

More power, more range, more convenience

The 81 K.1 fast-erecting crane

Technical data

Max. lifting capacity	6,000 kg
Max. radius	48.0 m
Max. lifting capacity at the jib head	1,350 kg



LIEBHERR

The 81 K.1 at a glance

External cabin

for optional use,
can be installed without
additional equipment

CC ballast

Save time using
screw-on ballast slabs

Variable slewing radii

2.75 – 3.5 m

Play-free tower connection

Fully automatic, rigid connection
of the inserted tower sections

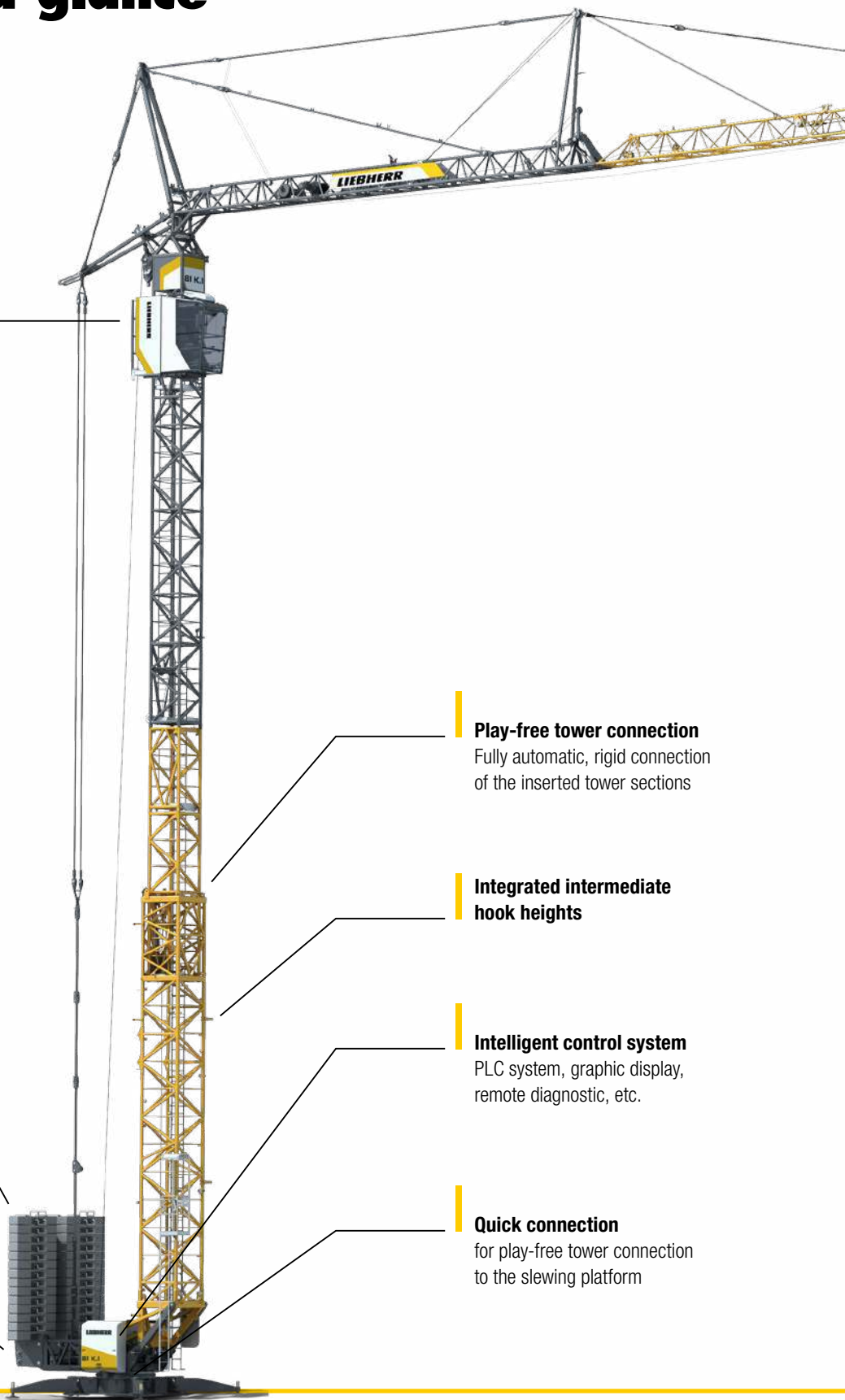
Integrated intermediate hook heights

Intelligent control system

PLC system, graphic display,
remote diagnostic, etc.

