Telescopic Crawler Crane LTR 1220

Max. lifting capacity: 220 t
Max. lifting height: 101 m
Max. working radius: 88 m

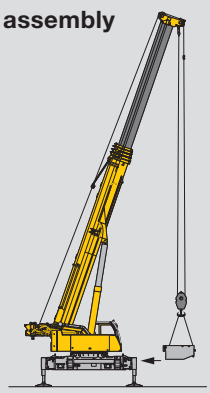
LIEBHERR

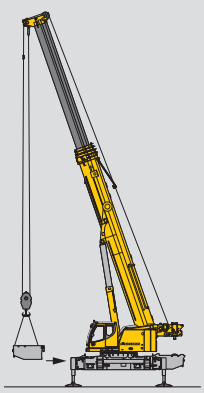
Telescopic Crawler Crane LTR 1220
Outstanding off road capabilities and manoeuvrability

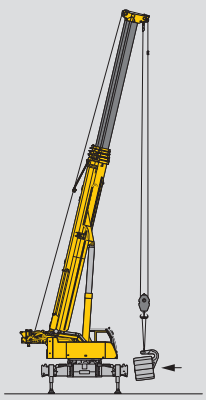
A long telescopic boom, high capacities, an outstanding manoeuvrability as well as an extensive comfort and safety configuration distinguish the telescopic crawler crane LTR 1220 from Liebherr. The 220-ton crane offers state of the art technology for more convenience for the practical operation.

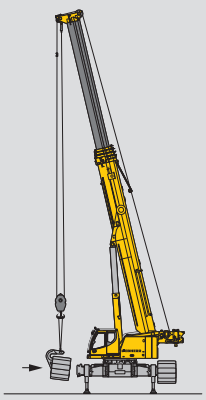
- **Strong, 60 m long telescopic boom with high telescopable capacities**
- **Outstanding off road capabilities and manoeuvrability**
- **“Pick-and-carry“, driving under full load**
- **Efficient transportation concept, self assembly of the complete crane**
- **Hydraulic adjustment of the chassis width**
- **Crane operation up to 4° side inclination also with reduced track width**
- **Optimised for erection of prefabricated elements with 2-hook operation with 2nd winch and erection jib**

Self assembly









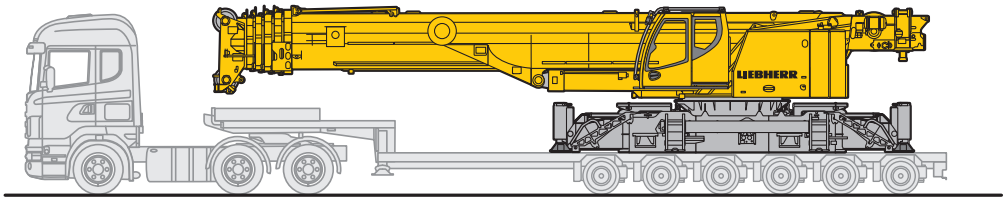
Economic transportation and easy assembly

Optimised weights and dimensions

The basic crane with 1 m wide crawler carriers has a weight of app. 91 t without ballast. Without crawler carriers the unit weighs app. 55 t including the jack-up cylinders and the traverse beams. It is only 3 m wide and 3.3 m high. By self-contained disassembly of the traverse beams the weight can be reduced to app. 48 t (option). Thus the economic transportation is warranted even in countries with restrictive weight regulations.

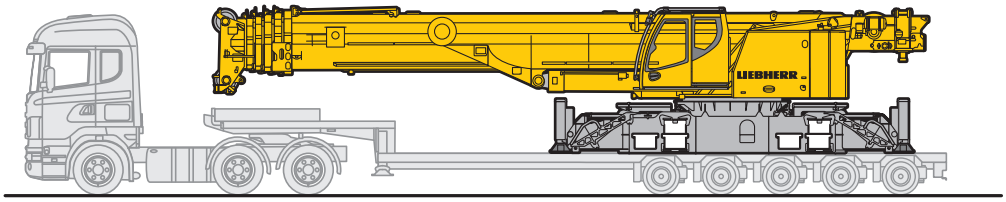
The crane assembly is carried out optionally by self erection. The basic machine is transported by low-bed trailer to the job site and then supports itself on the jack-up cylinders (option). Central ballast, traverse beams, crawler carriers and superstructure ballast are mounted without auxiliary crane.

