



Liftra

TURBINE INSTALLATION CRANE

EFFICIENT TURBINE INSTALLATION WITH THE LT1500 CRANE

WWW.LIFTRA.COM



WHAT WE DO

At Liftra, we design and manufacture custom lifting and transportation solutions for selected turbine models.

We strive to develop solutions that are both technically and economically attractive.

Liftra accomplish this by approaching each project with an agile mindset and readiness to conform to the specific needs of the client.

FIND OUT MORE

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THE FUTURE CALLS FOR NEW SOLUTIONS

The LT1500 Installation Crane enables clients to install and maintain wind turbines with a hub height of up to 250m and component weight of up to 120 ton. While helping to achieve total cost competitiveness and sustainable CO₂-emissions.

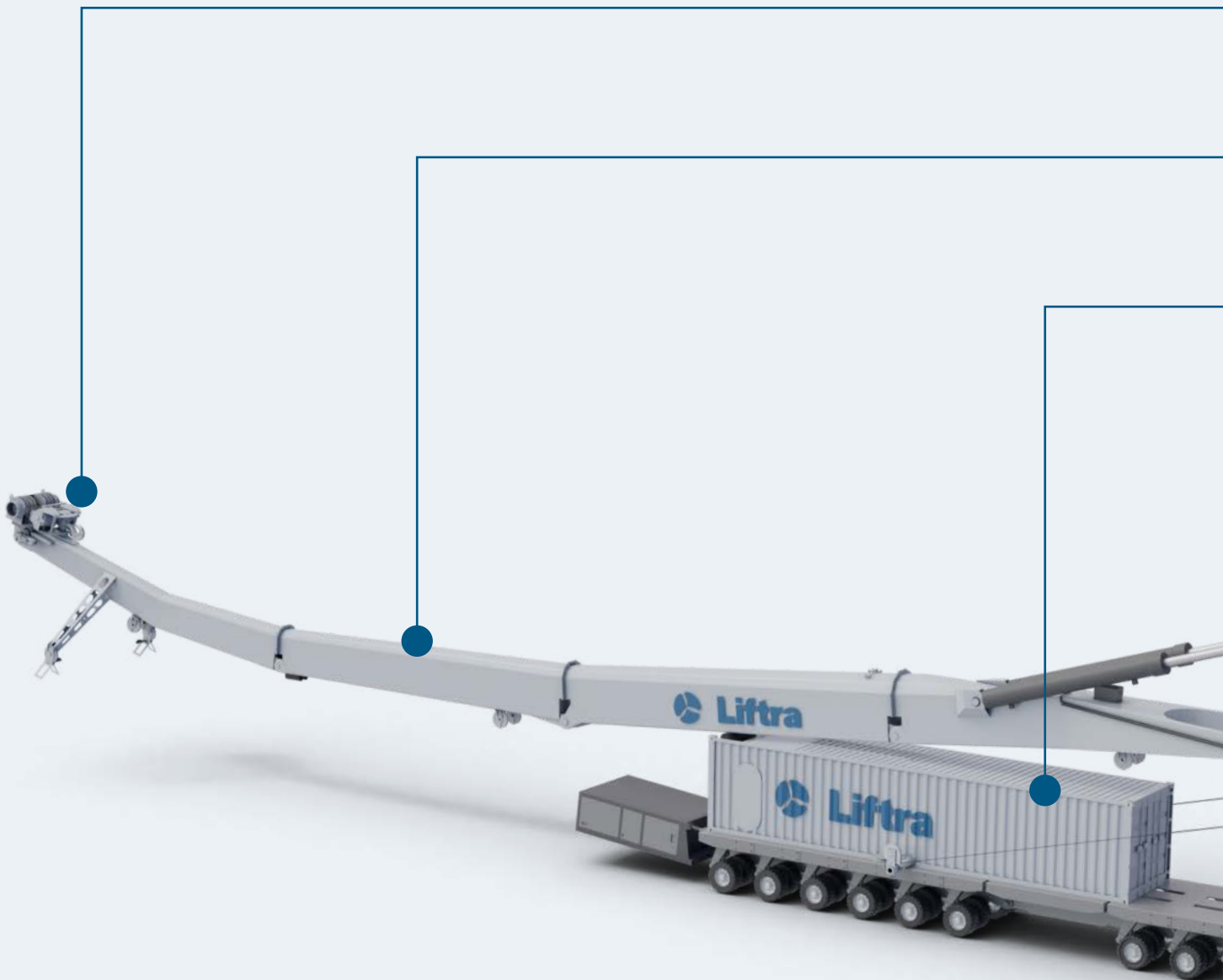
A general trend towards larger wind turbines at remote locations, places new demands on installation cranes, and greatly impacts cost and accessibility of conventional cranes. The future calls for new solutions such as the LT1500 Installation Crane to address these challenges.





SYSTEM OVERVIEW

The complete crane system is assembled on a Self Propelled Mobile Transporter (SPMT). It can be divided into the Crane Station, which stays on the SPMT during installation, and the Crane itself which goes up tower. The Crane can be divided into main parts as shown below.



