With its decades of experience, Hailo Wind Systems has a comprehensive range of high quality products and system solutions for the professional equipment of wind turbines.

Whether service lifts, ladders, fall arrest systems, climb assists, movable platform, tower equipment and much more: Safety, reliability and quality are always our top priority.

Hailo Wind Systems - High Level Access Solutions
As inventor of the aluminum ladder in Europe over 50 years ago, Hailo introduced the professional ladder systems into the wind turbines. So Hailo was there right from the start!

Today, Hailo Wind Systems is one of the world’s market and technology leaders for safe and reliable access and climbing solutions. With our premium ladder systems, customized service lifts, smart climb assists, convenient movable platforms, modern fall arrest systems and much more, we provide everything for professional access systems in wind turbines.

Along with our comprehensive range of services, our international, GWO-certified training center, the Safety And Rescue Academy (S.A.R.A.), sets the standard for safety training and education in the wind industry. With our own subsidiaries and service centers on 4 continents, we provide our customers professional, excellently trained contact persons and service technicians worldwide.

We are proud of our passionate contribution to sustainable energy generation and increased safety in wind turbines. And you can feel this enthusiasm in all of our projects.

28 THOUSAND Successfully finished wind industry projects
75 COUNTRIES Imported our high level quality products
1.000 CUSTOMERS Are associated with our products or services
With its decades of experience, Hailo Wind Systems has a comprehensive range of professional products and system solutions. Service lifts, ladders, fall arrest systems, climb assists, movable platform, tower equipment and much more:

Our product portfolio always offers the very best quality – for safe, reliable and high-quality access systems in wind turbines.

With this sustainable strategic approach, we are one of the leading suppliers for ladders, fall arrest systems and service lifts. Worldwide.

**HIGH LEVEL ACCESS SOLUTIONS**

**Access technology meets highest standards**

With its decades of experience, Hailo Wind Systems has a comprehensive range of professional products and system solutions. Service lifts, ladders, fall arrest systems, climb assists, movable platform, tower equipment and much more:

Our product portfolio always offers the very best quality – for safe, reliable and high-quality access systems in wind turbines.

With this sustainable strategic approach, we are one of the leading suppliers for ladders, fall arrest systems and service lifts. Worldwide.

**OVERVIEW**

**LADDERS & FALL ARREST SYSTEMS**

We introduced professional ladder systems into the wind industry. High-quality rungs with unique beading and a special grip profile ensure that our ladder quality is worldwide appreciated. Also available with rail- or rope-guided fall arrest systems.

**CUSTOMIZED SERVICE LIFTS**

We develop service lifts precisely tailored to our customer’s needs and requirements. Thanks to our comprehensive expertise, our ladder- and rope-guided service lifts are characterized by their reliability, quality, safety, smart design and low lifecycle costs.

**CLIMB ASSISTS & MOVABLE PLATFORM**

Our innovative E-Lift and H-Lift climb assists, as well as our brandnew movable platform C-lift, are smart alternatives to service lifts and are also ideally suitable for retrofit projects. Benefit from their extensive advantages and enjoy a new climbing experience.
By using the built-in ladder system in wind turbines, you can really experience the safety benefits of high quality components. Only reliable ladder systems can give you the reassurance of safety that should be self-evident.

As the inventor of the aluminium ladder 50 years ago, Hailo introduced the professional ladder system into wind turbines. Since this pioneering achievement, we have continuously developed our ladder systems and brought innovative solutions to the market, such as heated, self-deicing rungs or rails with LED lights.

Today we offer an extensive range of ladders that are unique in terms of quality and variety. High-quality rungs with anti-slide-profile and patented beading ensure that our ladders are well-known around the world. Naturally, our ladders are internationally certified and available in many widths, lengths and with customized rung distances.

Regardless whether they are for onshore, offshore, cold climate or lattice towers: With our huge range of ladders and accessories, such as ladder connectors, rung repair kits or assembly aids, we will always offer the perfect ladder system for you.

