

Mobile Crane

LTM 1350-6.1

Max. capacity: 350 t

Max. hook height: 134 m

Max. radius: 96 m

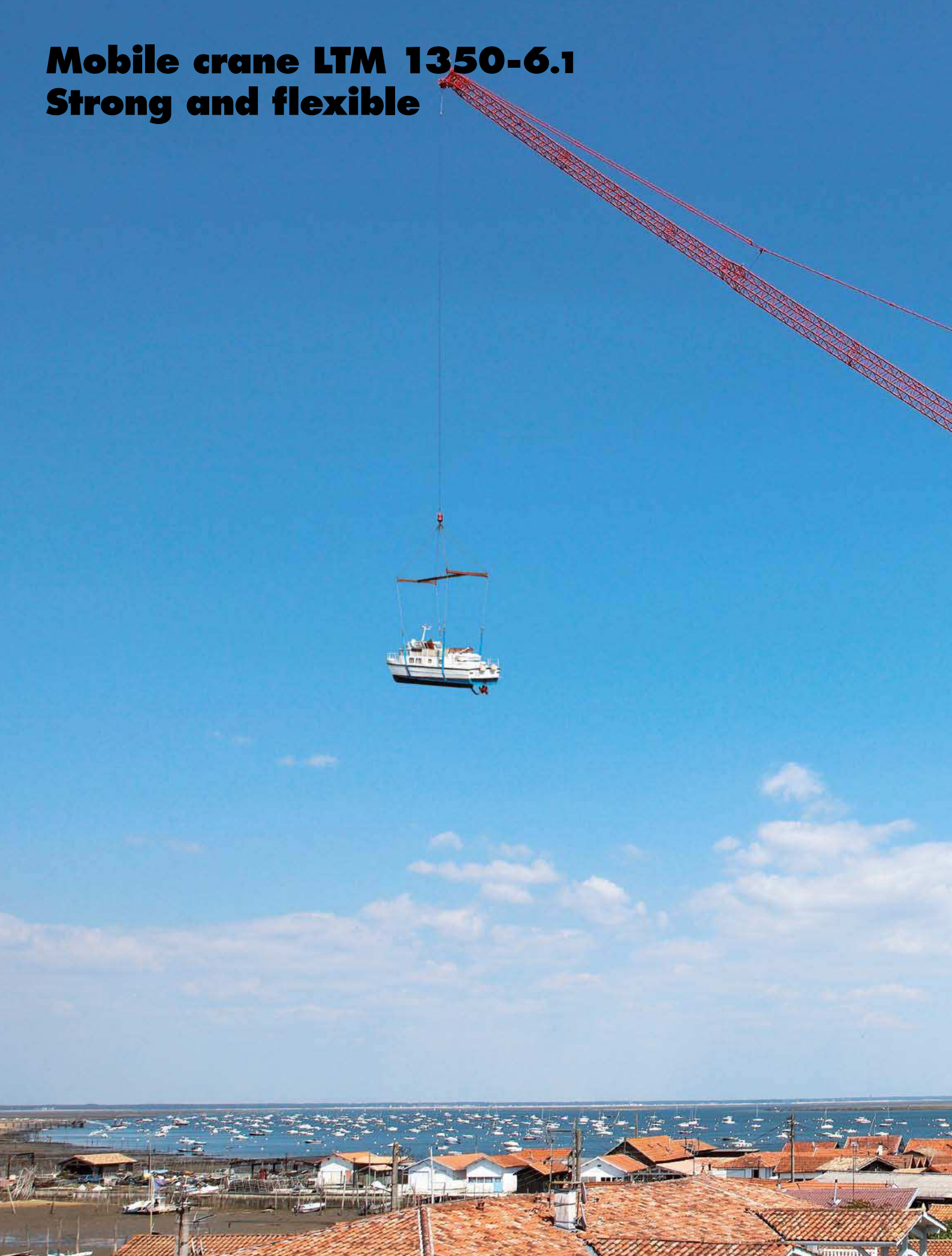


LIEBHERR

Courtesy of Crane.Market

Mobile crane LTM 1350-6.1

Strong and flexible



A long telescopic boom, high capacities, an extraordinary mobility as well as a comprehensive comfort and safety configuration distinguish the mobile crane LTM 1350-6.1 from Liebherr. The 350-ton crane offers state of the art technology for more convenience in practical operation.

