

# Courses for the Wind Turbine Industry:

Basic Technical Training, Basic Safety Training according to GWO's standards and an overview of Rescue Center Denmark's offers to the industry.



Approved by DNV-GL according to the GWO-standard



## Rescue Center Denmark's standard offers to the wind industry include:

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### GWO Basic Safety Training

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Working at Heights	2 days
First Aid	2 days
Fire Awareness	½ day
Manual Handling	½ day
Sea Survival	1½ day

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### GWO Basic Technical Training

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Hydraulics	1,2 days
Mechanical	2 days
Electrical	1,3 days

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### GWO Basic Safety Training - Refresher

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Working at Heights - refresh	1 day
First Aid- refresh	1 day
Fire Awareness- refresh	½ day
Manual Handling- refresh	½ day
Sea Survival- refresh	1 day

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### Special courses for the wind industry

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Confined Space	2 days
Slinger Banksman	2 days
Advanced Rescue	5 days
ActSafe Equipment lifting	1 day
ActSafe Personal positioning, Inside WTG´s	4 days
ActSafe Personal Positioning, Inside/Outside WTG´s and blades	5 days

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On the following pages you can read the course content in the individual courses and the opportunities, there are at Rescue Center Denmark. We offer also complete course packages, so you don't have to waste time booking the necessary courses at various training providers. Our GWO activities meet the demands of GWO standard, ISO 9001, ISO 14001 and OHSAS 18001.

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## Overview and contact person

Key Account Manager, HSEQ and team leader  
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Enquiries regarding. Basic Maintenance Training, Basic Safety Training, Refresher, Act Safe, Slinger/Banksman, Confined Space, Advanced Rescue, Cooperation agreements and quality/work environment

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Enquiries. Basic Maintenance Training & BST

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## Cooperation agreements

- Rescue Center Denmark cooperate with Falck Safety Service in order to provide better courses and work together continuously striving to improve the quality of the courses.
- Rescue Center Denmark cooperates with Zulaü and Act Safe Sweden in relation to courses in Act Safe.
- Rescue Center Denmark cooperates with SAT-Training with regard to Sea Survival.
- Rescue Center Denmark's concept is that the benefit of these cooperation's will be invaluable to our customers experience.



## Why GWO?

The purpose of the GWO standard is to prevent accidents and work injuries in the wind industry, while securing a basic technical insight in wind turbine construction and maintenance.

Member companies of Global Wind Organization, that for example consist of the largest operators and producers in the industry have together developed a standard for basic security courses in the wind industry. This means that GWO standard is recognized in the branch, as the standard all should have as a common basic security training. Recently a common basic technical training has developed Basic Maintenance Training. Even more importantly, it is an education that all producers recommend and agree to use. That means that it will not be necessary to take a new basic training if you change job or contracted by another firm.

As a known course provider, Rescue Center Denmark has established a leadership system. We are required to document that we fulfill the standards demands in relation to competent teachers, teaching and safety during teaching. The guidelines for our training and equipment are approved to the appropriate standard. It is your guarantee for provision of quality and your guarantee for a serious and competent course provider. Rescue Center Denmark's GWO activities meet the demands of all GWO standards, ISO 9001, ISO 14001 and OHSAS 18001 - all together audited by DNV-GL.

## Rescue Center Denmark.

The name is relatively new but our experience is solid. Rescue Center Denmark was established in August 2012 with a merger of the entire course activities in our course center West including wind, fire brigade and rescue training. This was combined with a merger with EUC Vest. This fusion meant that Rescue Center became part of Rybners. The background to the merger was to create a better service for our customers. Rescue Center Denmark has for years serviced the branches largest wind turbine producers and a diverse range of customers from the wind industry. While offering Maintenance Training we build further on over a 125 years' experience in technical and subject specific education in Rybners.

### We advise on the following equipment:

RedPro, DD, Milan, Aztec, Rollgleiss, ID's, Troll, Ralf, ActSafe, ActSafe rescue kit.

We offer certification and recertification courses in the above-mentioned equipment.



## GWO Technical Training

Basic Technical Training (BTT) consists of three course modules with the following duration and subjects:

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### Basic Technical Training in relation to GWO Standard, 4 ½ days.\*)

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Hydraulics	1,2 days
Mechanical	2 days
Electrical	1,3 days

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\*) The duration has been set in accordance with GWO standard.

