

The power

behind fully compliant
fall protection equipment



nacelle



tower



rescue



multisafeTM
systems

COMPLETE NACELLE SAFETY

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rescueTM
systems

COMPLETE RESCUE SOLUTIONS

easyclimber[®]
systems

COMPLETE TOWER SAFETY

Uniline Safety Systems is a leading international manufacturer of fall protection products and systems, with a range of products and solutions specifically designed for the wind energy sector and engineered to reduce risk and enhance safety at operational level.

fully protected fully compliant

A FULL RANGE

Uniline offers a complete range of safety products to meet the needs of service and maintenance personnel. Our systems include fully compliant, practical solutions for climbing towers, anchoring in localised areas and for working on the roof of Nacelles in exposed and potentially dangerous environments, along with a range of rescue products that can be used in conjunction with our anchorage systems.

GLOBAL SUPPORT

An ethos of quality, service, training and support has earned Uniline a deserved reputation around the world. With offices in the UK, North America, Spain and Australia and operating through specialist safety companies in over 25 countries, Uniline provides local technical, design, product and maintenance support, training and installation services to enable our customers to meet their specific safety objectives.

QUALITY YOU CAN TRUST

Uniline's systems are manufactured to ISO9001: 2000 standards, tested to conform with all international fall protection requirements and are CE Marked to the European PPE Directive. Rigorously tested to meet the additional unique and stringent requirements of the wind energy sector, they represent high quality, functional solutions that inspire confidence with users.

By selecting one company to provide all of your systems for fall prevention and rescue, you can increase productivity, enhance customer satisfaction and be assured of a safe working environment for all.

Products can be supplied for production or retro-fit to existing wind farms.

Complete Nacelle Safety



The nacelle can be a hazardous working environment. External access is required for inspection and maintenance tasks, exposing workers to the risk of falling.



Once outside the Nacelle, exposed conditions increase risk and it is essential to be able to attach to a secure anchorage and move about efficiently and confidently. In the event of a slip or fall, the worker will almost certainly need to be rescued, so additional anchorage points need to be available to provide the flexibility and security to carry out such an operation.

Anchorage points are also helpful for facilitating inspection and maintenance tasks to the tower and blades, where rope access techniques can be used. Comprehensive safety provision is required to undertake such tasks in safety.

Uniline has tailored its proven safety products to meet the specific needs of wind turbine manufacturers and operators.

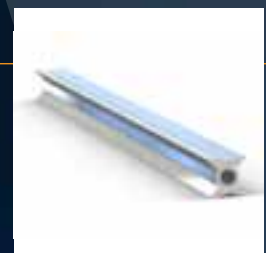
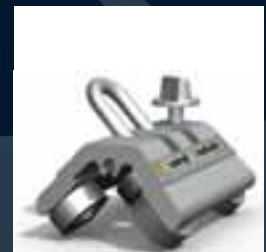
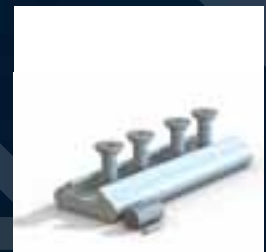


UniRail®, part of MultiSafe systems, provides a continuous anchorage system for up to 3 workers for fall protection, suspended access and rescue applications.

Features include free running attachment carriages, removing the need for double lanyards, improving user functionality and increasing worker safety and efficiency. These can be parked during use to maintain worker stability, increasing user confidence and safety during work positioning and rescue tasks. They can also be parked when not in use to prevent the wind from moving them away from access points.

The system can easily be installed both during production and retrofitted to existing structures, enabling customers to standardise their chosen fall protection solution. A proven safety product, UniRail offers over 20 years working life in harsh offshore and onshore environments: a life expectancy that reduces replacement and ownership costs.

The UniRail System is produced from marine grade aluminium and is anodised providing long term protection. Fixings have been developed for wind energy structures with proven waterproofing details to prevent water ingress. The system enables the rail to expand and contract with changes in temperature, removing the risk of damage or unnecessary stress to the structure or fixings. The system and carriages provide a minimum strength of 24kN. (Fixings at 750mm centres typical).