- 70 m long telescopic boom
- Capacity 34.7 t at the 70 m long suspended telescopic boom
- Max. system length 140.5 m
- 78 m long luffing jib, 42 m long fixed jib (0°, 20°, 40°, 60°)
- Y-suspension of telescopic boom, self assembly
- 12-speed ZF-TC-TRONIC-gearbox with torque converter
- Active, speed depending rear axle steering
- Air operated disk brakes
- LICCON2-control with mobile control and display unit BTT





Drive train

- 8-cylinder Liebherr turbo diesel engine, 450 kW/612 HP at 1900 rpm, max. torque 2856 Nm at 1500 rpm
- Automatic ZF-gearbox TC-TRONIC, 12 forward-, 2 reverse speeds
- Torque converter
- ZF-intarder directly installed at gearbox
- Axles 1, 3 and 5 driven, optional axle 4



Most modern chassis and drive technology

High mobility and efficiency

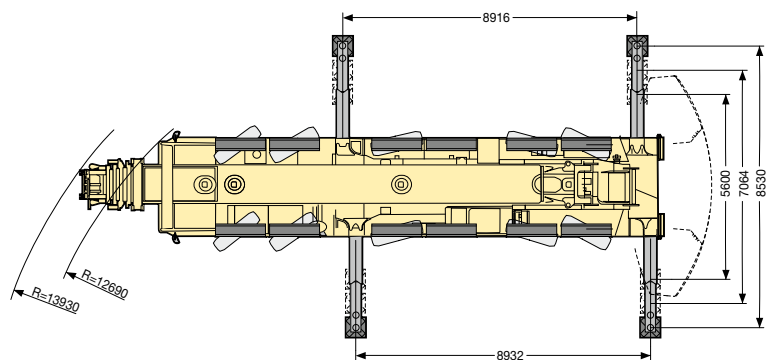
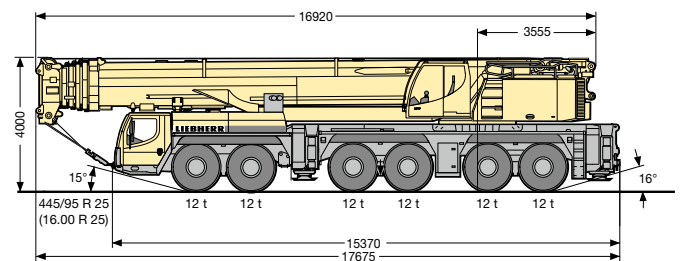
A high performance 8-cylinder Liebherr turbo diesel engine with 450 kW/612 HP provides for dynamic driving performance. The 12-speed ZF-gearbox with automatic gear change system TC-TRONIC grants high efficiency and best comfort.

- Reduced fuel consumption due to high number of gears and high degree of efficiency of the dry clutch
- Best manoeuvrability due to integrated torque converter
- Wear free braking by ZF intarder
- Telma eddy current brake optional, wear free and comfortable

Compact, mobile and weight optimized

Due to its extreme compact design the LTM 1350-6.1 can also manoeuvre on the tightest job sites.

- Chassis length 15.37 m
- Minimum turning radius 12.69 m
- Chassis width 3.00 m, even with tyres 445/95 R 25 (16.00 R 25)
- Tail swing only 5.7 m



Hydro pneumatic axle suspension „Niveaumatik“

- Maintenance free suspension cylinders
- Large dimensions to cope with high axle loads
- Spring travel +125/-125 mm
- High side stability at cornering
- Choice of the driving conditions by fix programs



Air operated disk brakes

- Higher braking power, better brake control
- Improved track stability
- No brake fading at higher operation temperatures
- Higher service life
- Shorter working time for changing of the brake pads
- Braking pads with wear indicators



5 steering programs

- Program selection by simple push button
- Clear arrangement of the control elements and displays
- Programs changeable during driving
- Crab steering controlled comfortably by the steering wheel



Variable steering concept



Centralizing cylinders at the rear axles

- Automatic straight positioning of the rear axles in case of failure

Active rear axle steering

The rear axles are electro-hydraulically actively steered depending on the speed and the steering angle of the front axles. 5 steering programs (P) are preselectable by push button.

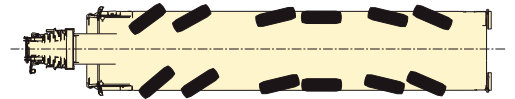
- Distinct reduction of the tyre wear
- Improvement of the manoeuvrability
- Stable driving performance also at high speeds
- All 6 axles steerable, no lifting of the centre axles at crab steering

High safety standards – complete know-how from Liebherr

- Centralizing cylinders for automatic straightening of the rear axles in case of failure
- Two independent hydraulic circuits with wheel driven and motor driven hydraulic pumps
- Two independent steering computers

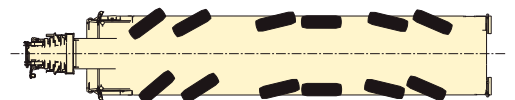
P1 Road steering

The axles 1 and 2 are mechanically steered by the steering wheel. The axle 3, 4, 5 and 6 are actively steered depending on the speed and on the steering angle of the front axle. From 30 km/h the axles 3 and 4 will be adjusted to straight driving and fixed. From 60 km/h the axles 5 and 6 are also adjusted to straight driving and fixed.