Quick connection

for play-free tower connection
to the slewing platform



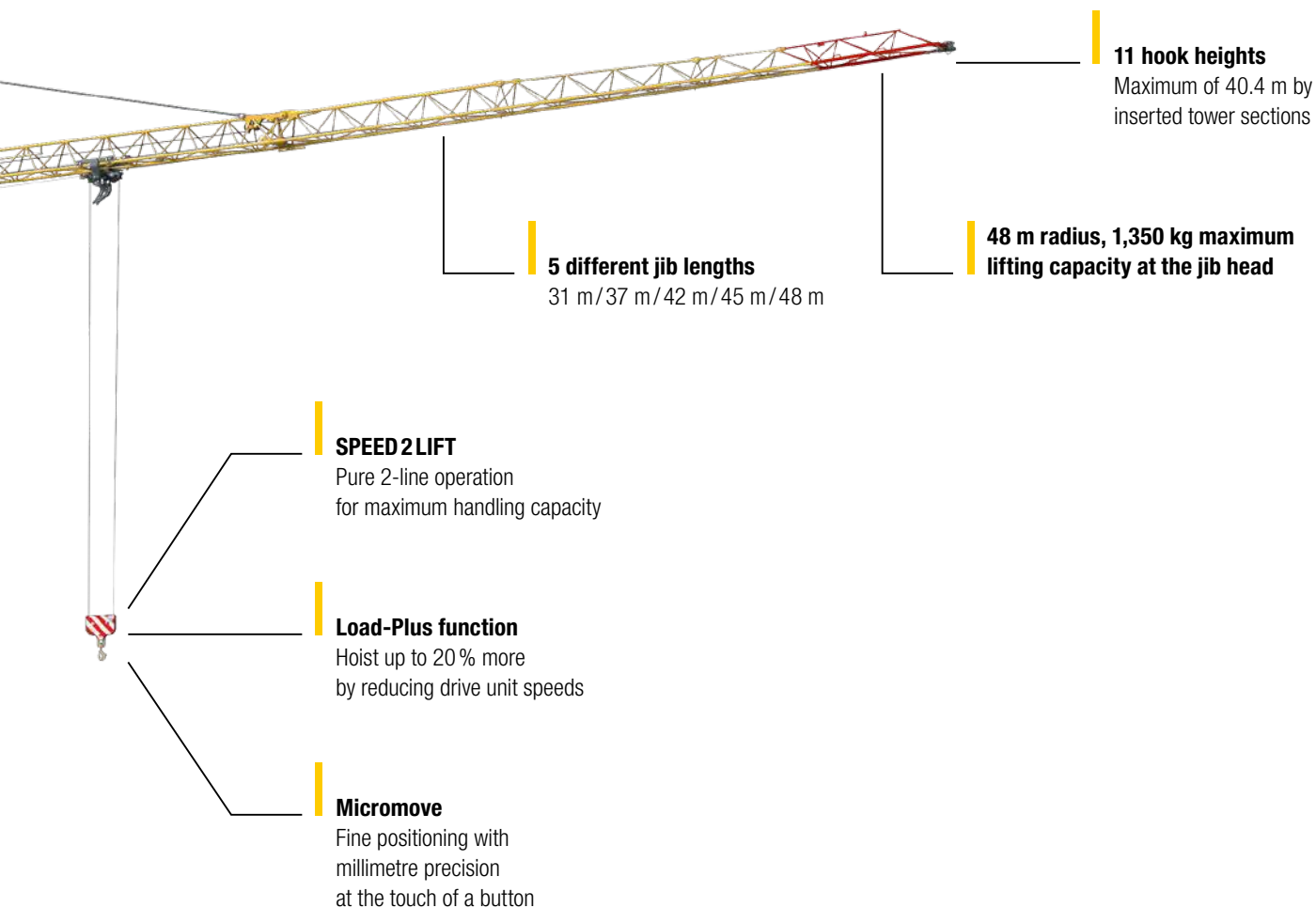


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Work quickly and safely



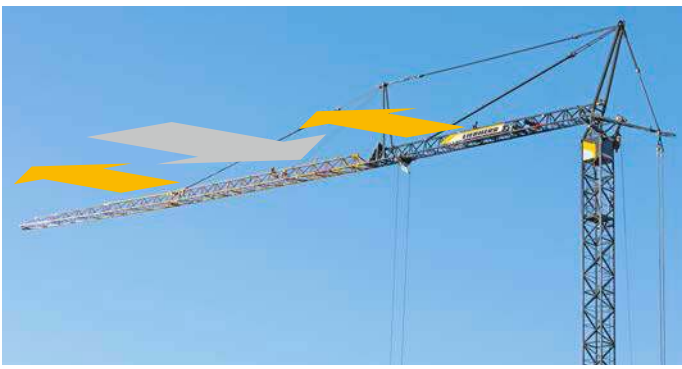
Load-Plus – Hoist more at the touch of a button

Using the new Load-Plus function you can increase your load capacity by up to 20 % at the touch of a button by reducing speed. This makes the 81 K.1 a flexible crane with an outstanding handling capacity. It means there is no need to call for another larger crane for individual heavyweight hoists.



Protect your material with Micromove

The drive units on the 81 K.1 are reduced to micro-speeds at the touch of a button. This enables the load to be positioned with millimetre precision. It provides protection for prefabricated components and enhances safety on site. The activated Micro-move function also prevents the hoist gear brake engaging. This allows suspended loads to be stopped and then moved again smoothly.



Precision in the wind

Wind influences the movement of the jib. The wind force moment control automatically holds the jib in position. No counterweight is required. Large size loads (for example shuttering panels) can therefore be moved and held precisely even in wind. That enables you to avoid unsafe situations.

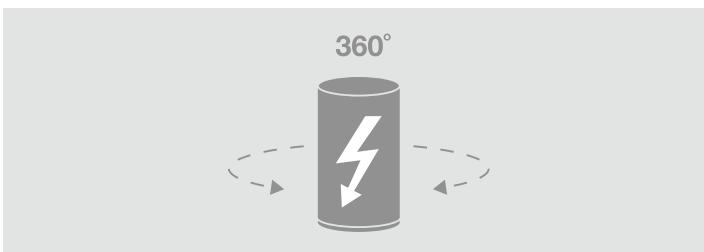


Keep your load under control

High-speed slewing movements can cause loads to swing. The integral oscillation damping system automatically compensates for this. A major step forwards for site safety since it significantly increases the crane driver's control of the load.

Current collector

No restrictions for slewing and no twisted cables due to free slewing in the wind



Full control lever distance available at all times

The modern control system on the 81 K.1 ensures that you always have the full control lever distance so that you can position heavy loads with millimetre precision