WIND ANCHOR TYPE 1



The rail system is complemented by a range of anchor points that can be attached to by two workers for fall protection, suspended access and rescue applications.

Wind Anchor Type 1

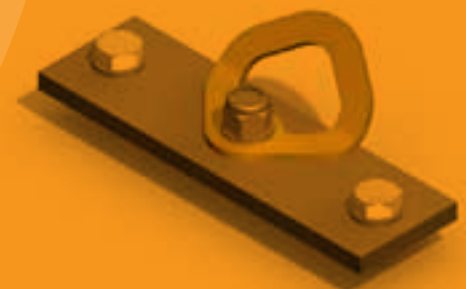
- Suitable for use by two workers
- Fixed to the structure using a single 16mm (5/8") fastener
- Able to rotate around its fixing point for maximum functionality
- 44kN strength, surpassing the requirements of all standards
- Powder coated yellow for EN50308 compliance
- 316 Stainless steel construction for good corrosion resistance in harsh working environments

Wind Anchor Type 2

- All the features of wind anchor type 1 but supplied with a stainless steel fixing plate to spread the load to the structure as required
- Particularly well suited to structures where fixing centres and sizes are pre-determined. 12mm fixings (1/2") recommended. 250mm fixing centres typical.

All products have been tested and meet the requirements of European Standard EN795, OSHA 1915.159, ANSI Z359.1 and EN50308, are CE Marked and have been tested and verified by Germanischer Lloyd, Hamburg for compliance with their own standards for anchor points and attachment systems.

Uniline can also develop bespoke anchor solutions for mass production.



Complete Tower Safety

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Extensive research with some of the world's leading wind turbine manufacturers into the specific needs for vertical ascent and descent inside the tower of a wind turbine, combined with thorough product testing and assessment, has enabled Uniline to produce the safest vertical climbing systems in the market. No other product in the market today exceeds the performance of Uniline's EasyClimber Systems.



 **easyclimber**
systems

Aluminium ladders, which are extensively used in wind turbines, are significantly weaker than steel and therefore fall protection systems that are attached to them must effectively and reliably control fall energy to prevent damage to or failure of the ladder structure.

EasyClimber systems' patented energy absorber uses unique Force Management® load control technology, reducing forces in the system in the event of a fall to less than 4kN, leaving it undamaged and ready to carry out a rescue. The energy absorbers are re-settable and therefore reduce the cost of ownership.

Climbers must scale heights of up to 120m and so it is extremely important that the safety system offers good functionality during ascent and descent.

The EasyClimber cable system is fixed to the structure at regular intervals using cable guides, allowing the user to pass over them without any need for manual intervention and leaving them free to concentrate on climbing without the problem of the attachment device snagging or having to remove the cable and re-insert it in to holding sleeves. This increases efficiency and user safety.

Climbing takes place in a unique environment and climbing techniques have been proven to override safety locking mechanisms in some manufacturers' attachment devices. This has previously resulted in death and serious injury.

Uniline has worked closely with manufacturers and operators of wind turbines to understand how climbers use safety systems and developed the Monkey® attachment device which addresses all of the known situations that occur whilst climbing, working and resting in the tower of a wind turbine. The Monkey has been extensively tested using dummies and a range of safety harnesses to provide the maximum possible protection for maintenance workers and engineers (test reports are available on request.)

When entering the tower of the turbine, maintenance personnel need to see easily that the safety system is ready for use.

Each system is supplied with a tensioning unit that maintains a pre-set cable tension and provides a visual indicator to the user at ground level. If the visual indicator is showing, the system is correctly set for use.

Systems must be quick to install so that turbine installation and operating schedules are not unnecessarily interrupted.

Uniline has developed an effective installation tool kit, which takes into consideration the confined operating environment whilst increasing installation efficiency. This kit on top of the system's excellent design ensures fast and simple installations.

EasyClimber Cable Systems

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easyclimber[®] systems

Tested to and conforms with EN353-2, BS5062-1, ANSI Z359.1, OSHA 3124-12R.