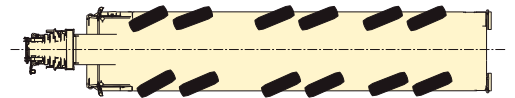
P2 All-wheel steering

The axles 3, 4, 5 and 6 are turned by the steering wheel depending on the steering angle of the front axle to provide for the smallest turning radius.



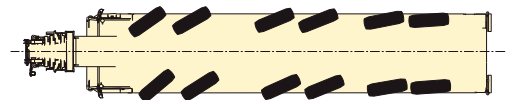
P3 Crab steering

The axles 3, 4, 5 and 6 are turned by the steering wheel to the same direction as the steering position of axle 1 and 2.



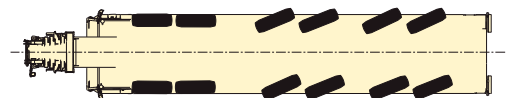
P4 Reduced swing out

The axles 3, 4, 5 and 6 are turned depending on the wheel turn of the front axles to minimize the back swing of the rear of the chassis.



P5 Independent rear axle steering

The axles 1 and 2 are steered by the steering wheel, the axles 3, 4, 5 and 6 are steered by push buttons independently from the steering angle of the axles 1 and 2.





The driver's cab

- Corrosion resistant steel plate execution, cataphoretic dip primed
- All around safety glazing
- Tinted windows
- Heatable and electrically adjustable mirrors
- Air cushioned driver's seat with lumbar support

Comfort and functionality



Modern driving cab and crane cab

The modern driving cab as well as the backwards tiltable crane cab offer a comfortable and functional working place. The control elements and displays are arranged according to ergonomic factors. Thus a safe and wear free working is assured.

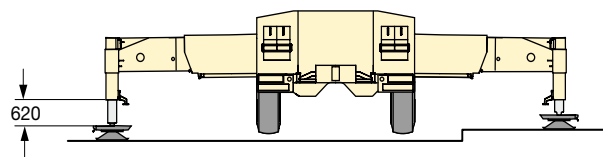
Fast and safe erection

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



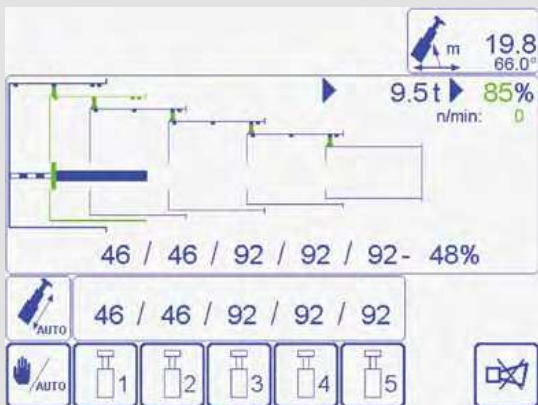
Crane supporting – fast, comfortable and safe

- BTT - Bluetooth Terminal, mobile control and display device
- Electronic levelling display
- Fully automatic levelling by push button
- Display of support forces
- Engine-start/stop and speed regulation
- Lighting of support area with 4 integrated floodlights
- Stroke of supporting cylinders front 620 mm, rear 620 mm
- Outriggers 2-stage, fully hydraulic, low maintenance extending system
- 3 supporting bases as standard 50/75/100 %



The crane cab

- Optimized heating and ventilation system, automatic temperature control, air condition optional
- Hinged front and roof screens
- Extended field of view due to large screens
- Crane driver seat with lumbar support, multiple adjustable
- Electrically extendable side running board
- 20° tiltable to the rear
- Engine-independent heating



The fully automatic telescoping system „TELEMATIK“

- Improvement of capacities at long booms and large radii due to “lightweight” telescoping system
- 1-stage hydraulic cylinder with hydraulically operated drive pin
- Maintenance free telescoping system
- Telescoping fully automatic
- Simple operation, supervision of telescoping at the LICCON monitor

High 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.

- 70 m long telescopic boom
- 78 m long luffing jib
- 42 m long fixed jib (0°, 20°, 40°, 60°)
- Stepless interpolation of capacities during luffing of the boom combination between 82° and 68° telescopic boom angle
- Y-telescopic boom suspension, self assembly

High capacities with full counterweight as well as with partial counterweight offer a wide application of operations

- High lateral stability due to the oval boom profile
- Optimized capacities due to the numerous extension variations
- Capacity 34.7 t at 70 m long suspended telescopic boom