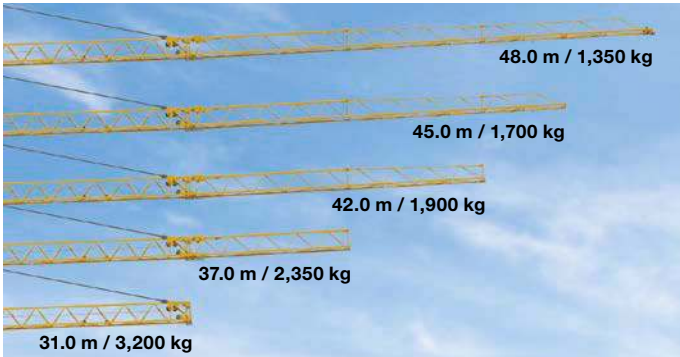
Flexible is economical



Initial hook height
26.0 m

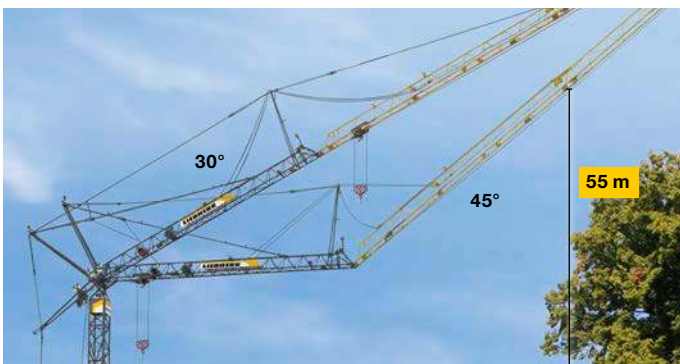
The success of your site

The uses for the 81 K.1 extend from multi-occupancy housebuilding to use for industrial projects. Due to its enormous adaptability with 11 finely graduated hook heights between 17.4 m and 40.4 m, its 30° luffed jib position and its 45° position to avoid obstacles, the 81 K.1 is perfect for any site. Jobs under high-voltage cables or inside buildings are also possible due to its telescoping tower. Ensure the success of your site yourself!



Range with carry

The jib on the 81 K.1 delivers 5 possible lengths, in other words the flexibility you require for a very wide range of different site sizes. The lifting capacity curves tailored to the varying jib lengths make the crane one of the most flexible bottom-slewing cranes on the market.



Obstacles or high destinations

The 30° luffed jib position and the 45° jib position to avoid obstacles enable you to adjust the crane perfectly for any type of use – and reach hook heights of up to 55 metres.



Variable slewing radius

By reducing the slewing radius, the crane's footprint can be reduced by more than 35%. This enables the crane to be assembled closer to the building and tackle jobs on constricted sites. Choose between a reduced footprint or less ballast.

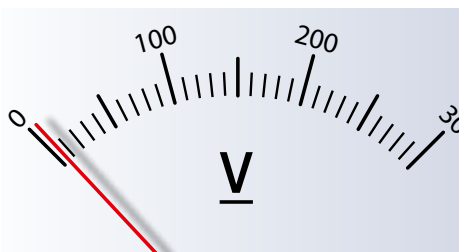
Extreme situations

Working under obstacles such as high-voltage cables with the tower retracted



Multi-voltage

Adjustment of operating voltage to suit conditions in different countries (380 – 500 V / 50 – 60 Hz)



Fast climbing

You can achieve various hook heights by the fast, practicable insertion of 2.4 m tower sections

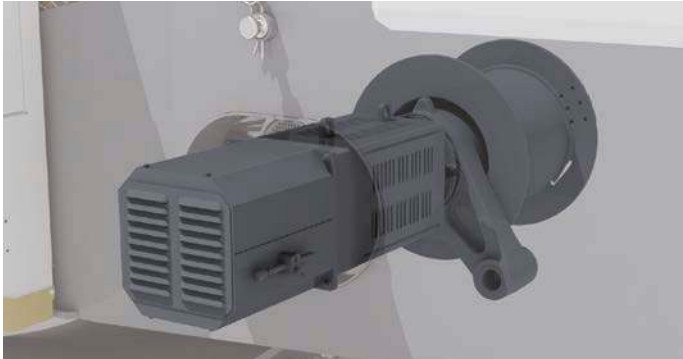


Peerless drive units and control systems



Speed to lift

The 81 K.1 is operated exclusively on a two-line basis. This means that you always have maximum performance at full speed whether you are hoisting the maximum lifting capacity or the hook is travelling empty. The hoist speed always adjusts to the attached load. As an aside, it is interesting to note that half of all load cycles involve an empty hook – and the 81 K.1 always completes them at maximum speed.