**WE INTRODUCED THE PROFESSIONAL LADDER SYSTEMS INTO WIND TURBINES!**

**QUALITY**
Patented, double-beaded rung connection for maximum durability.

**RELIABILITY**
More than 50 years of manufacturing expertise and worldwide service experience.

**SAFETY**
High-quality rungs with anti-slide profile and customized rung distance.

**YOUR BENEFITS FROM HAILO WIND SYSTEMS LADDERS:**
- Suitable for onshore, offshore and lattice towers
- High-quality materials and processing
- Patented beading
- Non-slip rungs with special anti-slide profile
- Individual rung distance
- Worldwide installation, maintenance and repairs
- Innovative rope- and rail-guided fall arrest systems
- Complete range of ladder accessories such as rung adapters, rail connectors and ladder brackets
- Customized solutions like nacelle ladders or mounting aids
TOPlift+

The TOPlift+ from Hailo Wind Systems sets new standards for ladder-guided service lifts. Besides of several innovative safety features, the TOPlift+ particularly stands out due to its great reliability and high-quality processing.

Continuous enhancements with improved details and new components have made the TOPlift+ even more robust, reliable and powerful. For example, downtimes and maintenance times have been reduced significantly, while the levels of safety and quality have been increased. This has caused professional service lifts which exceed even the highest requirements of our long-standing customers.

Naturally, we offer all service lift models in customized versions to meet, for example, the particular requirements of offshore wind power plants.

In addition they are also available in compliance with the Machinery Directive 2006/42/EC, CE certificate and as an option available with transparent macrolon or as a cold climate versions (CCV).

Also, all TOPlift+ models are ideal for retrofits in existing wind turbines or nacelle turbines.

<table>
<thead>
<tr>
<th>TOPlift+</th>
<th>L1+</th>
<th>L2+</th>
<th>L3+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payload / Persons [max.]</td>
<td>250 kg / 2 Persons</td>
<td>250 kg / 2 Persons</td>
<td>300 kg / 3 Persons</td>
</tr>
<tr>
<td>Speed</td>
<td>18 m / min at 50 Hz</td>
<td>18 m / min at 50 Hz</td>
<td>18 m / min at 50 Hz</td>
</tr>
<tr>
<td>Operational temperature range</td>
<td>-20 °C to +50 °C Available on request to -35 °C (L1 only)</td>
<td>-20 °C to +50 °C Available on request to -35 °C (L2 only)</td>
<td>-20 °C to +50 °C Available on request to -35 °C (L3 only)</td>
</tr>
<tr>
<td>Cabin dimensions: LxWxH [mm]</td>
<td>962 x 950 x 2750</td>
<td>962 x 800 x 2750</td>
<td>962 x 1200 x 2750</td>
</tr>
<tr>
<td>Space requirement for clearance of the cabin</td>
<td>1000 x 1000</td>
<td>930 x 1000</td>
<td>1300 x 1000</td>
</tr>
</tbody>
</table>
With GLOBALlift R, Hailo Wind Systems achieved its goal of manufacturing locally, quickly and economically all over the world a service lift that fulfills the highest quality requirements.

The new GLOBALlift H+ models were developed on the basis of a rope-guided 2-man cabin but are also suitable for transporting one person. State-of-the-art safety systems, such as the constantly improved arresters, hoists and overload protection systems, always ensure maximum safety.

The modular aluminum structure with its special design allows an improved all-round view, while the compact cabin affords maximum protection and comfort. Naturally, we offer all service lift models in customized versions to meet, for example, the particular requirements of offshore wind power plants.

In addition they are also available in compliance with the Machinery Directive 2006/42/EC, as cold climate versions (CCV) and with CE certificate worldwide upon request.

Also, all GLOBALlift models are ideal for retrofits in existing wind turbines or nacelle turbines.

**NEW FEATURES OF GLOBALlift+**
- Improved hoists & fall arresters
- E-control with innovative display (optional)
- Many improved details

