



Offshore Training and Development Cluster

Training centre for the wind industry



▲ We train you: Learn from the wind experts.

Training at OffTEC

Professional qualification for your personnel

OffTEC offers the best environment for training wind industry personnel at one location.

We work concertedly with our clients in order to achieve the full potential offered by this advanced power engineering, to expand their expertise, and to increase professional qualification in the industry.

Hand in hand with the latest real technology

The engineering used in wind turbines is being constantly developed, and the number of turbines in operation worldwide is also increasing. But any new developments in technology are worthless without properly qualified staff to service and maintain them. If high power wind turbines are to be operated safely and effectively, it is all the more essential that the training and qualifications of the technical personnel are individually and carefully coordinated to keep up with the technological developments.

With this in mind we concentrate on the comprehensive technical and safety training of wind personnel in accordance with international standards, the latest guidelines and directives, and under realistic conditions. Our dedicated training site has special facilities for maritime and technical training, for fire fighting exercises and a training wind farm with real offshore wind turbines.

Certified training courses at one location

OffTEC represents many years of experience in the wind industry, with a team of professional instructors and an experienced partner network, all based at Germany's unique training centre on the innovative GreenTEC Campus.

We also meet the requirements of the STCW (Standards of Training, Certification and Watchkeeping for Seafarers) and OPITO (Offshore Petroleum Industry Training Organisation) and provide training in accordance with these guidelines. The proof of our philosophy of quality and reliability for high customer satisfaction is provided by our certification according to ISO 9001 and ISO 29990.

Training under real conditions

The wind power industry is based on expertise, and this expertise demands the sound and thorough bespoke training that OffTEC provides for its clients.

Challenging work on wind turbines requires comprehensive and on-going training on real technology – specially designed to meet your requirements.

The better trained your team is, the more professional its work; and the better positioned your enterprise is for the growing on and offshore market.

We develop the necessary foundations for this in close cooperation with wind industry enterprises and institutions like the Chamber of Industry and Commerce, health and safety agencies, and other representative industry bodies: together we establish the guidelines and principles for training urgently needed skilled personnel, and the corresponding safety concepts.

Individualised training and advanced training courses

Our aim is to provide sound preparation and training for technical staff employed on wind turbines, and courses covering all safety-related areas - as part of a complete training programme or as refresher courses.

For example, we offer all the courses necessary for the offshore wind industry in compliance with the Global Wind Organisation (GWO) standards. Bureau Veritas has accredited OffTEC as a certified provider of all GWO modules.

We provide training using real technology and active offshore wind turbines at one location – on the 130-hectare site that includes our training wind farm, maritime training centre, technology training centre, seminar centre and training towers.



Rescue training on wind turbine SWT-3.6-120.

Professional and individual

Training to suit your individual requirements

Meeting the increasing need for qualified personnel in the wind industry requires dedicated courses and training programmes. These include the sound teaching of trainees, specialisation for experienced mechatronic technicians and their thorough schooling in all safety-relevant matters.

Only by communicating well-founded know-how and practising a variety of scenarios in realistic conditions can your technicians receive the expertise and security they need for their work.

We offer bespoke courses, developed and implemented in association with experienced cooperation partners – such as the Kraftwerksschule Essen for the qualification of service technicians. For this we employ experienced instructors, orient ourselves on international standards, and offer qualifications specially adapted to meet the requirements of the various manufacturers. And all this at one location

➔ Training courses

- Maritime safety and rescue
- Safety and rescue at height
- Helicopter training
- Fire prevention & firefighting
- Wind turbine & system engineering
- Electrical engineering
- Storage & logistics
- Business organisation
- Power plant management
- Communication

➔ Apprenticeships and further qualification

- Wind turbine service technician
- Skilled electrician
- Skilled electrician for defined electrical work
- Certified industrial mechatronics engineer (BSc equivalent)

For the latest, detailed overview of all the training opportunities we offer, visit our website at www.offtec.de