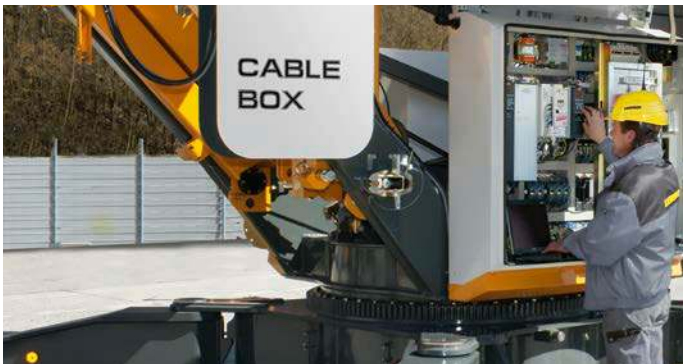
Powerful and sensitive

The powerful yet sensitively controllable hoist gear is the main requirement to achieve a high handling capacity and safe operation. It was designed and developed in-house and can hoist and lower all loads completely smoothly. Its wide range of speeds makes 2-line operation possible at full speed. The smart ventilation system cools the drive unit to keep it at perfect operating temperature at all times – regardless of the hoist gear speed.



Slew however you wish

Choose between sensitive slewing and maximum speed. Program different modes for the slewing gear and select them to suit the situation you find yourself in.

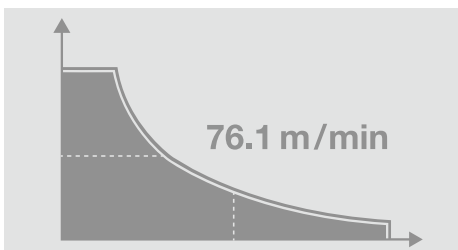


Safe control system

The modern PLC control system contains modules such as the ABB operating-range limiting system, the interface for the AKS anti-collision system and the MDE machine data recording system. The graphic display has a simple menu guide and shows all the main operating data at a glance. LiDAT also provides you with the facility to carry out remote diagnostic and data evaluation work.

Hoist speed

Hoist speeds of up to 76.1 m/min make high handling capacities possible



Electrical power connection

Energy supply using an easily accessible connection on the undercarriage



Very simple scaling

With just one weight you can scale the crane in a matter of minutes. That saves time and money.



The workplace



New design for efficient working

Not every site needs a cabin. Its external cabin makes the 81 K.1 even more flexible. The cabin can be installed quickly and easily when required. Access is easy and safe. The cabin also provides a perfect view of the site. That enables you to increase capacity and safety on site.



Clear view

The new cabin with its ergonomic controls provides the crane driver with space and enables him to work efficiently and without fatigue. The external cabin provides an unrestricted clear view of the site. The cabin will fit all recent models of our K series.



Remote control

The Liebherr remote control ensures that you have the crane under complete control from anywhere on the site. Two displays provide feedback on the current operating data. The remote control therefore enables you to be close to the action while still being able to monitor everything. This makes work on the site safer and more convenient.

Cabin installation

safely and easily by the crane itself



Large tool compartment

and extra space for the remote control with a 230 V socket for the charger



Raised control stand

for a better view







Have a good trip



Dream dimensions

Despite its outstanding hook heights, the 81 K.1 is compact and highly manoeuvrable to transport. It is moved as a complete, ready-to-erect unit and can therefore be quickly readied for use. Its small wheelbase of 6.05 m makes the 81 K.1 very manoeuvrable and easy to drive even over uneven surfaces.



The choice is yours

The modular axle system on high-speed and low-speed axles or in the form of a semi-trailer provides the ideal transport system for every site. Existing axles can also be used.

Transport speeds of up to 80 km/h are possible.



High embankment angle

The folding erection frame enables the 81 K.1 to achieve an embankment angle of 15°, which translates to around 1.4 metres of ground clearance.



Always easily manoeuvrable

The 180° angle lock of the steering axle ensures outstanding manoeuvrability on site.