~ 55 t

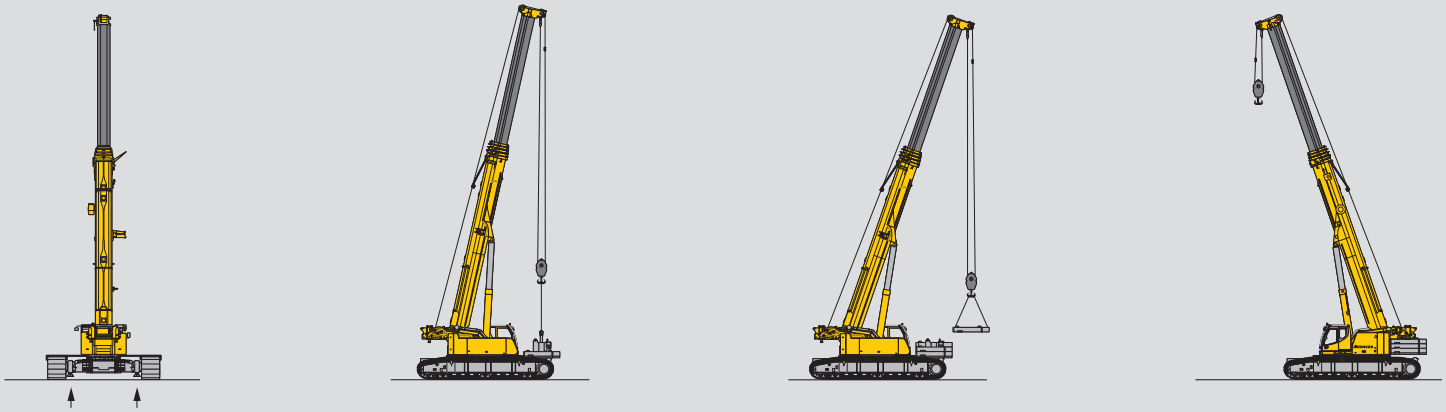


Basic unit with jack-up cylinders and traverse beams

~ 48 t



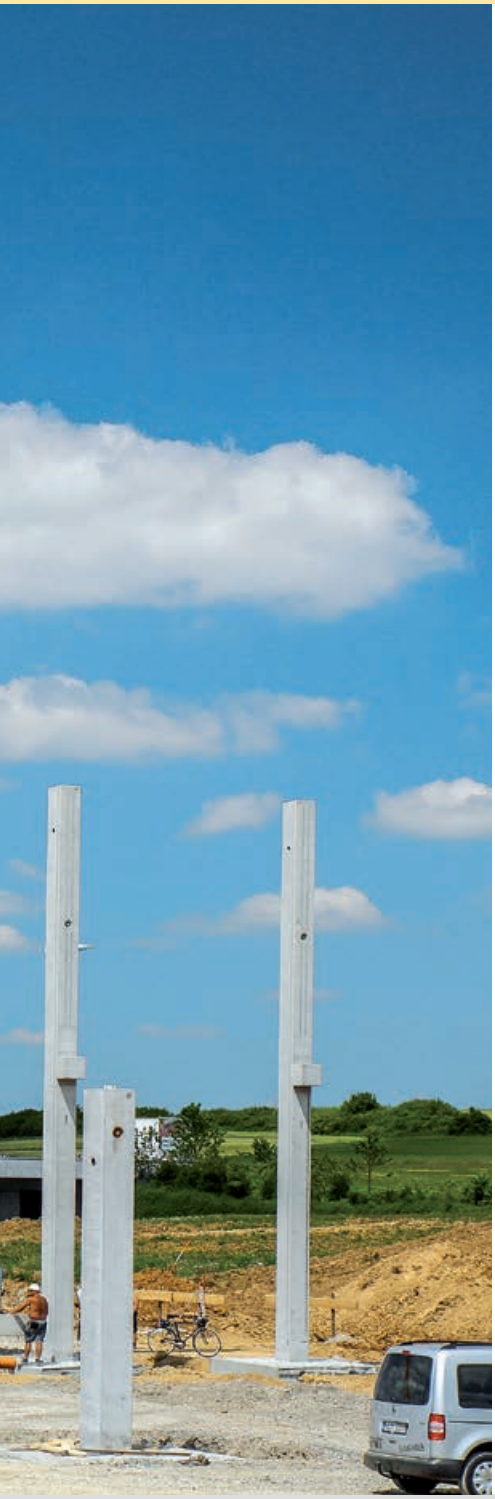
Basic unit with jack-up cylinders without traverse beams



The crane cab

- Large field of vision
- Safety glazing
- Tinted screen, front and roof screen hinged
- Crane driver seat with lumbar support
- Corrosion resistant
- Working floodlight
- 20° tiltable to the rear
- Optional: air condition, engine independent additional heating