The crane arrives to site on 8 containers or trailers. Once on-site it can be transported fully assembled on the SPMT as shown below.

HOOK BLOCK

CRANE BOOM

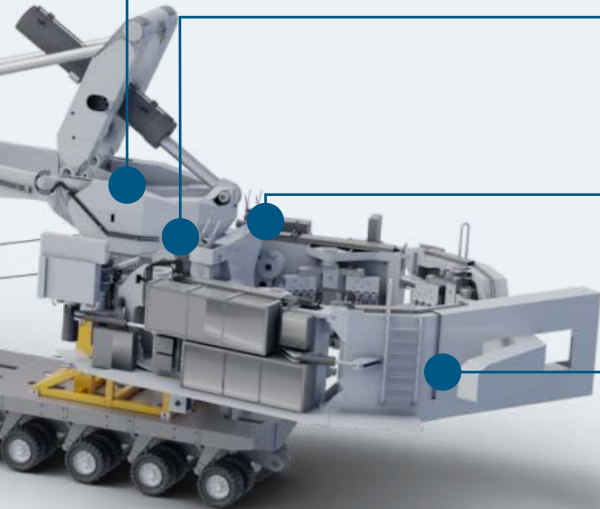
40FT CRANE STATION

SLEWING PLATFORM

CRANE BODY

HOIST BLOCK

TOWER CLAWS





LT1200

BUILDS ON THE LIFTRA SELF-HOISTING TECHNOLOGY

The LT1500 concept expands on key technology principles of the Self-Hoisting Crane, building on the proven self-hoisting method, and utilizing a 40ft container as the crane launch station.



LT1500

LT1500

TECHNICAL SPECIFICATION

WEIGHT



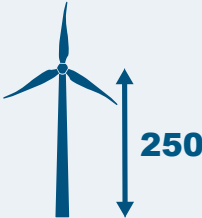
CRANE 120 TON,
CRANE STATION 30 TON

LIFTING CAPACITY



WLL - 120 TON

MAX TOWER HEIGHT



250M

MAX WIND



BLADES 14 M/S
OTHER 18 M/S
OUT OF SERVICE 40 M/S

MOBILIZATION



8 TRAILER LOADS
CAN ALSO BE 40FT FLAT
RACK CONTAINERS

RELOCATION ON SITE



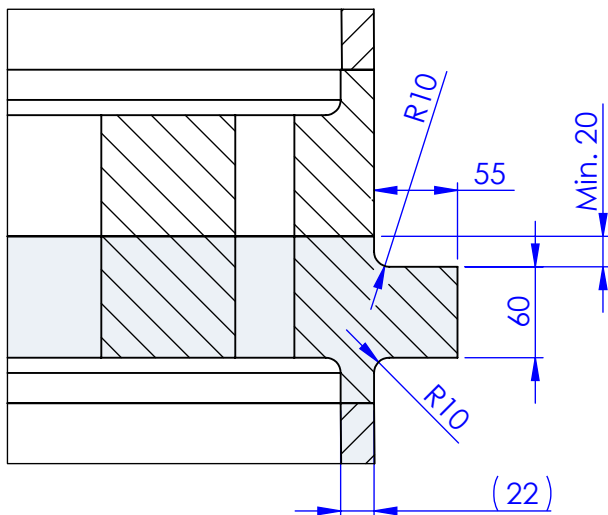
CAN BE DONE FULLY
ASSEMBLED ON 1 SPMT
(SELF PROPELLED MOBILE TRAILER)

TURBINE REQUIREMENTS

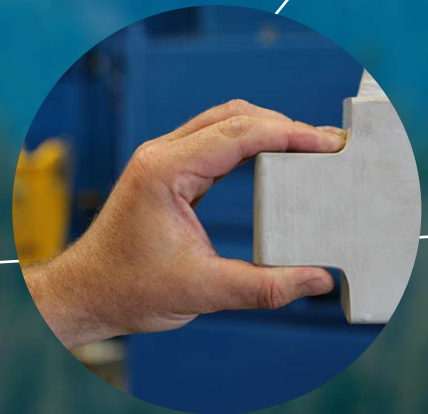
The LT1500 Installation Crane can connect to all tower sections with an outer diameter between 3.5m and 6.5m.

The only requirement is that the tower sections are equipped with an outside flange.

The dimensions of these flanges do not exceed a height of 60mm and a width of 55mm.



EXAMPLE OF TOWER SECTION WITH ADDED OUTER FLANGE



2.400m²

900m²



CRANE OPERATOR DEMANDS/ EDUCATION

The crane operator must have a mobile crane certificate and be certified for use of the LT1500 Installation Crane by liftra.