Tower sections on truck

Easy to transport on a truck due to the ideal packing dimensions of 2.4 m x 1.1 m



Twin tyres

If the road doesn't go all the way to the site, the twin tyres prevent the crane sinking



Crane transport on a semi-trailer

to deliver short transport lengths



Simply well set up



Quickly ready to start work

Sites are becoming smaller and smaller with less and less space. Constricted aerial jib assembly requires very little space and can take place above obstacles up to 25 metres in height. The complete assembly process is carried out by a sophisticated kinematic system using rope. It can even be assembled in extremely low temperatures.



CC ballast

The interplay between the hoist and assembly winches allows fast, easy self-ballasting. The large ballasting radius of 5 m and the CC ballast gives you more freedom than ever before. For example, you can position two ballast slabs simultaneously and the optional semi-automatic ballasting tongs means that one-man assembly is possible.



Even further out

The rope kinematics of K cranes enable the jib to be adapted with no great effort. The jib extension on the 81 K.1 enables you to achieve a radius of 48 m.



Short overhang

Even if there are obstacles, you can use the full radius as a result of the short overhang. That gains you valuable range.

Play-free tower connection

Automatic tower locking ensures a play-free connection during the extension cycle

Attachment points for mobile crane

The crane can be hoisted into sites where access is very difficult

Quick Connection

Simple interlock between the tower and slewing platform with just one blow of a hammer

Rod guying

Guying the jib using rods for safe assembly and high stability in action



Superbly equipped



Site lighting

The use of up to 4x 220 W LED spotlights enables you to decide when to finish your working day. They are immediately ready for use, extremely reliable, very durable and remain on the crane during transport.



Rail travel gear

If you have a large project, the crane can also be used with rail travel gear. This even allows the crane to be moved with a load.



Operating-range limiting system ABB

No other crane is as fast or accurate. Protect sensitive areas in up to three arcs, one rectangle and 10 traverses using the new ABB so that you can use the largest possible working range. You achieve a whole new level of safety and comfort.



Special paint finish

You can finish the crane in your own corporate livery for publicity purposes and to raise awareness of your company.



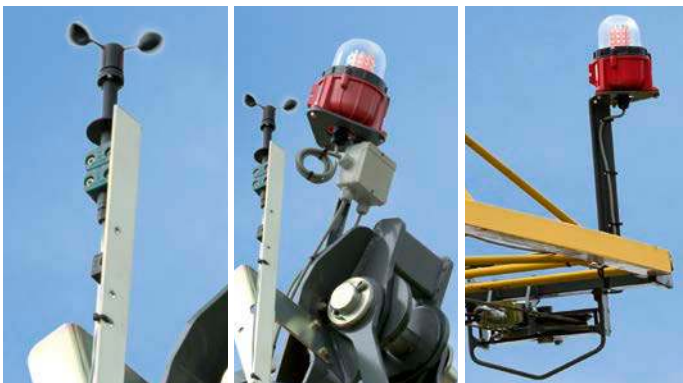
Control desk

As an alternative to the remote control, the crane can also be controlled using the small control desk with a 10 metre cable.



Central lubrication system

Easy maintenance of the ball slewing ring using the central lubrication system to ensure a long crane life. And if you really do not want to be bothered about the crane's lubrication, we can also supply an electric central lubrication system. This ensures that the slewing ring is lubricated automatically.



Anemometer

To enable you to see when stormy weather is approaching.

Aircraft warning control light

If, for example, your crane is near an airport, you need an aircraft warning control light. The aircraft warning control light can stay on the crane at all times and is always ready for use.



LiDAT

The data transfer and location system from Liebherr ensures that you always have the latest operating data for the crane in view. That enables you to manage the machine efficiently and plan its jobs and servicing perfectly. The LiTEL teleservice also makes remote maintenance possible to minimise down times on site.



A large Liebherr crane is silhouetted against a vibrant sunset sky. The crane's long jib extends across the upper half of the frame. Below the crane, the silhouettes of construction equipment and scaffolding are visible against the bright horizon. The sky transitions from a deep blue at the top to a bright orange and yellow near the sun, with scattered clouds catching the low light.

Liebherr - cranes for generations

