive in the advancement of renewable energy through continuous R&D, applying innovative materials, and relentlessly pursuing efficiency. The Freen-20 Vertical Axis Darrieus Wind Turbine has patented technology for maximal energy conversion at a reduced total cost. This revolutionary turbine assures unparalleled efficiency and flexibility, from city center installations to the rural and most remote areas that have poor access to energy grid.

A Legacy of Innovation: The Darrieus Invention

[Freen has developed a new small wind turbine](#) model based on the very important work of the late French aeronautical engineer Georges Darrieus. Commercial vertical wind turbines based on Darrieus' design were first deployed in the United States during the 1980s. Since then, the technology has been optimized many times over. Valerii Nebesnyi, serial inventor and a great

visionary when it comes to wind energy technology, pushed this evolution a step further by developing a patented technology for producing lighter and more versatile turbines than the traditional propeller turbines and older rigid vertical-axis designs.

With the Freen-20 model, by joining the flexibility of Darrieus' principles and advanced materials, several of the main key challenges of the small wind energy solutions have been met. The structure is very lightweight; it is easily installable and assures impact on the environment will be minimal. High efficiency with reduced maintenance needs will make this turbine an interesting solution for a wide range of customers-from individual consumers to businesses and municipalities in search of a reliable, renewable power source.

### Unparalleled Performance and Sustainability

The Freen-20 can deliver output on winds as low as 3.5 m/s while reaching peak efficiency at 11 m/s. Such adaptability makes the turbines from Freen unmatched for several scenarios of usage and a strong enabler of decentralized energy production to cut reliance on the conventional power grid. From independent installations to hybrids, Freen empowers individuals and business to use renewable energy with a minimal carbon footprint.

### Availability and Plans for Expansion

Orders are now being taken for the Freen-20 model, and new models Freen-3 and Freen-55 are planned to cater for fast-growing demand for small-scale renewable energy solutions. The new turbine, manufactured in Freen's state-of-the-art facility in Estonia-a 25,000-square-meter plant capable of producing up to 4,000 units annually-serves to help meet ambitious European Union renewable energy targets and support global climate change initiatives.

### About Freen OÜ:

Freen OÜ is an Estonia-based manufacturer of Vertical-Axis Small Wind Turbines, committed to delivering affordable and reliable wind energy solutions globally. With EU-based manufacturing and compliance to strict quality standards, Freen combines engineering expertise and patented technology to offer dependable wind energy solutions for diverse needs. Freen's mission is rooted in providing sustainable energy solutions for communities. Read more about Freen on the website.

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