High capacities at unpinned boom lengths

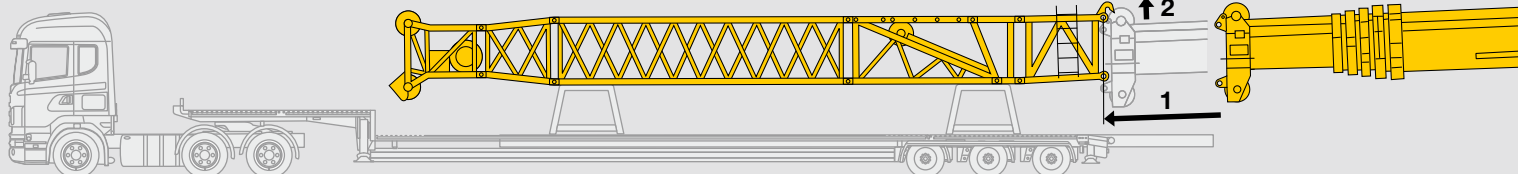
- High telescopic capacities due to interpolation
- Separate capacity charts for holding of loads at unpinned boom lengths
- Display at LICCON-monitor



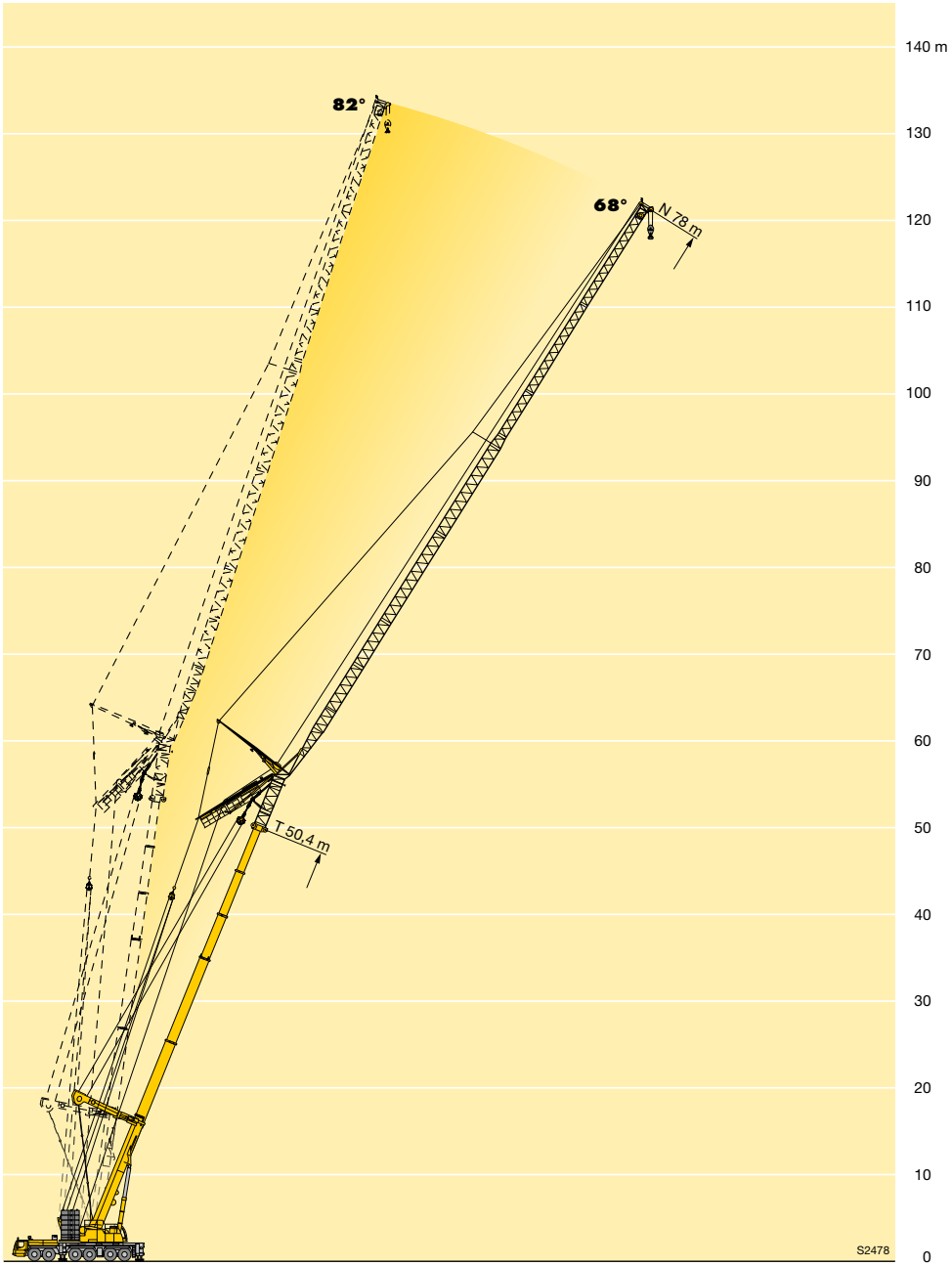
← Holding capacity

← Unpinned telescope length