Comfort and functionality

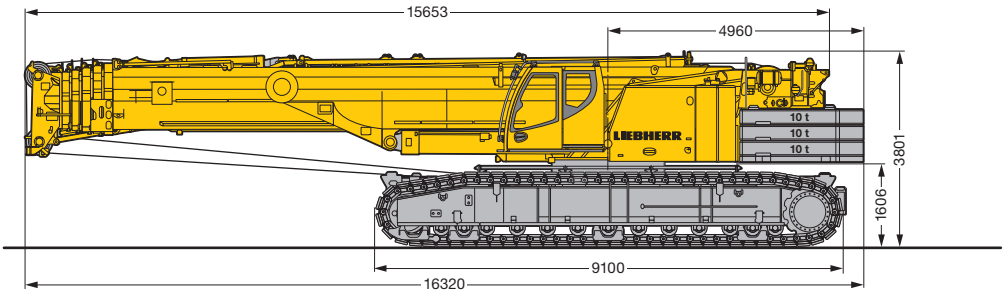


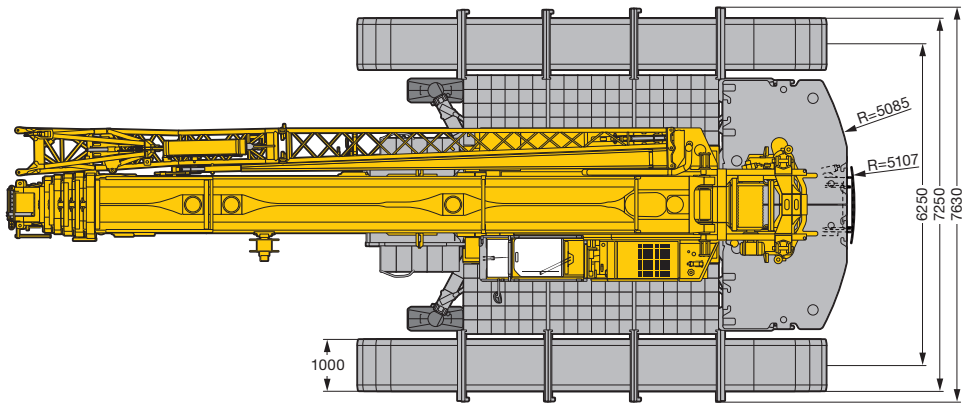
Modern crane cab

The backwards tiltable crane cab offers a comfortable and functional working place. The control elements and displays are arranged according to ergonometric factors. Thus a safe and fatigue-proof working is assured.

Fast and safe erection

The mounting of the additional equipment and the counterweight are designed for speed, safety and comfort. For the safety of the operators pedestals and hand holds are provided.





Self-mounting of ballast and optional hoist gear 2

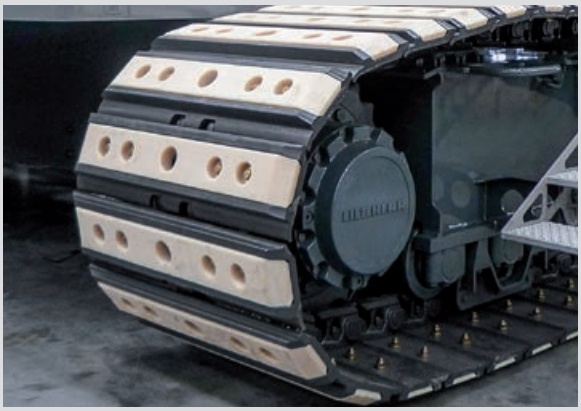
Hydrostatic drive from Liebherr

- Drive by engine in superstructure
- Stepless control of the driving speed
- Normal gear 0 – 0,6 km/h
  Fast gear 0 – 2,5 km/h
- Crawlers synchronically as well as independently counter directionally controllable
- Drive force 1130 kN

Crawler tracks

The 1000 mm wide crawler tracks are fitted as standard with 2-bar crawler shoes and offer maximum cross-country mobility. Optionally available are polyamide plates, which can be attached to the 2-bar shoes with a few manual grabs. With this equipment damages can be prevented when driving on industrial floors. Furthermore the polyamide plates are fully suitable for off road conditions.