**SERVICE LIFTS**

**GLOBALlift H / H+ Series**

<table>
<thead>
<tr>
<th>Model</th>
<th>Payload / Persons (max.)</th>
<th>Speed</th>
<th>Operational temperature range</th>
<th>Cabin dimensions (LxWxH) (mm)</th>
<th>Space requirement for clearance of the cabin (LxW) (mm)</th>
<th>Rope distance (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>250 kg / 1 Person</td>
<td>18 m / min at 50 Hz</td>
<td>-20 °C to +40 °C</td>
<td>638 x 670 x 2915</td>
<td>720 x 720</td>
<td>630</td>
</tr>
<tr>
<td>H2+</td>
<td>250 kg / 2 Persons</td>
<td>18 m / min at 50 Hz</td>
<td>-20 °C to +40 °C</td>
<td>580 x 986 x 3119</td>
<td>1200 x 800</td>
<td>1150</td>
</tr>
<tr>
<td>H4</td>
<td>250 kg / 2 Persons</td>
<td>18 m / min at 60 Hz</td>
<td>0 °C to +55 °C</td>
<td>703 x 1060 x 2921</td>
<td>1200 x 940</td>
<td>1020</td>
</tr>
<tr>
<td>H5</td>
<td>250 kg / 2 Persons</td>
<td>24 m / min at 60 Hz</td>
<td>0 °C to +55 °C</td>
<td>815 x 1102 x 3074</td>
<td>845</td>
<td>746</td>
</tr>
</tbody>
</table>

**GLOBALlift R / R+ Series**

<table>
<thead>
<tr>
<th>Model</th>
<th>Payload / Persons (max.)</th>
<th>Speed</th>
<th>Operational temperature range</th>
<th>Cabin dimensions (LxWxH) (mm)</th>
<th>Space requirement for clearance of the cabin (LxW) (mm)</th>
<th>Rope distance (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1</td>
<td>250 kg / 2 Persons</td>
<td>18 m / min at 50 Hz</td>
<td>-25 °C to +50 °C</td>
<td>683 x 1189 x 2882</td>
<td>1300 x 800</td>
<td>1150</td>
</tr>
<tr>
<td>R2</td>
<td>250 kg / 2 Persons</td>
<td>18 m / min at 50 Hz</td>
<td>-25 °C to +50 °C</td>
<td>683 x 1033 x 2882</td>
<td>1200 x 800</td>
<td>1020</td>
</tr>
<tr>
<td>R3</td>
<td>250 kg / 2 Persons</td>
<td>18 m / min at 50 Hz</td>
<td>-25 °C to +50 °C</td>
<td>783 x 854 x 2882</td>
<td>950 x 900</td>
<td>846</td>
</tr>
<tr>
<td>R4+</td>
<td>250 kg / 2 Persons</td>
<td>18 m / min at 50 Hz</td>
<td>-25 °C to +50 °C</td>
<td>780 x 710 x 2882</td>
<td>900 x 900</td>
<td>746</td>
</tr>
</tbody>
</table>

**SAFETY FUNCTIONS**

All GLOBALlift models come with professional monitoring and safety functions such as the following:

1. Optimized travel route limits and additional limit switches above and below the cabin ensure maximum safety.
2. High-quality fall arrester to ensure speed limitations while ascending or descending.
3. Reliable hoist in accordance with international (quality) standards.
4. State-of-the-art control cabinets for a better overview and intuitive access to the E-control. Optionally available with innovative display!
5. New lateral guide profiles that optimise the guiding characteristics and enable more comfortable usage.
C-LIFT – THE SMART MOVABLE PLATFORM

The C-lift is the smart movable platform from Hailo Wind Systems. Driven via two steel ropes and guided by the fall arrester rail of the ladder system, the movable platform is operated via wireless connection by a drive unit installed on the ground. The C-lift transports one person (up to 120 kg) reliably and safely.

The C-lift not only impresses with its high cost-effectiveness as well as easy installation and operation, but also due to smart features such as its send function, automatic operation (when the treading surfaces are folded in), wireless signal connection, reduced maintenance requirements and its suitability for retrofits.

Versatile safety features such as limit switches for automatic switching off, overload detection, wireless signal redundancies and an emergency-off function, as well as the mandatory two-hand operation, ensure a high safety standard.

C-lift TECHNICAL DATA

- Dead Weight: 26 kg without drive unit and control
- User weight: Max. 120 kg
- Speed: 18 m/min
- Operational temperature range: -20 °C to 50 °C
- Compatible fall arrest systems: H-50 and other
- Ladder inclination: -3 ° to +15 °
- Power: 1.1 kW
- Functions: Automatic travel, send function, wireless signal communication and many more.
- Safety functions: Overload detection, limit switches, automatic switching off, emergency-off function, two-hand operation and many more.
- Safety information: Personal safety ensured via compatible fall arrester. The C-lift is not a substitute for fall protection or PPE!