#### Hydraulics: (1½ days)

Foundation level hydraulics inclusive of Pascal's law, PPE, knowledge of hydraulic systems, pumps, pressure, power transmissions, sensors, connections, oil filters etc. It is at a foundation level, in relationship to wind turbines with a focus on personal security and general security inclusive of a risk analysis at hydraulic installations.

#### Mechanical: (1½ day)

Basic mechanical knowledge about wind turbines main components: Foundations, tower, nacelle etc. Knowledge of gear systems, bolts, bolt tightening, welding, tools (Measuring and tightening) brake systems, yaw system, lubrication, cooling, inspection, related to wind turbines with focus on personal security and general security.

#### Electrical: (1½ days)

Basic electricity, personal security, measuring equipment prevention of unexpected start up, electric components: Motors, relays, diodes, transformers, sensors etc., basic theory and diagram study, wind turbine electric - functional systems and the main components.

#### Entry requirement

There is no entry requirement to Basic Maintenance Training, but be aware if participants

continue onto a GWO Basic Safety Training (which there is a demand for in the wind industry), that there is a weight limit to 136kg. The participant's weight including equipment may not be over 136 kg.

#### Course certificate and validity.

After the completion of the course, a certificate is issued without an expiry date. It is expected that after the course that the participants maintain their competences during their employment. The individual company assesses the employee to decide if a refresher course in Basic Maintenance Training is necessary.

The teacher continuously assesses the participant's efforts and results and issues a certificate based on a satisfactory effort.

#### Registration.

Prices, accommodation and registration via [www.rescuecenter.dk](http://www.rescuecenter.dk) or tlf.: +45 7913 4485.

#### Attention.

If one or more of the participants speak a different language than Danish, the course is thought in English.





Our offers are combined together as a package deal due to the request from the wind industry. However if there is a request for a single module we can also accommodate this need.

For new employees in the industry we recommend the following combination comprising of:

Basic Technical training and Basic Safety Training, in total 13½ days training: Then the basic skills are in place for a future in the wind industry- naturally after GWO standard.

If there is a need to supplement training wishes for example. "on-site" training or other wishes - then contact us and we will find a solution to your training needs. Or to say it in another way: If you don't find what you are looking for, then call us. We will find a solution that fits your needs for example training on demand or supplemented training to fit the customer's needs.

Due to the fact that Rescue Center Denmark is a part of Rybners, we can offer a wide range of highly specialized courses within, electricity, management, hydraulics etc. We have years of service to the oil/gas industry and the wind industry including developing technical courses.

Call us and hear more on what we can do for your business: Business consultant Thomas Christiansen at [tc@rescuecenter.dk](mailto:tc@rescuecenter.dk) or tlf.: + 45 7613 3360 - Mobile +45 6114 5499

Rescue Center Denmark has over many years built up expertise and know how within training for the wind industry due to cooperation's with industries large producers. This means that we have developed and built on to our training facilities to a high level with masts wind turbine towers and a nacelle. This gives the optimal and most realistic training environment to comply with the intentions in the GWO standard. Training facilities don't just include the module "Working at Heights" but form also the frame of the other course modules, so that the effect of the training becomes more optimal in the wind turbine environment.

For further details contact Rescue Center Denmark, Key Account Manager, HSEQ John Møller Jensen at [jmj@rescuecenter.dk](mailto:jmj@rescuecenter.dk) or telephone: +45 30 46 48 80.

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## GWO Basic Safety Training

Modules in the education: Basic Safety Training (BST) include 5 course modules with the following durations and subjects:

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### Basic Safety Training according to GWO Standard, 6½ days.

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Working at Heights	2 days
First Aid	2 days
Fire Awareness	½ day
Manual Handling	½ day
Sea Survival	1½ days

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All modules are valid for 24 months. Rescue Center Denmark offers refresher courses in all modules.

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## GWO Basic Safety Training - onshore, 5 days

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### Working at Heights (2 days)

Height rescue with a combination of practical and theory. There is training in the use of personal fall protection equipment. Evacuation exercises and rescue equipment. Training is up to 20 meters of height on masts ladders and towers.