2-bar crawler shoes



Crawler tracks
with polyamide plates

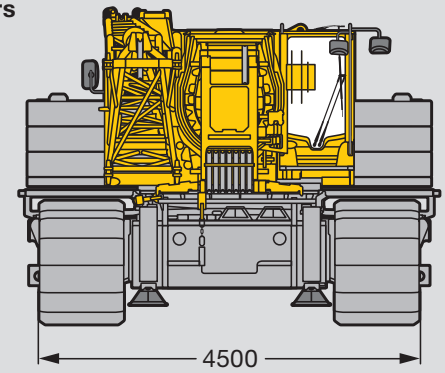
High safety

Functional walking surfaces and steps

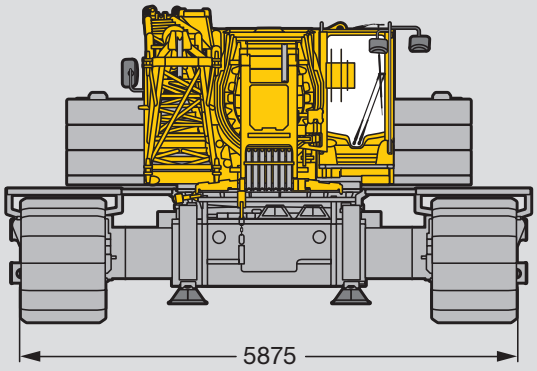
Large grating areas facilitate safe movement on the crane. During the design of the walking areas, special attention was paid to easy and fast transportation and assembly possibilities.

For improvement of accessibility to each crawler, two sets of steps can be attached. Alternatively the variably attachable steps also can be hooked directly to the chassis.

Telescopable crawlers

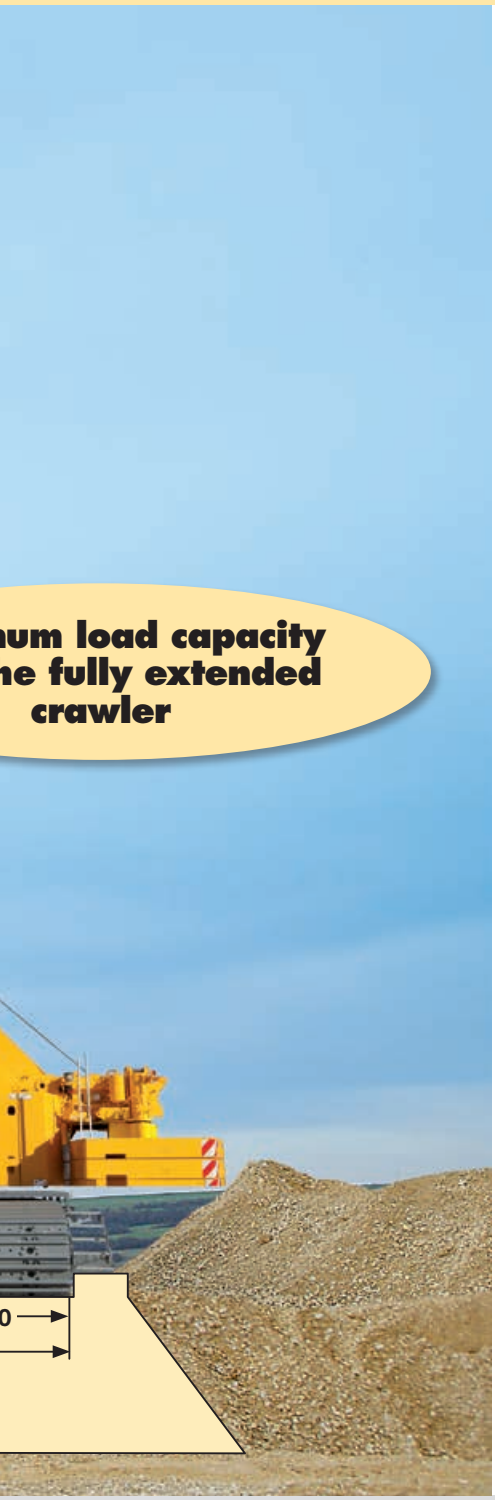


Narrow



Medium

Great operational diversity



High flexibility

Due to its extraordinary cross-country mobility and the possibility to drive sensitively with full load, the LTR 1220 offers an extraordinary operation diversity for e.g. erection of prefabricated components, on long-term sites in the energy sector, as an assistant crane for the erection of wind power units or at infrastructural projects.

