



proven, advanced,
differentiated,
optimized



Wind Turbine Designs

Faster to market, higher performance ... better profit

The wind industry is a highly competitive and dynamic market. To remain competitive, wind turbine OEMs need solutions to access the areas of high growth. For this, wind turbine manufacturers require the most advanced technology to ensure the best energy harvest in some of the most demanding environments. Specialization is required to optimize performance and lower the Levelized Cost of Electricity (LCOE). They also need to have supply chain and service strategies in place to build their wind turbine business.

Whether onshore or offshore, megawatt or multi-megawatt, doubly-fed or full-scale conversion drivetrains, manufacturers need to have the ability to pick and choose turbine designs that enable rapid growth and support their business development strategy.

Through its Windtec Solutions™, AMSC offers a unique opportunity to quickly access new growth markets.

By licensing an AMSC wind turbine design, your relationship with our team of experts will enable you to have all the necessary technical knowledge and training in place to install a prototype in as little as 12 months. At a range of 1.65 MW to 10 MW rated power, AMSC has what you need to be successful. We provide enhanced turbine designs, including detailed and complete electrical and mechanical wind turbine system designs for self-manufacturing. All the turbine designs undergo test and certification according to international standards.

Established wind turbine manufacturers rely on us to collaborate on state-of-the-art wind turbine designs – to maintain a competitive advantage in a fast moving market. As our partner, you profit from our wide range of experience in the design and development of wind turbines as well as supply chain development and localization. The end result is a holistic solution, tailored to fit your specific needs.

Faster to market, higher performance ... better profit.

Development and licensing of customized wind turbine designs for self-manufacturing

Development and supply of full electrical systems

Established supply chain ready for volume production

Globally comprehensive field service and component localization support

Basic and advanced customer training courses

Proven and next-generation solutions according to Germanischer Lloyd (GL) certification

Our products

Through its Windtec Solutions, AMSC supports you throughout the entire process. All designs, including calculations and documentation adhere to strict international certification guidelines, including IEC and Germanischer Lloyd (GL). Along with the complete design comes a full set of documents for purchasing, quality assurance, assembly, operation and maintenance of the wind turbine.

We also provide electrical systems, including proprietary pitch, control and converter solutions that are GL certified. AMSC will provide you with the expertise to set up your turbine supply chain and localization to make procurement of parts faster, easier and more cost effective.

Windtec Solutions turbine designs

All designs equipped with unique pitch system for smooth operation.

When wind speeds exceed rated speed, the advanced pitch mechanism works quickly and smoothly to adjust the rotor blade angle to match the wind. If an overall pitch drive fault occurs, the integrated patented SafetyLOCK system allows the blades to turn into a feathering position.

Our grid expertise allows our turbines to be in full compliance with all grid codes.

Our wind turbines fulfill the most demanding international grid code requirements and have low voltage ride-through (LRVT)

capability.

Real-time information with continuous monitoring.

The integrated wtSCADA software provides a direct interface between turbine and owner or operator. With supervisory control and data acquisition, wtSCADA software enables active turbine monitoring.

The advanced wtCMS condition monitoring system provides continuous and real-time monitoring of the key system components.

Tools for analyzing and operating wind parks.

The wtWPC wind park controller manages the behavior of multiple wind turbines, uniting them into a self-contained power plant, offering a single, defined interface to the utility grid.

Variety of designs to suit your wind strategy

1.65 MW – Capitalize on our localization expertise

The wt1650df (doubly fed) is cost-efficient to manufacture and utilizes our integrated drivetrain.

2.0 MW – Optimized power curves for maximum efficiency

The optimized integrated electric systems of our 2.0 MW design combined with rotor diameter ranges from 80 to 100m result in some of the most efficient power curves in the industry today. Our advanced power electronics and IGBT-based converter ensure that the turbine works with high efficiency over the entire speed range.

3.0 MW – Best energy harvest at low wind conditions

The wt3000dd (direct drive), wt3000df (doubly-fed) and wt3000fc (full-scale conversion) models have been designed to offer the lowest possible cost of energy and are ideal for low wind speed markets.

5.5 MW – Capitalize on the rise of offshore wind

The wt5500df (doubly-fed) features a three-phase induction generator. The wt5500fc (full-scale conversion) uses a synchronous generator or asynchronous generator with a full-scale converter. We offer designs to suit your offshore strategy.

6.0 MW – Enhanced reliability for offshore conditions

The wt6000fc (full-scale conversion) has been specifically designed to withstand the aggressive environmental conditions of the marine climate. The turbine is durable, reliable and has a long operational lifetime.

10.0 MW SeaTitan™ wind turbine – Maximum power per tower in offshore wind

The SeaTitan (direct drive) wind turbine design utilizes an HTS generator, which is significantly smaller and lighter than a generator using conventional technologies.



- Fastest time to market
- Variety of turbine designs to fit any business model
- Some of the world's most efficient power curves
- Mechanical, electrical and software capabilities – one point of contact

Wind Turbine Designs

About AMSC's Windtec Solutions™

AMSC's Windtec Solutions enable manufacturers to launch best-in-class wind turbines quickly, effectively and profitably. We provide conceptual and detailed designs for complete wind turbines and advanced drivetrain systems. In addition, we provide a broad range of volume manufacturing support services, including supply chain development, localization and employee training. Our offerings also include advanced wind turbine electrical control systems that ensure highly reliable and efficient power flows. Whether you are a new entrant or a proven wind turbine manufacturer, our commitment is to provide you with the solution that delivers competitive advantage, lowers the cost of energy and enhances your return on investment.

We can do all of this for you; we are the partner you can turn to.

About AMSC®

AMSC (NASDAQ: AMSC) generates the ideas, technologies and solutions that meet the world's demand for smarter, cleaner ... better energy. Through its Windtec Solutions, AMSC enables manufacturers to launch best-in-class wind turbines quickly, effectively and profitably. Through its Gridtec Solutions, AMSC provides the engineering planning services and advanced grid systems that optimize network reliability, efficiency and performance. The company's solutions are now powering gigawatts of renewable energy globally and enhancing the performance and reliability of power networks in more than a dozen countries. Founded in 1987, AMSC is headquartered near Boston, Massachusetts with operations in Asia, Australia, Europe and North America.



Talk to us about

- Solving your most complex power challenges
- Enhancing competitive advantage
- Improving your system's performance, reliability and profitability

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Whether you wish to make new advances in renewable technology, optimize power generation or delivery, or simply gain a better understanding of the issues you face, please get in touch. We're here to help.



smarter, cleaner
... better energy