### First Aid (2 days)

First Aid, with focus on accidents and First Aid in connection with work in the wind industry. It includes theory as well as practical exercises in a realistic environment for example inside a tower or a nacelle.

### Fire Awareness (1/2 day)

Basic education in fire extinguishing in different situations with the most commonly used fire extinguishers. There is training in the evacuation from a nacelle in the case of fire. Teaching is conducted with a run through of the theoretical information followed by practical exercises.

### Manual Handling (1/2 days)

Manual handling with focus on the difficulty accessing working places and the restricted working space in the wind industry. Training comprises of a theoretical introduction and practical exercises.

### Entry requirement

There is a maximum weight limit on Working at Heights, so that the participant including equipment may not be over 136 kg.

### Course certificate and validity

After the completion of the course, a certificate is issued with an expiry date. It is expected that after the course that the participants maintain their competences during their employment. The individual company assesses the employee to decide if a refresher course in Basic Maintenance Training is necessary.

The teacher continuously assesses the participant's efforts and results and issues a certificate based on a satisfactory effort.

### Attention

If one or more of the participants speak a different language than Danish, the course is thought in English.

Our offers are put together as a package deal due to the request from the wind industry. However if there is a request for a single module we can also accommodate this need.

## GWO Basic Safety Training – onshore/offshore, 6½ days

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### Course modules:

#### Working at Heights (2 days)

Height rescue with a combination of practical and theory. There is training in the use of personal fall protection equipment. Evacuation exercises and rescue equipment. Training is up to 20 meters of height on masts ladders and towers.

#### First Aid (2 days)

First Aid, with focus on accidents and First Aid in connection with work in the wind industry. It includes theory as well as practical exercises in a realistic environment for example inside a tower or a nacelle.

#### Fire Awareness (1/2 day)

Basic education in fire extinguishing in different situations with the most commonly used fire extinguishers. There is training in the evacuation from a nacelle in the case of fire. Teaching is conducted with a run through of the theoretical information followed by practical exercises.

#### Manual Handling (1/2 day)

Training in manual handling with focus on the difficulty accessing working places and the restricted working space in the wind industry. Training comprises of a theoretical introduction and practical exercises.

#### Sea Survival (1½ day)

Training sea safety with a combination of theory and practical. There is a run through of the safety equipment and it's use during evacuation from a vessel and during man over board exercise.

#### Entry requirement

There is a maximum weight limit on Working at Heights, so that the participant including equipment may not be over 136 kg.

#### Course certificate and validity

After the completion of the course, a certificate is issued without an expiry date. It is expected that after the course that the participants maintain their competences during their employment. The individual company assesses the employee to decide if a refresher course in Basic Maintenance Training is necessary.

The teacher continuously assesses the participant's efforts and results and issues a certificate based on a satisfactory effort.

#### Registration

Prices, accommodation and registration via [www.rescuecenter.dk](http://www.rescuecenter.dk) or tlf.: 7913 4485.

#### Attention

If one or more of the participants speak a different language than Danish, the course is thought in English.





## GWO Basic Safety Training - Refresher

Modules in education: Basic Safety Training Refresh (BST-R) contains 5 course modules with the following duration and subjects:

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### Basic Safety Training Refresher in accordance with GWO Standard, 4 days

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Working at Heights	1 day
First Aid	1 day
Fire Awareness	½ day
Manual Handling	½ day
Sea Survival	1 day

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All modules are valid for 24 months. There is recertification every 2 years with all modules.

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#### Content of modules.

The content of the refresher modules is the same as the content in Basic Safety Training but the refreshment duration time is reduced and there is a repetition of the skills learned on a Basic Safety Training course.

#### Validity rules and recertification deadlines

Recertification deadlines are until 2 months before a certificate expires. This means that if a participant renews a certificate in the period 2 months before the expiry date then the expiry date from the original certificate is kept and the 24 months validity starts from that date. For example: A certificate that expires on the 30/09-2016 but the participant renews his certificate on the 31/7. The certificate is printed with the date 30/09-2016 as a starting date of the certificate and an expiry date of 30/09-2018.

To refresher courses the entry requirement is that the participants holds a valid certificate. A

valid certificate is understood as GWO certificate that does not expire before the refresher course is complete.