Perfect infrastructure – unique in Germany

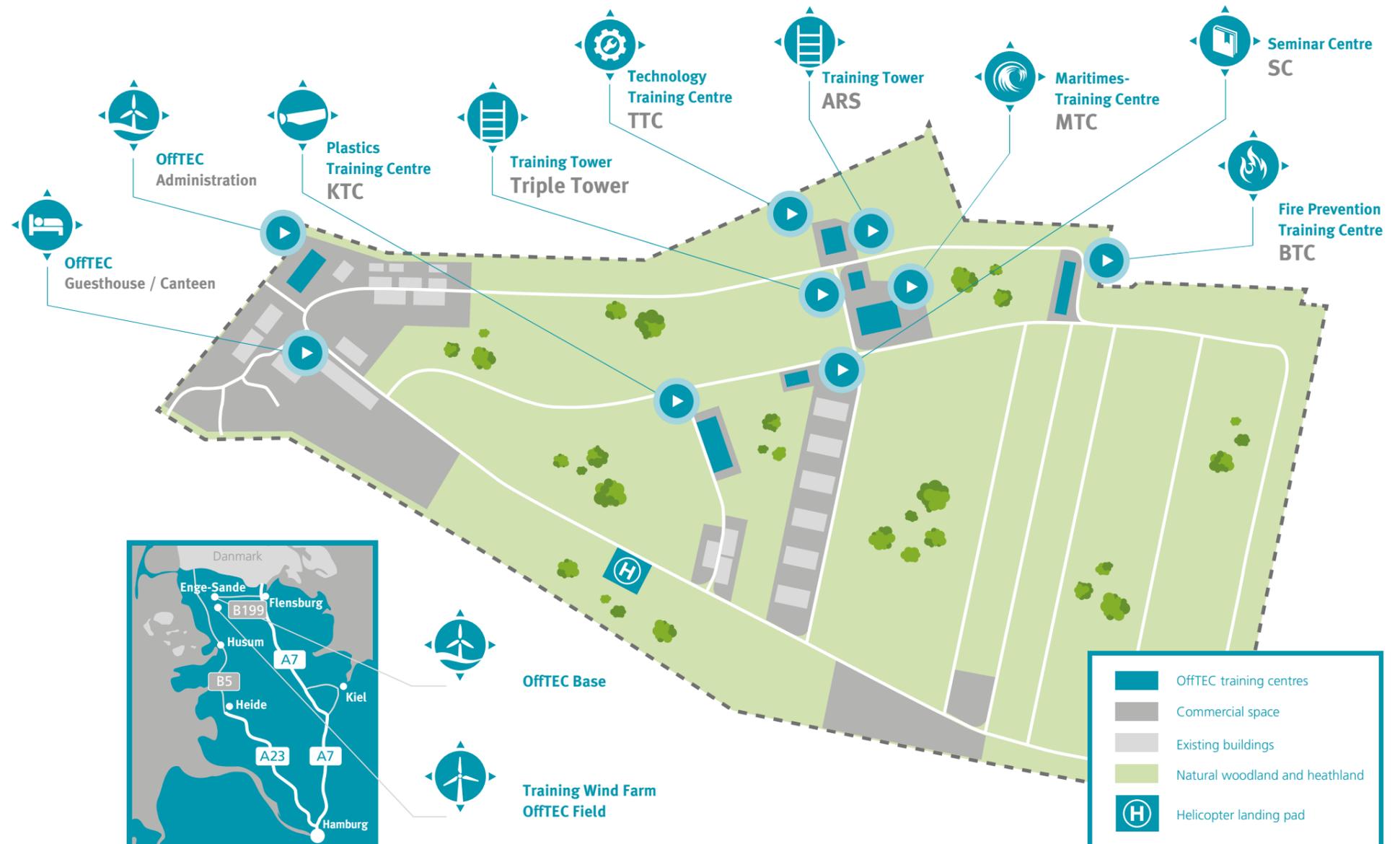
One location for all training courses

We rely on authentic conditions for implementing the various types of training we offer.

On the 130-hectare GreenTEC Campus we have set up several training centres for dedicated courses and training scenarios. Another important component is the OffTEC Field, our directly adjacent training wind farm.

We are the only enterprise in Germany that offers comprehensive training courses for all relevant wind power and safety subjects in one location. This ensures our customers less expenditure for organisation, travel and logistics.