Key Features of the Monkey attachment device (Patent pending)

- Spring loaded cable guide prevents instability and cam deactivation during close proximity climbing or resting
- Unit weighted to provide the best functionality to safety ratio for the user
- Auto locking system ensures worker safety during attachment
- Tamperproof anti-inversion device ensures the unit cannot be put on upside down
- Bull nose prevents the user from being able to bear down on the device when in close proximity to the ladder (a major cause of attachment device failure)
- Bespoke karabiner design ensures fast cam engagement speed in all circumstances
- Tested and proven to work with a wide range of harness designs
- Developed specifically for use in the unique environment of a wind turbine tower

Each EasyClimber system comes with a 10 year guarantee**. As you would expect from Uniline, all fixings are isolated from any dissimilar metals and have been designed for minimal maintenance in the future.

**subject to terms and conditions



Complete
RESCUE
Solutions

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Uniline's range of rescue and evacuation products has been enhanced to provide a complete global solution for wind turbines. As different countries have different requirements, compliance issues can often cause problems for manufacturers and operators of wind turbines.



Uniline's considerable experience and global reach has allowed us to develop our rescue product range to meet the requirements of international customers. This means users are always able to train with and use our products, safe in the knowledge that they meet local compliance requirements.

The range complies with European standards EN341 Class A and EN1496; American standards ANSI Z359.4 2007 & NFPA 1983; and Australian standards AS4142.3.

The products have detailed instructions for use in the appropriate language, making the delivery of quality training easier. In addition, Uniline offers access to an international service for work

at height and rescue training by competent and experienced personnel and service, and maintenance manuals to assist authorised personnel in inspecting devices. Service and maintenance centres support customers' needs for continuous rescue provision and repair of training devices, and maintenance free packaging solutions for infrequently used equipment provides long term product protection, even in harsh environments.



LiftEvac™

A controlled rate of descent device that combines evacuation with raising and lowering of a worker or casualty, Lift Evac offers high levels of safety and maximum flexibility for all rescue situations in the wind turbine.

LiftEvac is easy to anchor and control and intuitive to use due to its 'ratchet' style raise and lower facility. The ratchet handle is telescopic to give more leverage when required, with a second handle providing stability and control during use and making the raising of two persons very comfortable compared with other rescue products. It is especially beneficial in confined environments and for use on ladders.

The LiftEvac can be used to recover a casualty whilst the rescuer remains in a safe position. If necessary, the rescuer can descend to the casualty whilst maintaining complete control of the device. The product can also be used as an access system, allowing for inspection tasks to be undertaken in a controlled and flexible manner.

Work height:

Up to 160m for 2 persons at a time (200kg)

Rate of descent/ascent:

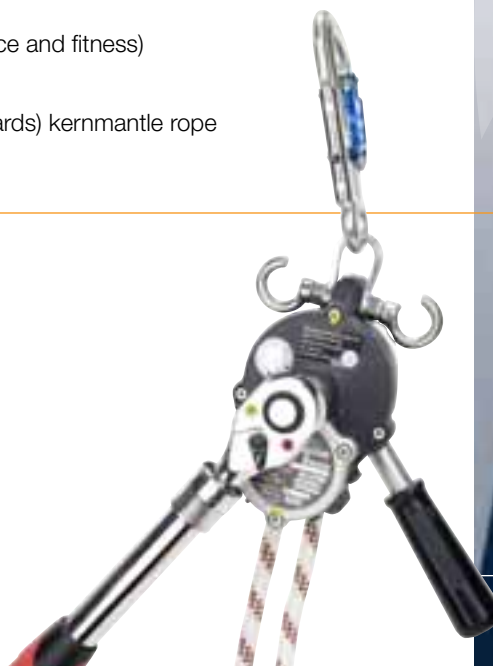
0.8 metres per second descent

0.2 metres per second ascent

(dependant upon operator competence and fitness)

Rope:

10mm or 11mm (for Australian standards) kernmantle rope





MinEvac™ & MinEvac™ Hub

MinEvac is a controlled rate of descent device that combines evacuation and raising and lowering of a worker or casualty. It can be used in a variety of rescue situations when combined with the hub wheel, allowing the casualty to be raised in order to detach them from an anchorage when under load. The product is available for one or two persons for rescue and evacuation.