#### Entry requirement

The entry requirement is the same as on a Basic Safety Training course. There is a maximum weight limit on Working at Heights, so that the participant including equipment may not be over 136 kg.

#### Registration

Prices, accommodation and registration via [www.rescuecenter.dk](http://www.rescuecenter.dk) or call: ++45 7913 4485

#### Attention.

If one or more of the participants speak a different language than Danish, the course is thought in English.

Our offers are put together as a package deal due to the request from the wind industry. However if there is a request for a single module we can also accommodate this need.



## Special offer to the wind industry

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Confined Space	2 days
Slinger Banksman	2 days
Advanced Rescue	5 days
ActSafe Equipment lifting	1 day
ActSafe Personnel positioning/Inside WTG´s	4 days
ActSafe Personnel positioning/Inside/Outside WTG´s incl. blades	5 days

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All modules are valid for 24 months. Rescue Center Denmark offers refresher courses in all modules.

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### Confined Space (2 days)

Content: Confined Space theory, methods to risk assessments, safety risks, use of gas measures and monitoring oxygen content. Use of breathing apparatus and Air Line systems, security and rescue equipment with practical exercises.

a spine board or marine board. Secure and correct evacuation of a casualty from a wind turbine.

### Course requirement

Course requirement: GWO First Aid, GWO Working at Heights and GWO manual handling.

### Slinger Banksman (2 days)

Content: responsibilities and rules for those who work with rigging and lift operations. Approval and marking rules for rigging equipment, inspection and retiring rules for rigging equipment. Different types of equipment and their application, rigging technique, beam angles, communication and signal techniques. Assessment of loads and heavy point's placement, rigging loads, secure use of radio, organization of a lift and placement of the loads.

If you haven't found what you are looking for then we can find a solution for you.

If there is a need to supplement training wishes for example. "on-site" training or other wishes - then contact us and we will find a solution to your training needs. Or to say it in another way: If you don't find what you are looking for, then call us. We will find a solution that fits your needs for example training on demand or supplemented training to fit the customer's needs.

### Advanced Rescue (5 days)

Content: Correct and secure rescue of a casualty from a wind turbine incl. hub, nacelle, lift and tower. Secure and correct use of rescue equipment in rescue situations, correct and secure assistance to rescue teams. Correct and secure attachment and placement of the unconscious on

For further details contact  
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## Courses in the use of ActSafe Power Ascender

Rescue Center Denmark have a cooperation with Zulaü A/S in relation to courses in Act Safe. Our courses in Act Safe are approved by the product manufacturer.

These courses are for firms that will use Act Safe to lift equipment, material or people. Here is the opportunity at a low cost to quickly place the specialist into a position where they can inspect wind turbines, blades inside and outside, undertake a lift at restricted access area or as a backup set up a crane. Act safe is an equipment can be used for many different work situations and rescue Center Denmark is ready to instruct in the various situations it can be applied.

### ActSafe Equipment Lifting

1 days. Course Content:

- Slinger Banksman theory and practical lifting exercises.
- ActSafe functionality and inspection. Safety instructions, guidelines and legislation for ActSafe, lifting
- equipment and accessories. Equipment lifting operations.

### ActSafe Personal Positioning inside towers/WTG´s.

This course gives competencies for both inside work and includes equipment lifting.

4 days. Course Content:

- Person lifting/man riding. Bringing experts or themselves in position for working at difficult reachable work Places using the Ascender according to manufactory and HSE recommendations inside WTGs. The use of back up ropes and emergency plans in place.

### ActSafe Personal Positioning outside towers/Blades/WTG´s 5 days.

This course gives competencies for both inside and outside work including equipment lifting. 5 days. Course Content:

- Person lifting/man riding. Bringing experts or themselves in position for working, at difficult reachable work places using the Ascender according to manufactory and HSE recommendations inside/outside WTGs and Blades. The use of back up ropes and emergency plans in place.

### Entry requirements:

GWO Working at Heights and GWO First Aid or equivalent.

The manufacturer recommends a refreshment training every 2 years.

### Certification

ActSafe Power Ascender courses for the wind turbine industry are approved by DNV-GL according to ISO 22846-1 and -2. (Standards for Rope Access systems.)

For further details contact Rescue Center Denmark, Key Account Manager, HSEQ

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