



TAILOR-MADE SOLUTIONS FOR SPECIAL LIFTING AND TRANSPORTATION TASKS IN THE GLOBAL WIND TURBINE INDUSTRY

**WWW.LIFTRA.COM** 

### **ABOUT LIFTRA**

At Liftra, we develop and manufacture advanced lifting and transportation solutions to optimize wind energy operations worldwide.

Our innovative solutions reduce mobilization time, lower environmental impact and optimize safety, enabling cost-effective installation and maintenance operations.

With a global presence and a strong commitment to innovation, we strive to support the wind industry's continued growth.



PER ESKE FENGER CO-FOUNDER, OWNER & CEO



JENS MORTENSEN CO-FOUNDER, OWNER & CEO

INNOVATION FOR THE WIND INDUSTRY SINCE:

2003

GLOBAL OFFICES:

8

AND GROWING

EMPLOYING

650+

PROFESSIONALS.

EQUIPMENT USED IN

30+

Industry Leader

IN SELF-HOISTING **TECHNOLOGY & BLADE**  Experts

IN DEVELOPING LIGHT-WEIGHT STEEL STRUCTURES.

OEM's preferred

CHOICE OF TOWER TRANSPORT SYSTEMS.

Trusted Supplier

TO MAJOR OEM'S, WIND FARM OWNERS AND SERVICE PROVIDERS.

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### GLOBAL PRESENCE

WITH 8 GLOBAL OFFICE LOCATIONS, WE SUPPLY OUR TOOLS AND SERVICES TO OVER 30 COUNTRIES WORLDWIDE.

We strive to support our customers with cost-efficient and optimized transportation, installation, and maintenance solutions worldwide. Therefore, we have established offices in Denmark, China, Spain, the USA, Poland, Vietnam, Brazil and Australia.

With a team of over 600 talented professionals, we offer a wide range of onshore and offshore solutions.

### QUALITY SOLUTIONS

AT LIFTRA WE TAKE PRIDE IN OUR ABILITY
TO PROVIDE CUSTOMERS WITH HIGHQUALITY PRODUCTS

Quality control is embedded in our engineering process, and we have extensive experience with third-parties like DNV and Bureau Veritas, approving products in accordance with EN, ISO, ASME and DNV standards and rules.

Liftra is actively involved in the European Crane Standardization Committee (S-353), contributing to the development and adhering to crane standards.

We operate under multi-site certified management systems (ISO 9001 and ISO 45001, with ISO 27001 and 14001 in progress) and hold EN 1090 and ISO 3834 certifications for our in-house production—ensuring consistent, high-quality, and safe delivery of our products and services.



# YOUR BUSINESS PARTNER IN THE WIND INDUSTRY

AT LIFTRA, WE BELIEVE THAT COLLABORATION DRIVES INNOVATION. THROUGH JOINT VENTURES AND STRATEGIC PARTNERSHIPS, WE HAVE DEVELOPED SOLUTIONS THAT ENHANCE OPERATIONAL EFFICIENCY, IMPROVE SAFETY, AND REDUCE THE COSTS OF WIND TURBINE INSTALLATION AND MAINTENANCE.

Our strategic partnerships and joint ventures include:

### PowerCurve

Independent service provider specializing in aerodynamic blade enhancements.



Liftra-owned blade repair company specializing in large-scale blade repairs.



Disrupting offshore fixed and floating wind turbine maintenance.



Customized software and control solutions for the wind industry.



Pioneering offshore wind installation with vessel-based self-hoisting cranes.



Enabling offshore major component exchange through advanced crane and vessel motion compensation.



Smarter lifting through sensor-driven precision and safety.



Customized on-site repair solutions and tooling combined with advanced lifting technologies.

We are always exploring new opportunities to collaborate and innovate. Therefore, we embrace partnerships and business ventures that align with our commitment to develop high-quality, efficient and sustainable solutions for the wind industry.



READ MORE
ABOUT OUR
PARTNERSHIPS
ON LIFTRA.COM:

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### **OUR SOLUTIONS**

AT LIFTRA, WE OFFER A WIDE RANGE OF COST-EFFICIENT SOLUTIONS PROVIDING OPTIMIZED OPERATIONS FOR THE WIND INDUSTRY. BACKED BY EXTENSIVE EXPERIENCE, WORLD-CLASS ENGINEERING, AND AN AGILE APPROACH WE DESIGN OUR EQUIPMENT TO SUPPORT OPERATIONS ON BOTH CURRENT AND NEXT-GENERATION WIND TURBINES — ALL WITH A CLEAR FOCUS ON A SUSTAINABLE FUTURE.

#### Engineering

We offer comprehensive engineering services, whether you need concept verification, codevelopment of a solution, or a completely new product designed for your specific demand. Our team of engineers is ready to deliver the best solution for your challenge.