**Work height:**

Up to 160m for 1 or 2 persons at a time

Rate of descent:

0.8 metres per second

Rope:

10mm or 11mm (for Australian standards) kernmantle rope

Both the Liftevac™ and Minevac™ are lightweight and compact designs, making them easy to carry and use in confined environments; offer 10mm or 11mm kernmantle rope options enabling international compliance and feature a stainless steel pulley wheel option for training devices, reducing the maintenance requirement and increasing training productivity.

Accessories:

Uniline offers a range of accessories including pulleys, slings, rope levers, rope protectors, karabiners, rope clamps and rope grabs, addressing the many different requirements for rescue products and training. These can be combined with the rescue devices to make bespoke kits, or purchased separately.

Storage solutions



Rescue product use falls in to two categories: firstly, frequent and predictable use – where storage should provide easy access and comfortable transportation. For these situations, Uniline offers quality kit bags made from tough PVC lined nylon, with 38mm wide webbing carry straps, cord fastening, air holes, drainage holes and an inner karabiner loop. Various sizes of bag are available.

Secondly, for emergency use, where storage should protect the product to ensure it remains in perfect condition for use whenever it is needed, Uniline offers high density polyethylene storage bags, factory sealed to prevent the long term ingress of moisture. The bags have a moisture vapour transfer rate of 0.02 and offer a maintenance free solution for up to ten years. The bags have an easy access tear point and a moisture gauge and window so that the product can be checked without removing it from the bag. They are then stored inside a sealed aluminium or yellow composite case, depending on the customer's preference, which further protects them from damage.

the power to fully protect



Training

Training personnel to work at height on a wind turbine is a specialist activity to be undertaken by highly skilled and experienced trainers. Through Uniline's international network of specialist contractors, we can support customers with training provision in climbing, height access and rescue. Uniline will only ever put customers in touch with companies with the appropriate skills to support you, thereby ensuring you of a complete solution for your height safety needs and reducing exposure to risk within your organisation.

We're experts in fall protection and rescue, so you don't have to be.



Support

Where ever, when ever you need our support, you have it. Uniline's customer service and support is unsurpassed in our market place and with an International presence and distribution in 25 countries we can provide technical, design, product and maintenance support for all aspects of height safety, helping our customers to keep their business moving.

Uniline Safety Systems is a leading international manufacturer of fall protection products and systems. Through a combination of expert knowledge and practical experience, we can help our customers reduce risk and increase safety when working at height.

Uniline's comprehensive range of products offers fully compliant, practical solutions for structures of all types, in all industries. Our ethos of delivering quality, service, training and support for our customers has earned Uniline a deserved reputation for excellence around the world.

Operating through specialist safety companies in over 25 countries, Uniline provides local support and installation services to meet the specific safety objectives of all our customers.

easyclimber systems

The best vertical fall protection systems in the world won't let you down. The extensive development of the EasyClimber range of products for vertical structures including masts, towers, pylons, wind turbines, silos, bridges and chimney stacks ensures customers will enjoy the safest and most functional climbing experience possible.

roofsafe systems

If you need a safety solution for roof access during maintenance and inspection tasks, then look no further than Uniline's RoofSafe product range. Our products, including roof anchors, horizontal lifelines, horizontal rail systems and walkways offer comprehensive protection for workers on all types of roofs.

multisafe systems

MultiSafe comprises three of the best known brands in fall protection safety: Uni-8, Uni-16, and UniRail. The versatility of these products combined with Uniline's expertise in fall protection ensures we can solve even the most complex of height safety problems in industry, construction, façade access and for all manner of building maintenance and inspection tasks.

rescue systems

A range of intuitive rescue and access products to aid recovery of workers after a fall or in an emergency at height. The diversity of Uniline's Rescue range ensures we can provide a solution for all types of rescue situations whilst keeping safety the top priority.



because lives depend on it

www.unilinesafety.com



Member of
EWEA
WIND IS POWER

BWEA
Delivering the UK's wind, wave and tidal energy

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