HIGHLIGHTS

- Cost-efficient & smart
- Faster & more comfortable than climbing
- Easy operation & maintenance

MOVABLE PLATFORM

HUGE TIME SAVINGS
Up to 50 % faster ascent and descent (approx. 150 h/year)

VERSATILE SAFETY FUNCTIONS
Reliable system of safety services

HIGH COST REDUCTIONS
Extremely large reduction in total investment per wind turbine

BETTER WORKING CONDITIONS
Significant improvement in working conditions

EASY TO USE
Simple installation and operation

FLEXIBLE TO USE
Ideal for retrofit projects

LOW MAINTENANCE REQUIREMENTS
Minimal maintenance and training requirements
E-LIFT – THE INNOVATIVE CLIMB ASSIST

The E-Lift is a portable, motorised climb assist system that was specifically designed for wind turbines.

Thanks to its unique functionality and modern technology, the E-Lift creates time savings of up to 50 % and reduces the physical burden by 80 %. Due to its innovative technology, the speed is individually adapted to the user’s weight, which makes it considerably more efficient and comfortable to use compared to all other climb assists.

Thanks to its generously dimensioned battery, the E-Lift can be flexibly brought to any location and is therefore the ideal climb assist for wind farms of any size. Based on the numerous safety functions, it is reliable and safe to use – not only in wind turbines.

HIGHLIGHTS

- Innovative technology
- High cost-effectiveness
- Automatically adaptive tractive force

TECHNICAL DATA

<table>
<thead>
<tr>
<th>E-Lift</th>
<th>TECHNICAL DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>11.5 kg</td>
</tr>
<tr>
<td>User</td>
<td>50 to 130 kg</td>
</tr>
<tr>
<td>Ascent &amp; descent time savings</td>
<td>Max. 50 %</td>
</tr>
<tr>
<td>Assistance force</td>
<td>80 % of user weight</td>
</tr>
<tr>
<td>Speed</td>
<td>Max. 24 m/min</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>0 °C to 50 °C (10 °C if battery &gt; 0 °C)</td>
</tr>
<tr>
<td>Range</td>
<td>Approximately 1,500 m (about 9 ascents and descents)</td>
</tr>
<tr>
<td>Battery</td>
<td>Li-Ion, 11.6 Ah, charging time: 5 h, service life after 1,000 charges: approx. 80 %</td>
</tr>
<tr>
<td>Ladder inclination</td>
<td>Max. 0 - 3 ° or 5 ° per 5 m</td>
</tr>
<tr>
<td>Safety information</td>
<td>Not a device for passenger transport, no fall protection/PPE.</td>
</tr>
</tbody>
</table>

STANDARDS

- Machinery Directive 2006/42/EC
- EMK Directive 2014/30/EU
- ISO 9001:2015
- CE conformity
**H-LIFT – THE EFFICIENT CLIMB ASSIST**

The H-lift is a modern climb assist system that was specifically designed for cost-effective use in wind turbines. It reduces ascent and descent times by up to 50 % and the physical burden of climbing by about 40 kg.

To save costs, all major components are mobile and can be installed in a few steps. The drive and control unit is only required once per system, making it particularly efficient to use in wind farms. Thanks to many improvements, high set-up costs and expensive investments are a thing of the past.

The operation of the H-Lift was also specifically tailored to the requirements of wind turbines. Furthermore no training course or intensive maintenance is required either.

And thanks to the numerous safety functions, it is reliable and safe to use – not only in wind turbines.

**HIGHLIGHTS**

- Cost-efficient & mobile
- Faster & more comfortable climbing
- Easy operation & maintenance

**HUGE TIME SAVINGS**
Up to 50 % faster ascent and descent (approx. 150 h/year)

**REDUCED EFFORT**
Up to 40 kg less physical load

**ENORMOUS COST REDUCTIONS**
Extremely large reduction in total investment per wind turbine

**BETTER WORKING CONDITIONS**
Significant improvement in working conditions

**SIMPLE INSTALLATION**
Simple installation and operation

**FLEXIBLE TO USE**
Ideal for retrofit projects and temporary use

**VERY LOW MAINTENANCE REQUIREMENTS**
Minimal maintenance and training requirements

**H-Lift TECHNICAL DATA**

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dead weight (motor unit / control)</td>
<td>20 kg (14 kg / 6 kg)</td>
</tr>
<tr>
<td>User weight</td>
<td>60 to 120 kg</td>
</tr>
<tr>
<td>Support</td>
<td>Up to 40 kg</td>
</tr>
<tr>
<td>Adjustable speed range</td>
<td>25 - 35 m/min</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-10 °C to 45 °C</td>
</tr>
<tr>
<td>Ladder inclination</td>
<td>Max. 0 - 3 ° or 5 ° per 5 m</td>
</tr>
<tr>
<td>Safety information</td>
<td>Not a device for passenger transport. No fall protection/PPE.</td>
</tr>
</tbody>
</table>