← Telescopic capacity

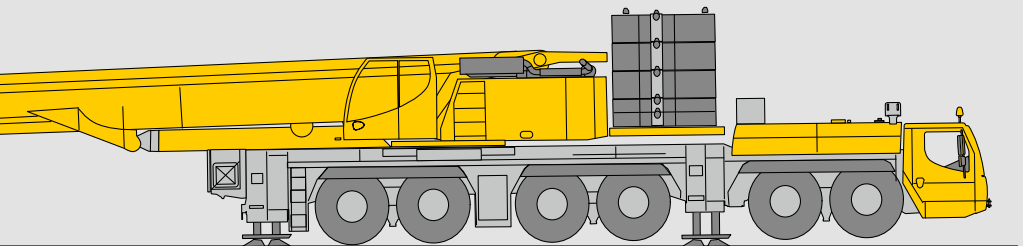


Multivariable boom system



Stepless capacity interpolation

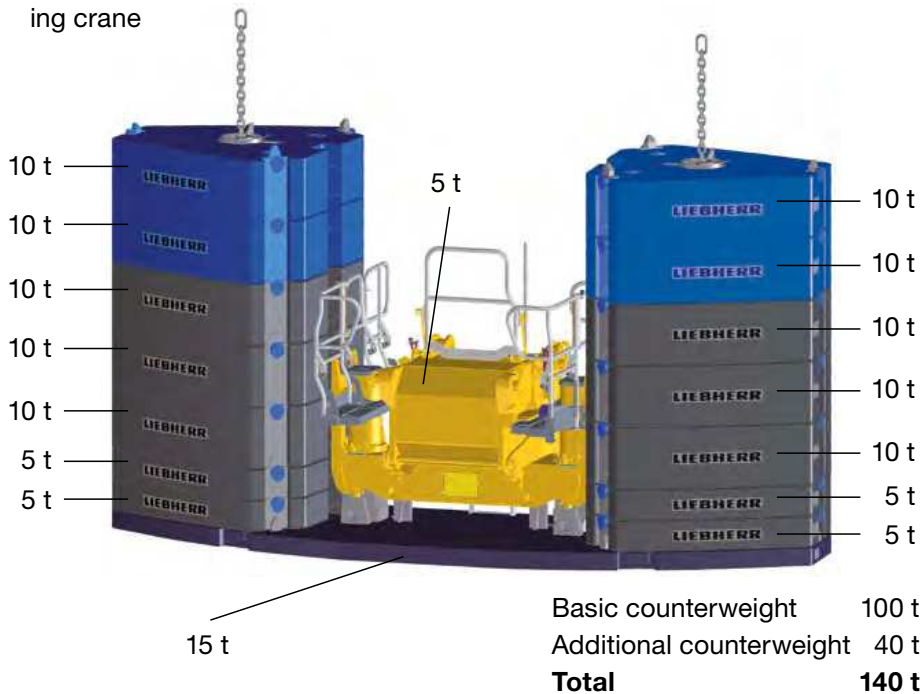
Self assembly of the fixed jib



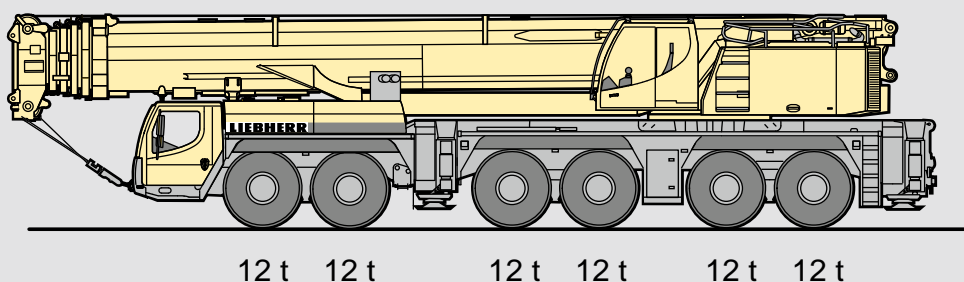
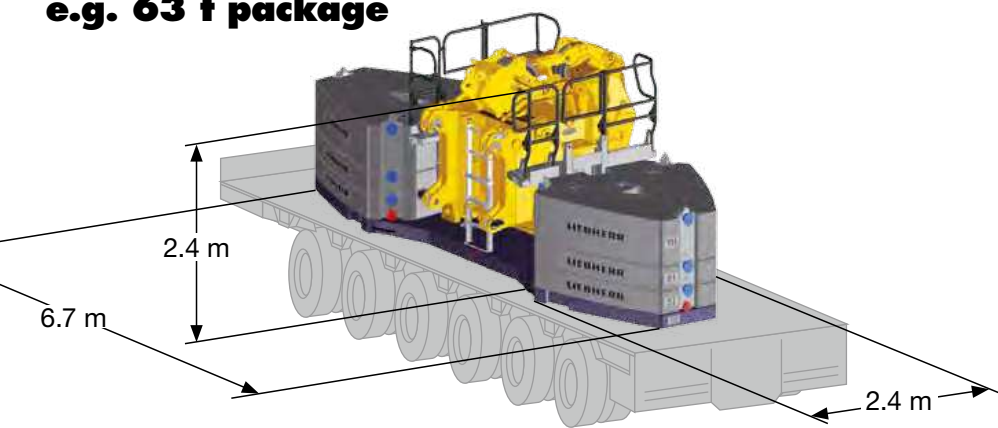
Variable counterweight