SITE REQUIREMENTS

UP TO **63%**
SMALLER
CRANE PAD AREA
COMPARED TO
CONVENTIONAL
SOLUTIONS

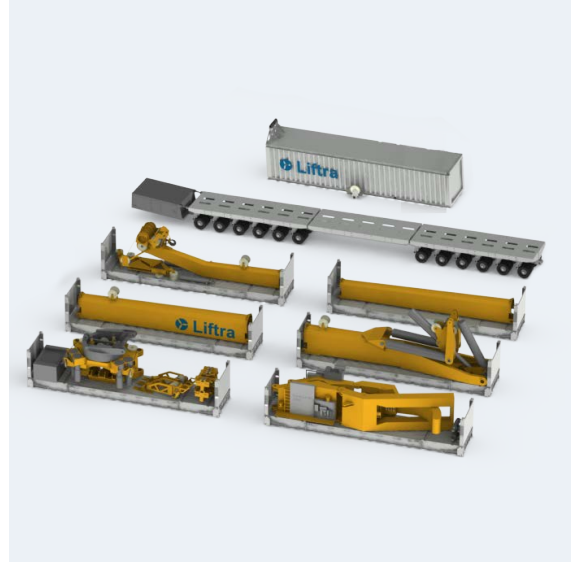
LT1500 Installation Crane needs less than half the crane pad area compared to conventional cranes.

- No area for boom or crane assembly needed
- No area for Superlift needed
- No minimum lifting radius
- No area for crane components needed

MOBILIZATION

No special road infrastructure is required:

- Only 8 trailer loads
- Can be transported on 40 ft flat rack containers
- Limited oversized loads
- No special trailers needed



INSTALLATION

Pre-installation is done up front. Pre-installed towers can be from 20m up to 150m high and constructed of either steel, concrete or other solutions. The only requirement is a flange on the top of the pre-installed tower.

The LT1500 Installation Crane can install tower sections with a length of up to 36m and a weight of 120 ton.

Towers are installed by using a tailing crane to upend the sections.



REPOSITIONING ON THE TOWER

After the installation of each tower section, the crane will reposition itself to the next flange at the top of the installed tower section. This will take approx. 2 hours.

On the top tower section, the flange will be positioned a few meters below the top to avoid conflicts with the nacelle.

Nacelle, drive-train, hub, and blades are installed from the same position on the top tower section.

When the entire turbine has been installed, the LT1500 Installation Crane can be lowered directly from the top flange to the SPMT on the crane pad.

RELOCATION

For relocation in-between turbines, the LT1500 can be transported fully assembled on the SPMT.

This configuration allows for fast relocation, bringing the transportation, from one turbine to the next, down to approx. 10 hours.

CHECK OUT
THE LATEST
MATERIAL:

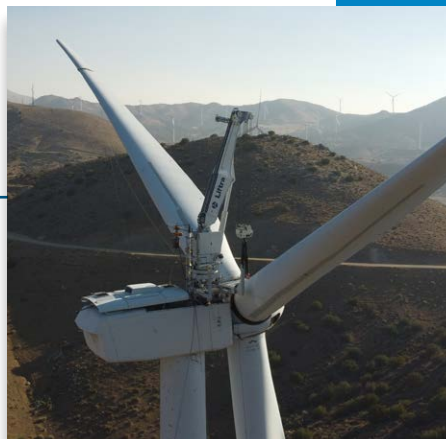


RELATED PRODUCTS

Liftra provides equipment for the whole turbine life cycle, from transport to installation and maintenance.

MAINTENANCE WITH THE LIFTRA SELF-HOISTING CRANE

Liftra's Self-Hoisting Crane, LT1200, can effectively and safely replace main components. The small site layout is still sufficient.



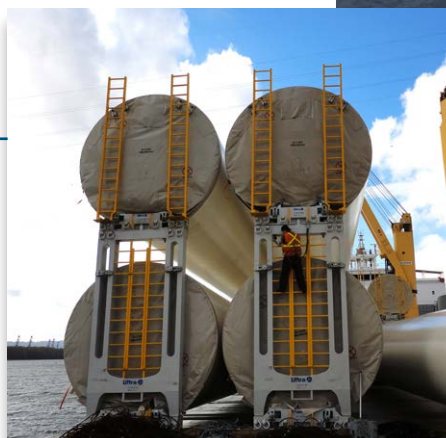
BLADE INSTALLATION AND EXCHANGE

Liftra supplies blade handling equipment for both installation and blade replacement.



TOWER AND BLADE TRANSPORT

Liftra offer a wide range of solutions for efficient transportation of towers, blades, and nacelle. The universal Tower Stacking System is available both for purchase and rental.





FUTURE DEVELOPMENT

Concept studies have already shown the future potential of the LT1500 Installation Crane as a solution for offshore turbines, either floating or bottom fixed.

For the crane to be deployed offshore, it would be scaled and the lifting capacity will be increased to more than 500 ton

The crane's size and specifications will be influenced by the next generation of offshore turbines, and the complete offshore installation concept will be developed in partnership with DEME Offshore and customized to fit their vessels.

**DOWNLOAD
SALES MATERIAL**



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