About TÜV Rheinland

Founded 140 years ago, TÜV Rheinland is a global leader in independent inspection services, ensuring quality and safety for people, the environment, and technology in nearly all aspects of life.

To aid the successful planning, construction, installation and final acceptance of wind energy projects, we offer a wide range of services including project and product certification, expert reports, manufacturing surveillance and laboratory services.

Our global network of experts at around 500 locations in 65 countries can support you in everything you need to ensure your project is a complete success.

We are accredited by the German Accreditation Body (DAkkS) as a certification body for type and component certification of on- and offshore wind turbines.

And What Can We Do for You?

We will gladly advise you in all issues concerning small wind turbines.

Just contact us.

Always a good sign.

This mark stands for all the information about products, services and systems that are tested, certified or inspected by TÜV Rheinland. Transparent, available anytime worldwide – powerful and unique. The TÜV Rheinland test mark.

Small Wind Turbines

Certification of types and components

TÜV Rheinland
Industrie Service GmbH
Am Grauen Stein
51105 Köln
Germany
wind-cert@de.tuv.com
www.tuv.com/wind
Ensuring Safety and Quality of Your Small Wind Turbines

Steadily mounting energy prices and concerns about global climate change have convinced many people to seek alternative sources of energy. Wind energy is one alternative that is favored due to its scope for deployment and the progress of developments. There is a growing trend for small wind turbines (SWT), because they are a sustainable solution to fundamental problems surrounding the supply of energy.

The number of manufacturers may be growing, but enormous efforts and costs are entailed in the production of SWT. TÜV Rheinland supports manufacturers of small wind turbines with extensive certification services applying the IEC 61400-2 standard to reduce liability risks and ensure safety for people and the environment. There is no mandatory requirement for the certification of small wind turbines, but it is recommended and it enhances the trust of investors and insurers in the project. In Germany, certification according to IEC 61400-2 is necessary to fulfill all requirements of the DIBt (Deutsches Institut für Bautechnik) to easily gain the building permission which is valid a lifetime.

Type and Component Certification Services

Type and component certification of SWT in accordance with the IEC 61400-22 standard is comprised of the following modules:

1. Design review, including evaluation of:
   - Operational management and safety systems
   - Load and load cases
   - Rotor blades
   - Mechanical, structural and electrical components
   - Design Data Test
   - Foundations
   - Manufacturing process
   - Transport, installation and maintenance process
   - Health and safety

2. Type testing:
   - Verification of testing laboratory competence (according to ISO/IEC 17025)
   - Safety and functional testing
   - Performance measurement
   - Durability testing

3. Manufacturing surveillance:
   - Evaluation of the manufacturer’s QM system
   - Manufacturing inspection of all critical components (such as rotor blades, hub, shaft, etc.)

Upon the successful outcome of certification testing, a type certificate is issued. Optional modules include assessment of the foundation design, evaluation of the foundation manufacture and measuring the type characteristics which can be provided by TÜV Rheinland. In addition, we cooperate with a partner to offer services according to the British Microgeneration Certification Scheme (MCS).

Our experience – your benefit

Our network of experts serves our clients worldwide by providing reliable and comprehensive certification services to support their wind energy projects, in accordance with all applicable standards and regulations.

Drawing on our extensive experience in the field of type certification, we make sure your small wind turbines are flawless, safe, and productive.

Our services for small wind turbines

- Type and component certification according to IEC 61400-2
- Type static according to German DIBt
- MCS certification in cooperation with a reputable partner
- Assistance with CE marking process
- Further wind related services (noise, performance, yield measurements etc.)