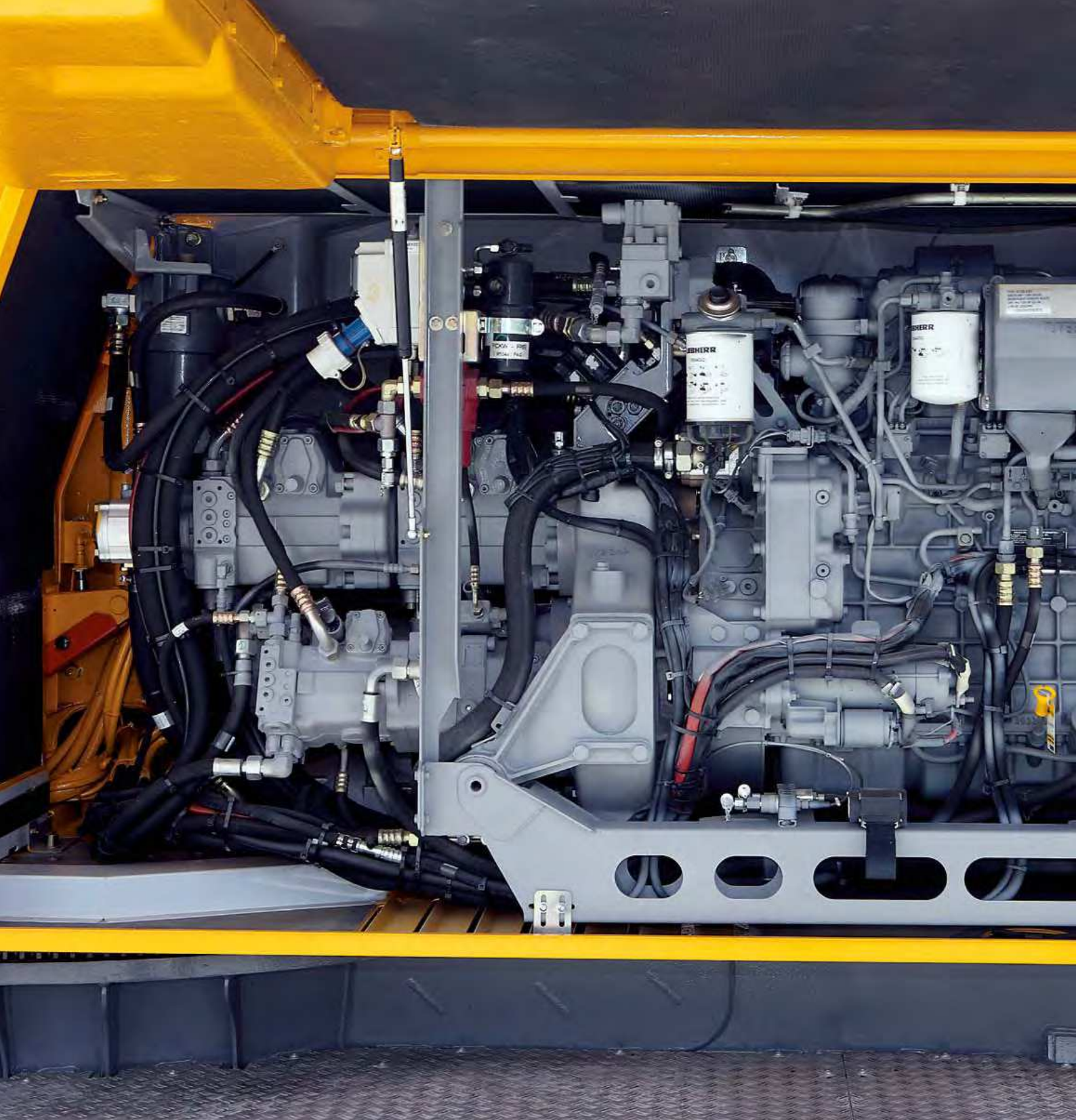
Mounting of counterweight - only a matter of minutes

- 140 t total weight, 100 t basic counterweight, 40 t add. counterweight
- Hydraulic ballasting device at counterweight frame
- Hoist gear 2 (option) mountable at the counterweight frame without assisting crane



Easy counterweight transportation, e.g. 63 t package





The hoist gear

- Liebherr hoist winch with internal planetary gear and spring loaded multi disk brake
- Rope pull 122 kN at the outer layer
- Max. rope speed 138 m/min
- 2. hoist gear optional