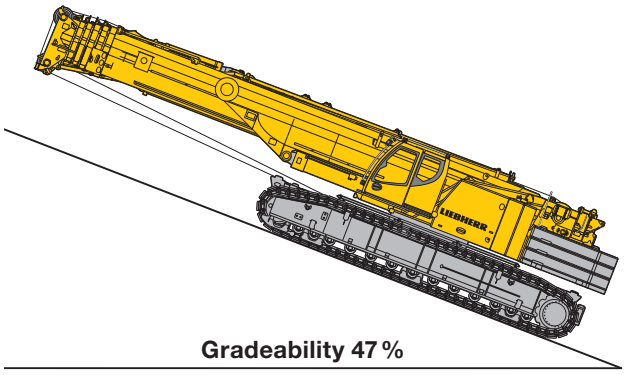
Telescopable crawlers

The chassis of the LTR 1220 can be hydraulically telescoped from the chassis width of 4.5 m to the intermediate width of 5.88 m or the maximum width of 7.25 m. Additionally the LTR 1220 also operates on an asymmetric track. Thus the full capacity can be utilised when working over the side at which the crawler is fully extended.

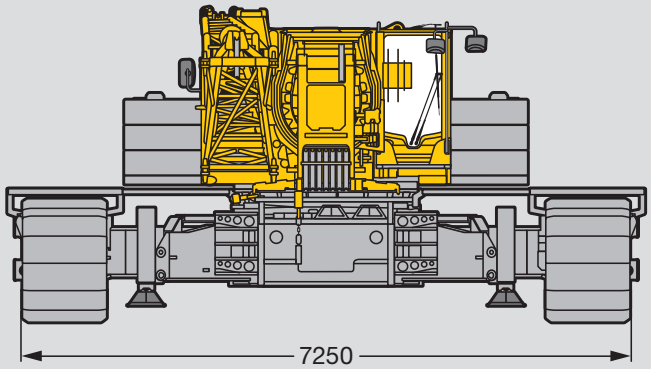
On all chassis widths the LTR 1220 can perform crane operations which are secured by the LICCON safe load indicator. The telescoping can be carried out in fully assembled condition.

Crane operation with side inclination

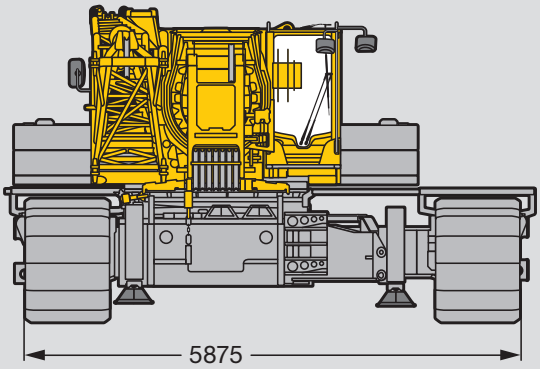
Additional operational possibilities are offered by the load charts programmed as standard for working with main boom and assembly jib on surfaces with an inclination up to 4°. To ensure high capacities also under these conditions the sheaves at the boom head and the assembly jib are manufactured from steel.



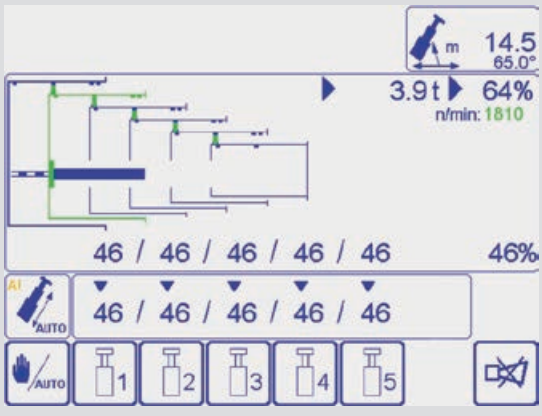
Gradeability 47 %



Wide



Asymmetric



The fully automatic telescoping system "TELEMATIK"

- Greater lifting capacities with longer booms and larger radii thanks to ‚light' telescoping system
- One-stage hydraulic cylinder with hydraulically operated drive pin
- Maintenance-free telescoping system
- Fully automatic telescoping
- Easiest control and monitoring of telescoping action on LICCON screen

3.4 m long assembly jib

High lifting capacities and flexible boom system

Powerful, long telescopic boom and functional lattice extensions

The telescopic boom consists of the base section and 5 telescopic sections, which can be comfortably and automatically extended and pinned to the requested length by the thousand fold proven single cylinder telescoping system TELEMATIK.