#### Equipment

Developing tools for transportation, installation and maintenance of wind turbines is our specialty. Liftra tools are designed for easy mobilization to complex locations, support efficient operations at high wind speeds and reduce CO<sub>2</sub> emissions created during operation. Our cranes, yokes and transport frames are used globally by the largest stakeholders in the wind industry to tackle the most challenging operations. Get an overview of our product portfolio on p. 9 and read more on the following pages.

#### Manufacturing

With over 20 years of production experience, Liftra operates manufacturing facilities in Denmark, China, Vietnam, Spain and Poland. Our facilities' day-to-day processes includes the production, assembly and quality assurance of Liftra tools for transportation, installation and maintenance.



#### Services

To enable the most optimal use of your Liftra equipment, we offer a variety of services, such as:

- Operator training
- Inspection and maintenance
- Operation
- Product Support

Our experts are ready to assist you, ensuring smooth and efficient operations.

#### Refurbishment & Rental of Tower Transport Systems

The Liftra Tower Transport System is one of our oldest and most widely utilized solutions. Our rental and refurbishment concept ensures efficient use of the Liftra Tower Transport System. From our refurbishment centers in China and Vietnam, we refurbish both rented and customer-owned systems, extending product lifetime and ensuring continued high-quality performance.

#### Load Test Facility

At the Liftra Load Test Facility in Nakskov, Denmark, we offer tests in one of the largest test benches in Europe. With 2000 ton pulling force the test facility is utilized to test loads of lifting yokes, crane blocks and other heavy lifting and transport equipment.

### PRODUCT SERVICES

WE ARE HERE TO MAKE SURE YOU GET THE MOST OUT OF YOUR LIFTRA EQUIPMENT.

#### Training

equipment purchase. Our training programs ensure that operators are fully equipped with the knowledge and skills required for safe, efficient, and high-quality Liftra equipment operation.

#### Inspection and maintenance

We offer annual inspection and maintenance of your Liftra equipment worldwide, whether it be at one of the Liftra locations or a location chosen by the client. During inspections, our product specialists ensure that your Liftra equipment remains in excellent condition and complies with all specifications and requirements.

both onshore and offshore operations. Our experienced

We have a team of support engineers at your disposal for

**READ MORE** PRODUCT SUPPORT ON



At Liftra, we provide comprehensive training with every

#### Operation support

We provide highly skilled and certified operators for professionals can support your operation of Liftra equipment whenever additional support is required.

#### **Product Support**

spare part requests or technical difficulties. You can read more about Liftra product support and contact us on our website: liftra.com/en/product-support.

> **ABOUT LIFTRA** LIFTRA.COM:



### **PRODUCTS**



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**ONSHORE CRANES** MAINTENANCE





### LIFTRA SELF-HOISTING CRANES

COST-EFFECTIVE, UNIVERSAL UP-TOWER CRANE SOLUTIONS FOR ALL MAJOR COMPONENT EXCHANGE OPERATIONS, ELIMINATING THE NEED FOR LARGE, CONVENTIONAL CRANES.















#### Reduced mobilization costs.

Transported in a single standard 40-foot container.



#### Minimal site footprint

Ideal for remote locations and areas with poor infrastructure.



#### Multi-brand compatibility

Multi-brand system - compatible with all the major turbine brands.



#### Optimized for safety

The operator is in full control right next to the crane and gearbox.



### Proven technology

More than 50 cranes operating worldwide on 6 Continents.



#### WLL Up to 78 tons



#### Weight

24-26 tons Depending on tower height



Max hub height 170



### Peak wind speed

18 m/s peak



Fully Electric option



Reach

Up to 7 m





### LIFTRA INSTALLATION CRANE

THE STATE-OF-THE-ART SOLUTION FOR COST-EFFICIENT AND SUSTAINABLE WIND TURBINE INSTALLATION ONSHORE AND OFFSHORE.













Build upon self-hoisting crane technology In use since 2013.



CO<sub>2</sub> emission reduced by 50% for crane work



Reduced civil work

Over 50% of crane pad area reduction compared to conventional cranes.



Reduce installation time by 25%

The fastest road to power production.



#### Minimal Mobilization

All parts fit a standard truck bed, and the crane can be relocated between turbines on a SPMT without disassembling.







Max tower height 250m



Wind Speeds 18 m/s (14 m/s for blades)



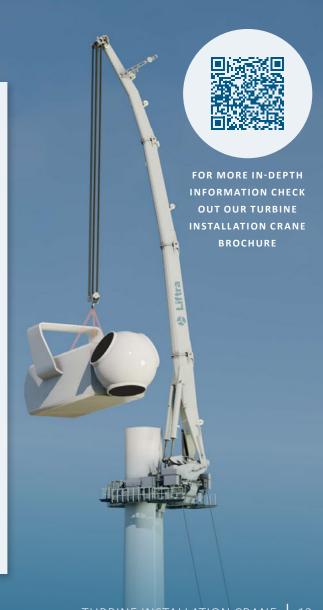
Transport size 8 Trailer loads



Crane System Weight 120t



Required Crane pad area Less than 900m2



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### YOKES

LIFTRA PROVIDES A DIVERSE RANGE OF LIFTING YOKES DESIGNED TO ENHANCE EFFICIENCY AND SAFETY IN WIND TURBINE INSTALLATION AND MAINTENANCE.