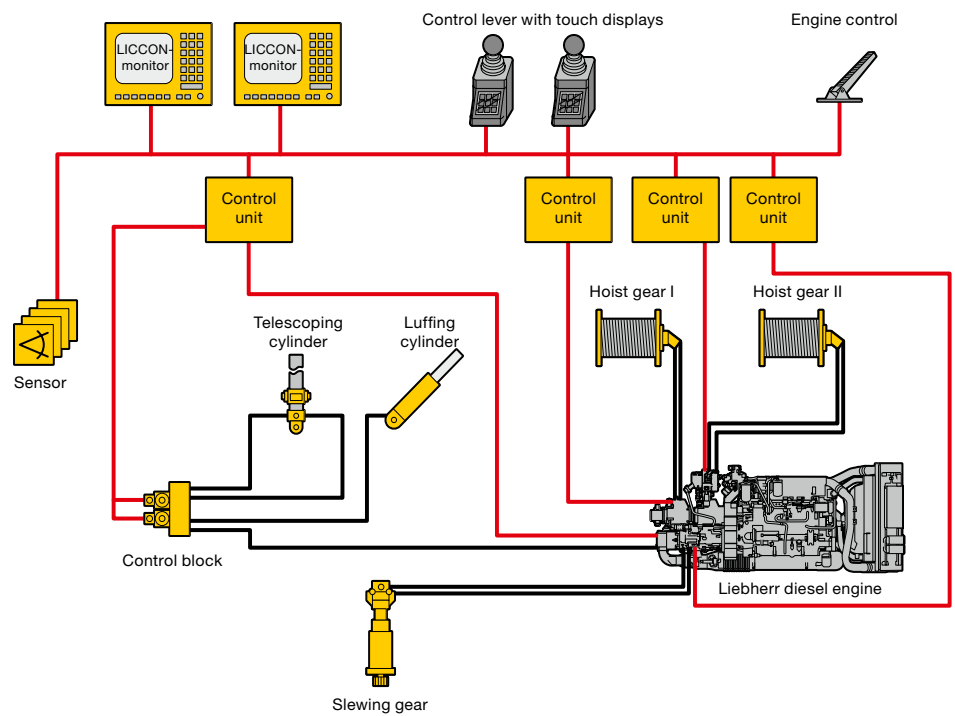
Powerful crane drive



With proven components

The drive components for the crane operation are designed for high performance and provide for sensitive and precise handling of the load. They are specially tuned for the crane operation and proved in severe long-term tests.

- Crane engine: 4-cylinder Liebherr turbo diesel engine, 180 kW/242 HP at 1800 rpm, max. torque 1145 Nm at 1500 rpm, optimized 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, 122 kN rope pull at the outer layer, less reeving necessary due to high line pull