Due to our new guest house including 36 beds, we offer our customers a full service with training, accommodation and food.



Maritime training centre

Training for survival at sea

Training courses can only be as good as the facility in which they are provided. This is why at our Maritime Training Centre we have combined real technology and modern infrastructure down to the last detail. We have thus been able to create an environment in which it is possible to simulate scenarios of operations out at sea as realistically as possible.

The complexity of our training centre and its connection with the other centres at the same location make it unique in Germany.

Waves like a stormy sea

The 13-metre high MTC building has a 15 x 23 metre pool with a depth of 5.5 metres (water depth 4.20 metres) and a wave machine that can simulate waves over 2 metres high. Here it is possible to recreate extremely realistic sea conditions. The facility has been extended to include an outside pool and a practice tower.

The main area also has a gallery extending over several floors that is equipped with an escape chute, boat landing system, winches, diving ramp and other rescue equipment. A special helicopter operator has been installed in the MTC for training rescue from moving water. A Helicopter Underwater Escape Trainer (HUET) enables the necessary training for offshore operations that includes evacuation and rescue from a ditched helicopter. The MTCs comprehensive features are completed by light and sound systems, and wind generation machines that together simulate various weather conditions.

Under constant surveillance of the safety divers, the participants get out of the helicopter simulator.

Variable and future-oriented

In addition to classic training scenarios and height-based exercises, in our MTC we also carry out simulations for boat landing on an offshore turbine and helicopter winching exercises using recognised and experienced instructors. Here we can also test new systems.

Our training centre and our team offer you a wide variety of opportunities for training your personnel to do the job you need them to do, and in line with all established standards.

🕒 Training courses

- Sea survival training with various wind and wave scenarios, also in accordance with the GWO guidelines
- Basic offshore safety training and emergency-response training
- Helicopter abseiling and survival training
- Helicopter underwater escape training (HUET)
- Capsizing training
- Special maritime training according to customer requirements
- Testing of various technical systems in the wave pool



▲ In various group exercises survival at sea is trained.

Equipment:

🕒 Building

- 25 x 38 m hall size
- > 12 m height
- 320 m² seminar, office, sanitary and technical rooms
- Gallery at two height levels over water for rescue training
- Flexibly movable suspension crane

🕒 Pool

- 15 x 23 m - 345 m² pool dimensions
- 5.50 m pool depth
- 4.20 m water depth
- Wave maker with waves over 2 m in height
- Various wave patterns possible

🕒 Rescue equipment and other fittings

- Helicopter fuselage for winching training
- Modular egress training simulator for HUET
- Escape chute system
- Boat landing simulator
- Lifeboats and life rafts
- Various types of safety equipment
- Platform for water exercises
- Winches
- Rope ladders, pilot ladders and net systems
- Capsizing Boat
- Wind and sound generators
- Freefall boat and outdoor pools in preparation

Training wind farm – OffTEC Field

Training on real offshore technology

The highest degrees of professionalism and sensitivity are required of technicians and rescue personnel when working on onshore and offshore wind turbines.

We offer training on real technology in preparation for such deployments at our OffTEC Field training wind farm.

Training courses under real conditions for optimum preparation for onshore and offshore operations

The operational wind farm currently has four Siemens offshore and onshore wind turbines of type SWT-3.6-120 and SWT-3.0-101DD, offering outstanding prerequisites for realistic training of your employees.

OffTEC also has other brands and models of wind turbines for a wide variety of training purposes. These include Nordex, Siemens (2.3), Vestas and Senvion.

Work on the real technology: Helicopter winch exercise on wind turbine SWT-3.6-120



➔ Training courses

- Extended height, safety and rescue training on real offshore wind turbines
- Winch training from helihoist
- Helicopter rescue training incl. rescuing at an angle from the transition piece
- Turbine and safety-related instruction (escape routes, safety equipment etc.)
- Device and handling instruction (onboard crane, service lifts etc.)
- Procedural training (access procedures, rescue procedures, work procedures)

➔ Equipment

- 2 Siemens SWT-3.6-120 wind turbines with full offshore configuration (90-metre tower, helihoist platform)
- 2 Siemens SWT-3.0-101DD wind turbines (80-metre tower, gearless)
- Helicopter landing pad

Technology training centre

Theoretical and practical wind turbine engineering

Theoretical and practical training for professional qualification of technical personnel is carried out in the Technology Training Centre (TTC), which has been specially equipped with extensive facilities for training on wind turbines.