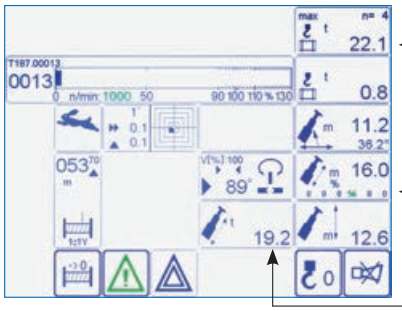
- 60 m long telescopic boom
- 12.2 m – 36 m long double swing-away jib, attachable at 0°, 22.5° and 45°
- Hydraulic adjustment of the swing-away jib at full load from 0° to 45° (optional), interpolation of capacities
- Hydraulic assistance for assembly of the swing-away jib with BTT
- Intermediate section 7 m for extension of the telescopic boom for operation with swing-away jib

High lifting capacities both with full and partial counterweight offer a wide operational range

- High lateral stability due to the oval boom profile
- Optimized capacities due to the numerous extension variations
- Capacity 18.8 t at 60 m long telescopic boom

High capacities at unpinned telescopic lengths

- High telescopable capacities due to interpolation
- Separate charts for holding of the load at unpinned telescopic lengths
- Display at LICCON monitor



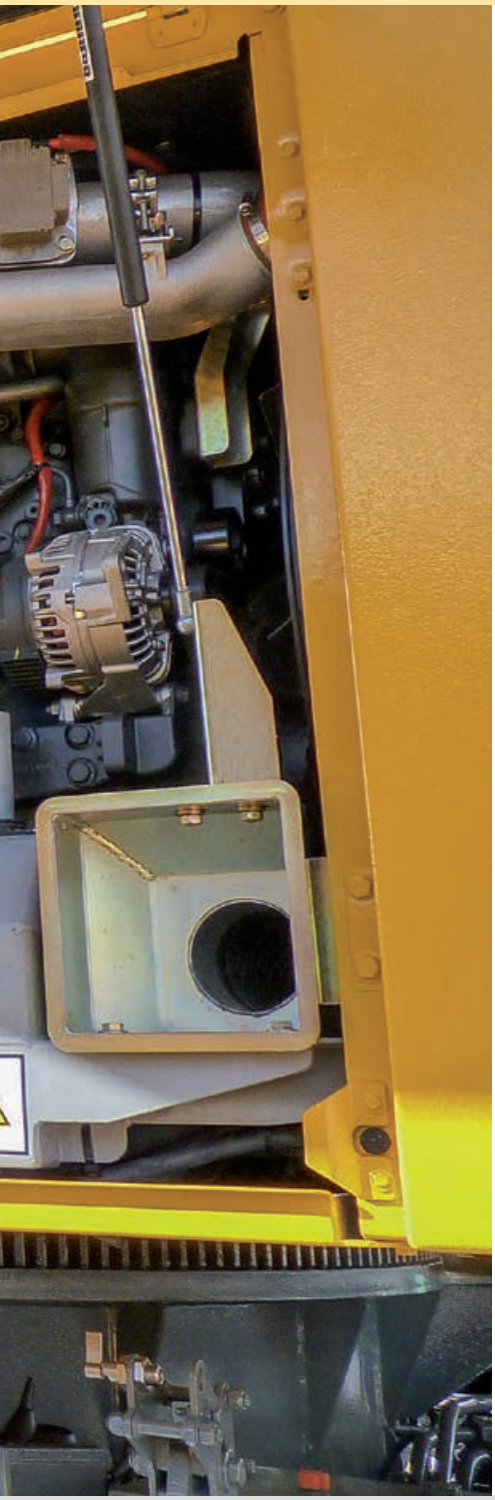
Rooster sheave, foldable sidewise

Hydraulic assistance for assembly of the swing-away jib with BTT

The hoist gear

- Liebherr hoist winch with internal planetary gear and spring loaded multi disk brake
- Rope pull 105 kN at the outer layer
- Max. rope speed 130 m/min
- Sensitive motions in closed hydraulic circuit
- Optional 2. hoist gear including self-assembly device