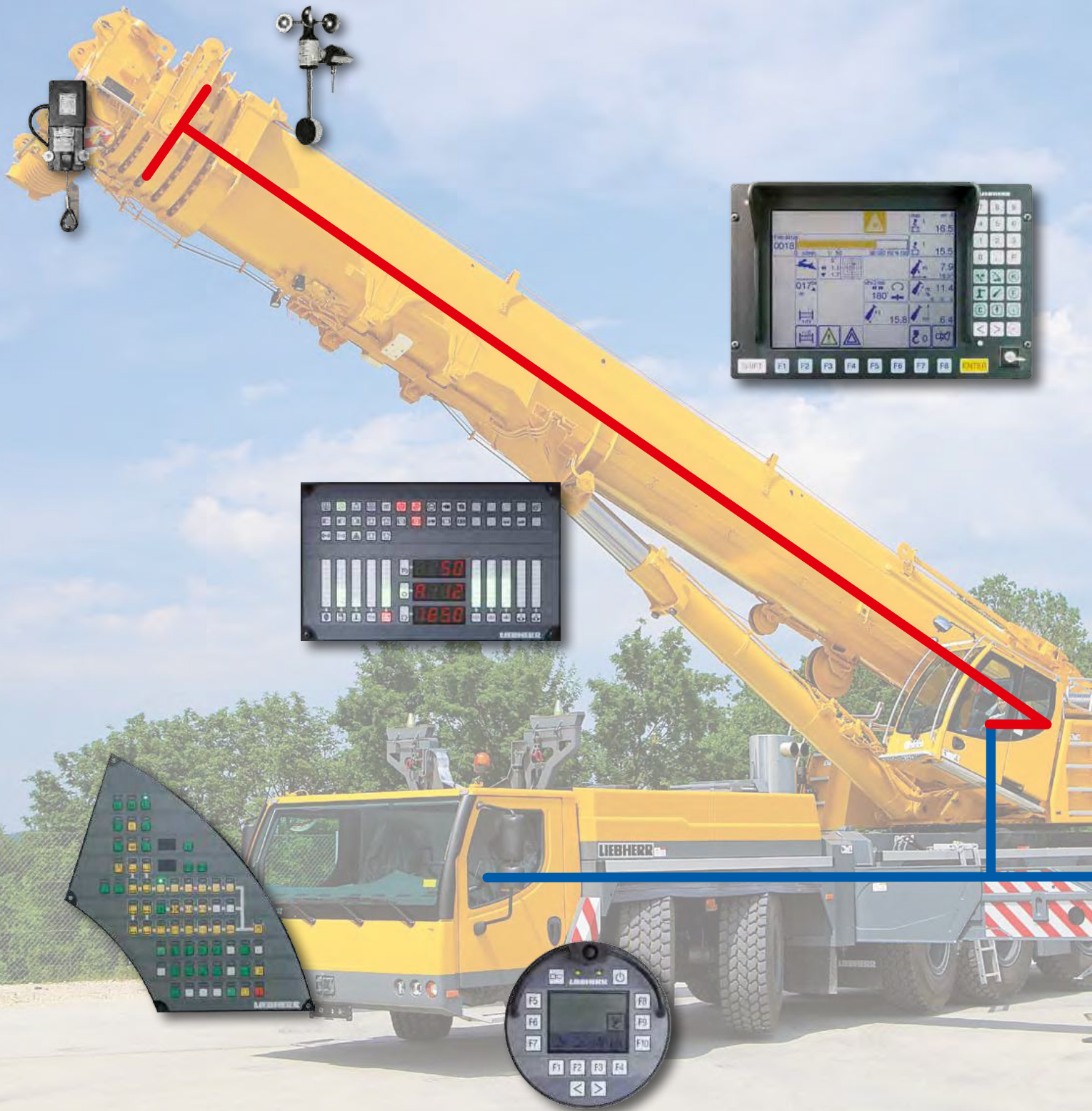
The slewing gear

- Liebherr planetary gearbox, spring loaded multi disk brake
- Sensitive motions in closed hydraulic circuit
- Slewing speed from 0 – 1.2 rpm infinitely variable



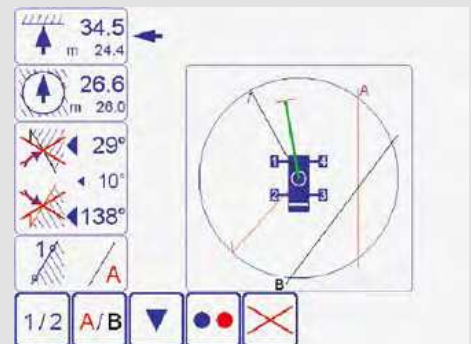
The central greasing

- 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

- Fast locating of failures at the computer screen without measuring equipment
- Display of failure codes and failure descriptions
- Comfortable dialog functions for supervision of all in and out terminals
- Display of functions and allocation of sensors and actors



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 in-house. 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

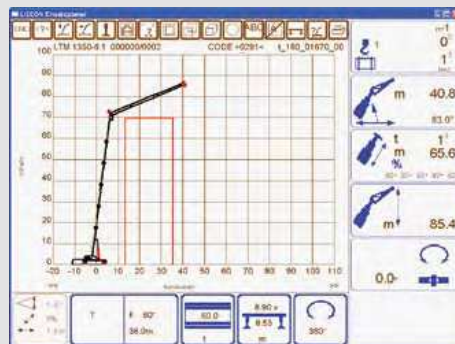
Liebherr mobile cranes are completely interlaced by the data bus system. All important electric and electronic components are equipped with own micro processors and communicate with each other by only limited data cables. For the special demands of the mobile crane Liebherr has developed own data bus 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 (Option)

- Relief for the crane driver by automatic supervision of the working range boundaries like bridges, roofs etc.
- Simple programming
- Four different limiting functions:
 - Boom head height limiting
 - Radius limiting
 - Slewing angle limiting
 - Border limiting



The LICCON working planner

- Computer program for planning, simulation and documentation of crane operations at the computer
- Display of all load charts belonging to a specific crane
- Automatic search of a suitable crane by input of the load case parameters load, radius and hoisting height
- Simulation of crane operations with drawing functions and display of support forces

LICCON2 - safe and comfortable



Attaching and detaching of the hook block

The BTT – Bluetooth Terminal offers the crane driver the possibility to attach or detach the hook block at the front of the vehicle within sight, as the hoist winch and the luffing cylinder of the telescopic boom are remote controlled.



Wireless remote control

Wireless remote control (option)

All crane motions can be controlled outside of the cab.

- Higher efficiency
- Free view and closeness to the load
- Prevention of communication errors between the crane driver and the job site personnel

Supporting the crane

By use of the BTT the mobile crane can be comfortably and safely supported on the outriggers. Engine start/stop, speed regulation, electronic level display, automatic support levelling and display of the support forces are available as standard.



Colour monitor

The readability of the data on the monitor of the LICCON2 control in the superstructure cab is improved by the colour display. Warnings and the crane utilization are easier detectable.



Touch displays

Below the joy sticks integrated in the armrests the touch displays are installed, with which the various operational functions can be selected. These are beside others the supporting of the crane, the adjustment of the working floodlights as well as heater and air condition controls.