Our experienced and certified staff teaches in accordance with established standards based on the rules laid down by BG/DGUV, VDE and VDI, and in accordance with the directives governing electrical engineering and mechanical training courses.

The shed has 700-m² floor space and contains a flexible crane track with a 2t hook load, laboratory and seminar rooms, as well as utility, storage, social and office space.

The TTC has been set up in such a way that it is possible to implement flexibly arranged, bespoke modular training courses that are specific to customer and manufacturer requirements.

➔ Training courses

- Comprehensive basic technical training for wind turbines
- Electrical engineering qualifications for persons instructed in handling electrical systems (EUP) through to qualified electricians
- Special module for erection and commissioning, etc.
- Screw tightening procedures and cable assembly
- Crane courses
- Manual handling in accordance with GWO
- Safety at height, rescue from confined spaces, etc. in accordance with GWO



The equipment of the TTC allows diverse technology-based instruction in existing situational conditions of wind turbines.

➔ Equipment

- Simulators in the shape of nacelles and wind turbine components
- Multifunctional lab with hydraulic, gear, electromechanical and electrical wind turbine components
- Wind turbine function simulator for qualification courses involving plant management, monitoring and maintenance
- Training stations for screw tightening procedures and cable assembly
- Integrated training platform for safety and rescue training

Fire prevention training centre

We can simulate the worst-case scenarios for a fire in a wind turbine at the Fire Prevention Training Centre (BTC). This is situated in a fireproof, former military facility on the OffTEC site, which has been fully modernised and equipped.

Here we provide exercises in fire prevention and firefighting, and knowledge of escape routes and procedures. Here we train the various reactions in case of fire on onshore and offshore wind turbines under realistic conditions.



The training towers

We operate a unique training tower for training working at heights in accordance with GWO and BG/DGUV standards. As its name suggests, the triple tower with a height of 18 metres actually consists of three towers, offering a specific infrastructure that makes it possible to carry out training with a variety of ascent and ladder systems and escape hatches.



Safety at height and evacuation training

By replicating the work areas of a wind turbine and various types of platforms, the Advanced Rescue Simulator (ARS) with a height of 6 metres can be used for safety at height training as well as evacuation from confined spaces such as nacelle, rotor blade, hub sections and from elevators. "Rescue from depth", "rescue a free-hanging person", "rescue from the yaw section and from under the gear box" are some of the scenarios that can be trained under realistic conditions in the ARS.



➔ Training courses

- Seminars on fire prevention and protection measures, and firefighting
- Practical firefighting relating to offshore turbines, including fire awareness training in accordance with GWO
- Use of PPE at height, also in accordance with GWO and BG
- First aid, including first aid in accordance with GWO specifications



▲ *OffTEC offers all relevant safety training at one location.*

Summing up...

The extensive training and seminar facilities that incorporate real technology at the OffTEC Base enables technical staff to receive thorough, professional training and qualifications.

With experienced instructors and state of the art technology at one dedicated location, and in accordance with the latest industry guidelines, OffTEC offers efficient training. We design the qualification programmes in cooperation with you the customer to create bespoke, and thus flexible and specific programmes that meet your particular needs.

- ➔ Training in accordance with the highest current industry standards
- ➔ Integration of real offshore and onshore engineering – offshore wind turbines and helicopter deployment
- ➔ Wind-specific training
- ➔ Unique maritime training centre with the latest maritime training technology
- ➔ Health, safety and environment proficiency, and its implementation in theory and practice
- ➔ Concentration of training in one location
- ➔ Individual qualification programmes according to customer specifications
- ➔ Modular programmes to enable flexibly designed courses
- ➔ Own equipment and real wind turbine technology
- ➔ Favourable all-inclusive package (training, accommodation, materials, etc.)



On the top of safety with OffTEC! ▶

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