



Lightning Protection Systems

Leading Edge Protection

Blade Monitoring & Optimization

Transport Equipment & Solutions

Subsea

Performance & Structural Components

Solutions designed to last the lifetime of your wind turbines

Polytech brings sustainable solutions to life that improve the durability and performance of wind turbines.

At Polytech, our goal is to make wind the preferred source of energy through innovation and collaboration.

We therefore help OEMs, park owners and operators, to reduce the levelized cost of wind energy.

Our creative, agile, and holistic approach have produced a wide range of robust and competitive solutions in Lightning Protection Systems, Leading Edge Protection, Blade Monitoring & Optimization, Transport Equipment & Solutions, Subsea, and Performance & Structural Components.

To produce industry-leading solutions that can last a lifetime, we submit our products to rigorous testing, and pioneer the use of IIoT – because certainty beats assumptions.



When you work with us, you work in the fast lane. Our workflow comprises the entire value chain from initial design to large-scale production and global supply. Time-to-market matters - and we deliver.

Founded in 1994, we are now front-runners in wind power innovation and a trusted partner to major players in the wind industry. With locations in Denmark, China, Germany and Mexico, we are ready to make sustainability profitable.



Full-scale lightning test at our Lightning Test Center in Denmark.

Accredited test centers

We operate two accredited test centers in Denmark – one specialized for full-scale lightning tests and the other for material tests. Both test centers are accredited by DANAK (Danish Accreditation Fund, which is a member of ILAC) according to the ISO/IEC 17025 standard. This accreditation guarantees you test results at the highest quality.

Our test centers play an essential part in all our development (concept, product, full solution) and manufacturing processes.



SPL mesh production at our factory in Wuxi, China.

Lightning Protection Systems

We are home to some of the world's leading experts in all disciplines within lightning protection of wind turbines. We can support you with a turnkey solution for complete protection – from risk assessment and conceptual design, through detailed design, prototyping, full scale- and component testing, and serial production from our global manufacturing footprint.

We use our expertise in modern wind turbine design to develop and produce customized solutions for you. These solutions include turnkey delivery of complex lightning protection systems for carbon blades, complex lightning protection systems for nacelles, and overvoltage protection and shielding for the electrical systems and principal components in the wind turbine. We always work closely, in confidence, with your own development engineers to provide you the best lightning protection solution.

Leading Edge Protection

Larger wind turbines mean longer blades and faster tip speeds. As a result, there are growing challenges linked to eroded leading edges due to the merciless onslaught from rain, hail, sand, and airborne particles. Our Everlasting



Our ELLE™ leading edge protection retrofitted to turbines at a harsh weather site on the North Sea coast.

Leading Edge (ELLE™) is a solution to effectively eliminate the erosion problem, which causes poorer aerodynamic performance and ultimately harm the structural integrity of your blades. You can apply ELLE™ during manufacturing or retrofit it to your installed base.

ELLE™ is the first leading edge protection on the market that has been verified by DNV according to DNV-RP-0573. ELLE™ therefore offers an unmatched lifetime durability and erosion resistance to maintain your turbines' aerodynamic performance.

Blade Monitoring & Optimization

We develop state-of-the-art blade monitoring and optimization solutions based on IIoT sensor technologies and innovative data analyses. Our solutions always include a blade monitoring hub. When connected to our strain sensors, the hub enables load monitoring of your blades, which is a vital part of any individual pitch control system. When connected to our vibration sensors, the hub can be used for ice monitoring.

Our blade sensor technology is based on fiber optics, making it immune to lightning strikes, and the durability is unmatched, outlasting the lifetime of the wind turbine. A proper blade monitoring system will significantly reduce your operating costs and increase your energy yield.

Transport Equipment & Solutions

We develop and supply tailored solutions for protecting wind turbine blades, nacelles, and tower sections during transport and storage. We combine our comprehensive know-how and expertise in working with polyurethane and other relevant materials. By incorporating advanced track & trace technologies, our solutions will reduce cost and complexity when it comes to your transport equipment and project logistics.



Polyurethane pad with embedded magnets to protect nacelles during transportation.

Subsea

We develop innovative, tailor-made, and reliable subsea solutions using our extensive material and testing expertise. Our solutions protect and enhance subsea installations and allow efficient installation on vessels to reduce your transport and logistics footprint.

Performance & Structural Components

We provide a wide range of blade implants and add-ons to ensure that your blades achieve maximum speed, performance, balance, and protection. These include serrations, vortex generators, T-spoilers, gurney flaps, blade root covers, balancing chambers, vibration dampers, cable support rings and guides, and sensor coatings.

All our implants and add-ons undergo comprehensive salt spray, temperature, and UV testing at our accredited test centers to ensure perfect adhesion and longevity throughout the life of your blades. These thorough tests can eliminate expensive service calls during your operations.

We often develop our tailor-made solutions to match your needs and specifications in a close partnership with your own aerodynamic engineers or blade designers.