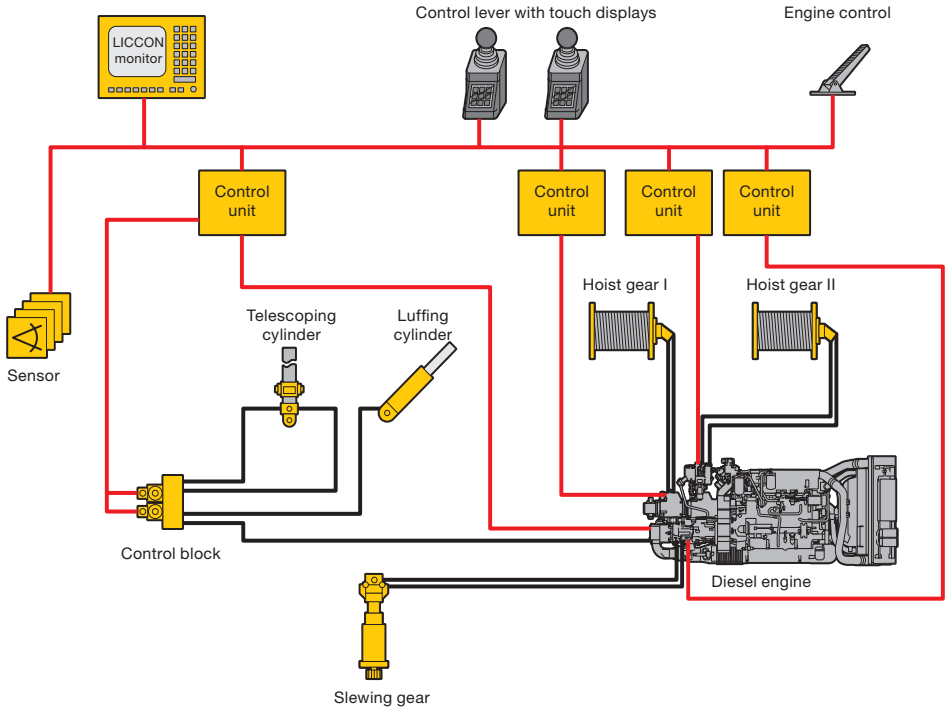
Powerful crane drive



With tried-and-tested components

The drive components for crane operation are constructed for high performance and ensure sensitive and precise load handling. They are specially designed to suit the crane's usage and have been subjected to hard endurance tests.

- Crane engine: 6-cylinder turbo diesel engine, emission stage 3b acc. to 97/68/EG, Tier 4i EPA/CARB. 230 kW/312 HP, max. torque 1,300 Nm, optimised fuel consumption by electronic engine management
- Sensitive motions of the hoist gears in closed hydraulic circuits
- Electric/electronic SPS-crane control via the LICCON-computer system
- In-house fabricated Liebherr winches, 105 kN rope pull at the outer layer, less reeving necessary due to high line pull

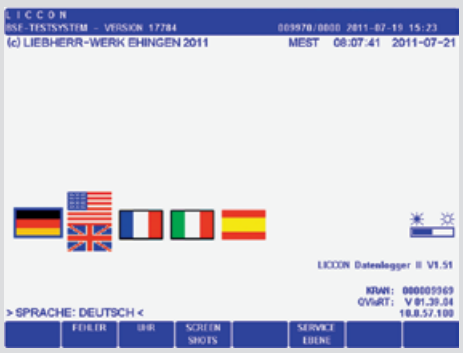


The slewing gear

- Liebherr planetary gearbox, spring loaded multi disk brake
- Sensitive motions in closed hydraulic circuit
- Slewing speed from 0 – 1.5 rpm infinitively variable

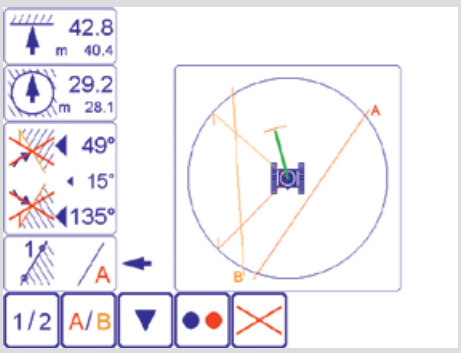
The central greasing

- Standard central greasing device for slewing bearing, boom bearing, luffing cylinder and winch bearing
- Even supply of grease
- Filling quantity visible at any time in transparent reservoir