**STANDARDS [PENDING]**

- Machinery Directive 2006/42/EC
- EMC Directive 2014/30/EU
- ISO 9001:2015
- CE conformity
FALL ARREST SYSTEMS FROM HAILO WIND SYSTEMS - SAFETY AT EVERY LEVEL

Our fall arrest systems stand for maximum safety and quality. All systems comply with PPE Directive 89/686 EEC for climbing protection systems, are internationally certified and are suitable for use as reliable fall protection on fixed ladders.

All of the accompanying fall arrest devices, including fixed guides, are also equipped with integrated shock-absorbing elements to minimise impact forces and have been in use successfully worldwide for many years.

MANUFACTURER KNOW-HOW
Expertise, experience and know-how from the specialists.

CUSTOMIZED PRODUCTS
Excellent solutions for individual requirements.

COMPREHENSIVE SERVICES
Installation, maintenance and more from one partner.

HIGH QUALITY STANDARDS
We are continuously enhancing all of our products.

OUR FALL ARREST SYSTEMS BENEFITS

H-50.2 FALL ARREST SYSTEM
Our approved rail-guided fall arrest system for maximum safety and reliability:

- High-quality aluminium extruded profile
- Worldwide appreciated
- Continuous, frame-less grooved design
- Excellent durability
- Fast installation
- Long-term safety

NEW: H-50.2 FALL ARREST SYSTEM

NEW: HWS-FAS 8 FALL ARREST SYSTEM
Our brand new cost-efficient rope-guided fall arrest system with many extras:

- Can be used regardless of ladder and rung width
- Very easy, fast installation
- Available with 8 mm steel or stainless steel rope
- Steel insert for reduced rope elongation
- Ideal for retrofits
- Practical indicator for correct rope tension

FALL ARREST DEVICES

<table>
<thead>
<tr>
<th>Description</th>
<th>H-50.2</th>
<th>HWS-FAS 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full arrest runners</td>
<td>PARTNER H-50.2, rail-guided</td>
<td>HWS SKE EVO, rope-guided</td>
</tr>
<tr>
<td>Weight incl. shock absorber (approx.)</td>
<td>1,200 kg</td>
<td>0,500 kg</td>
</tr>
<tr>
<td>User weight</td>
<td>50 to 136 kg</td>
<td>50 to 140 kg</td>
</tr>
<tr>
<td>Possible angle</td>
<td>-3° to 15°</td>
<td>-15° to 15°</td>
</tr>
<tr>
<td>Features</td>
<td>Fall protection rail can be used simultaneously with up to 5 persons</td>
<td>Fall protection rope can be used simultaneously with up to 5 persons</td>
</tr>
<tr>
<td></td>
<td>Very simple attachment to the ladder</td>
<td>Very simple attachment to the ladder</td>
</tr>
<tr>
<td></td>
<td>Runner detachment at any time</td>
<td>Runner detachment at any time</td>
</tr>
<tr>
<td></td>
<td>Very short fall arrester slip path</td>
<td>Very good running characteristics and easy operation</td>
</tr>
<tr>
<td></td>
<td>Excellent grip on rail even if dirty or oily</td>
<td>Minimal maintenance and repairs</td>
</tr>
</tbody>
</table>

NEW: HWS-FAS 8 fall arrest system

NEW: HWS SKE EVO
Quality, reliability and safety always have top priority for our products and services.

Whether service lifts, ladders, fall arrest systems, climb assists, movable platform, tower equipment, hoists, fall arresters, e-controls, ropes or individual requirements: Hailo Wind Systems as your global partner enables you to achieve new heights with safety.

Hailo Wind Systems – High Level Access Solutions.