Liftra Yokes lift and carry all wind turbine components, including towers, nacelles, blades, rotors, main shafts and more!

Designed to operate in challenging site conditions, Liftra Yokes support efficient operations at high wind-speeds, reducing downtime and providing more time-efficient operations.

• Efficient

• Multi brand

• Secure

• Onshore/Offshore



CHECK OUT ALL



### OFFSHORE SOLUTIONS

THROUGH STRATEGIC COLLABORATIONS, WE INTRODUCE INNOVATIVE OFFSHORE MAINTENANCE SOLUTIONS, POWERED BY OUR SELF-HOISTING CRANE TECHNOLOGY.

#### **ATOMS Platform**

The ATOMS platform is a multi-brand solution for optimizing the maintenance of fixed-bottom and floating wind turbines using the Liftra Self-Hoisting Crane. The platform was developed by SOLVE WIND, a joint venture between Liftra and Esteyco.



#### Reduces Costs

Self-Hoisting Crane technology eliminates hub height as a cost driver



#### Universal

No seabed or water depth limitations, as there is no need to jack up

#### OCX (Offshore component exchange)

This solution combines the LT1200 Liftra Self-Hoisting Crane technology with HMH Heave Compensation technology, supporting service operations from offshore supply vessels.



### DEME Offshore and Liftra joined forces:

Developing a novel installation and maintenance methodology, including the Turbine Installation Crane (TIC) technology integrated on board existing DEME vessels, suitable for bottom-fixed and floating turbines.









YOUR INDUSTRY EXPERT IN STATE-OF-THE-ART BLADE YOKES

#### HORIZONTAL

#### Blade Hawk

Installation and service in horizontal position (0°). Ideal for turbines with gearboxes or turning tools.



#### Fast and Easy mobilization

Collapsible yoke enables singletruck transportation and can be ready for use within an hour.



#### Integrated tilt and pitch

Built-in tilt and pitch ensure more efficient maneuvering process.



#### WLL up to 32 tons

Designed for both onshore and offshore blades.



#### Onshore and offshore use

Complete third-party CG3 certification.

#### WIDE-RANGE

#### Blade Dragon

Installation and service at all angles. Enabling blade operations on direct drive turbines with both hydraulic and electric pitch.



#### Installation at all angles

Operates in 12 m/s and 18 m/s peak winds.



#### No need to power the turbine

Blade Dragon requires no yawing, pitching, or rotor turning.



#### One-point lifting

No tailing crane required.



#### Offshore approval

Complete third-party CG3 certification.

#### **VERTICAL**

#### Blade Skylark

Installation and service in vertical position (-90°). Enabling blade or pitch bearing exchange using Liftra Self-Hoisting Cranes.



### Blade exchange with up-tower crane only

Works with LT1000 and LT1200 Liftra Self-Hoisting Cranes.



### Eliminates the need for a tailing crane



#### Vertical handling

Lowering required hook height to just below the nacelle for conventional crane use.



#### Easy configuration

A simple adapter can be changed to fit multiple blade types.

#### VERTICAL

#### Blade Way

Installation in vertical position (-90°). The Blade Way is a stand-alone system for blade and pitch bearing exchange without using cranes.



#### Crane-less Solution

Standalone system.

#### Minimum transport costs

Transported in two 40ft containers ensuring minimal preparation on site.



### High stability

Works in high wind speeds, and requires no tagline assistance.



#### Multi-brand tool

Easily reconfigured between different turbines.

16 BLADE YOKES BLADE YOKES 17

# **UP-TOWER EQUIPMENT**

WE OFFER AN EXTENSIVE ARRAY OF TURBINE-SPECIFIC & ADAPTABLE UP-TOWER EQUIPMENT FOR TURBINE MAINTENANCE

#### Our portfolio includes:

- Main shaft fixtures
- Rotor locks
- Rotor turning gears





# **TRANSPORT EQUIPMENT**

LIFTRA TECHNOLOGY HAS SUPPORTED TRANSPORTATION OF TURBINE PARTS FOR MORE THAN 20 YEARS

We provide multi-brand solutions for onshore and offshore transportation and lifting of all turbine parts, including:

- Towers
- Blades
- Hubs
- Nacelles





# FIELD **EQUIPMENT**

OUR EQUIPMENT SUPPORT OPERATIONS ON THE GROUND

- Multi-brand rotor stands
- Manual tagline winch
- Blade stand

### **GET IN** TOUCH:

INTERESTED IN ONE OF OUR SOLUTIONS? READ MORE ON OUR WEBSITE, FOLLOW OUR UPDATES ON LINKEDIN OR REACH OUT TO US DIRECTLY.



Liftra.com



in Liftra



DOWNLOAD SALES MATERIAL







### **OUR LOCATIONS**

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