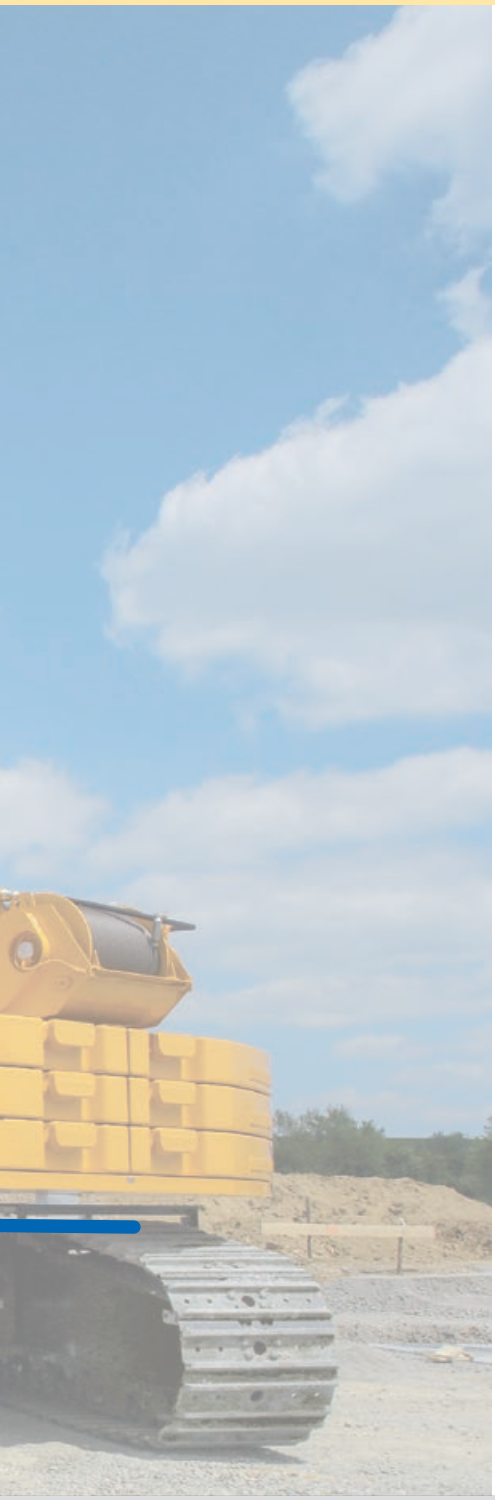


The LICCON test system

- Rapid localisation of problems without any other measuring instruments
- Error code and description displayed
- Convenient interactive functions for monitoring all inputs and outputs
- Displays functions and allocation of sensors and actuators



Intelligent crane control



For functional and safe crane operation: the LICCON computer system

The soft and hardware of the mobile crane control is developed by Liebherr inhouse. The centre is the LICCON computer system (Liebherr Computed Control).

- Integrated LML load moment limiter
- Key components are in-house manufactured by Liebherr
- Guaranteed spare parts availability
- Worldwide proven under the most different climate conditions
- Operator friendly

The second control generation LICCON2 is the result of a continuous development by the Liebherr specialists and enables the adaption to the constantly increasing demands of the markets due to its modern and future oriented control.

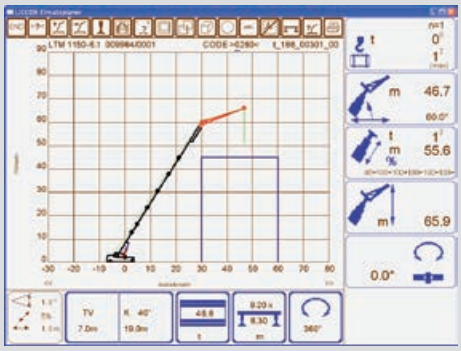
The data bus technology

Liebherr mobile cranes are completely interlaced by the data bus system. All important electric and electronic components are equipped with own micro processors and communicate with each other by only limited data cables. For the special demands of the mobile crane Liebherr has developed own data bus systems (LSB – Liebherr-System-Bus). The data bus technology improves the reliability, the comfort and the safety for road driving and crane operation:

- Higher reliability due to remarkable lesser electric cables and contacts
- Continuous self testing of the “intelligent sensors“
- Comprehensive diagnosis possibilities, fast fault finding

The LICCON working range limiting system

- Makes the crane operator’s job easier by automatically monitoring workspace restrictions such as bridges, roofs, etc.
- Simple programming
- Four different limitation functions:
  - Pulley-head height limitation
  - Radius limitation
  - Slewing angle limitation
  - Edge limitation



The LICCON work planner

- Computer programme for planning, simulating and documenting crane operations on a PC
- Representation of all the crane’s load charts
- Automatic search for suitable crane based on load, radius and lifting height parameters
- Simulation of crane operations with outline functions and supporting force display

Intelligent crane control

LICCON2 – safe and comfortable

With the mobile control and display unit BTT Bluetooth Terminal erection operations, like the actuation of the jack-up cylinders and the track adjustment can be performed comfortably and safely with intervisibility.

Easily and cost effectively the crane can be upgraded to complete remote control: apart from the appropriate software on the crane only a panel with two joysticks is needed, into which the provided BTT is plugged in. With the remote control on the LTR 1220, as well as the complete operation of all the crane movements, the crawler chassis travel can also be controlled. The unrestricted view of the crane and the load means that safety and convenience of operation can now be improved even further.

Track adjustment with BTT

Driving of the crawler chassis and complete crane operation with radio remote control (option)

PN 242.00.E06.2014

Liebherr-Werk Ehingen GmbH
Postfach 1361, 89582 Ehingen, Germany
☎ +49 7391 502-0, Fax +49 7391 502-3399
www.liebherr.com, E-Mail: info.lwe@liebherr.com
www.facebook.com/LiebherrConstruction