

Mobile crane

LTC 1050-3.1

Lifting capacity:
50 t

Telescopic boom:
36 m

Hoist height:
48 m



LIEBHERR

LTC 1050-3.1 mobile crane

Compact and suitable for universal use





The LTC 1050-3.1 delivers the outstanding handling of a classic all-terrain crane. At the same time, thanks to its compact design it is an ideal machine for working in highly restricted spaces, for example for crane work in industrial buildings. The VarioBase® and ECO-mode features make the compact crane particularly safe and efficient to use.

Telescopic boom

36 m

Folding jib

13 m

Movable crane cabin

Excellent visibility on the road and during crane operation

Lift cabin optional

Taxi crane

Complete equipment can be carried on the crane with 12 tonne axle load

VarioBase® optional

Greater safety and higher performance

ECOMode

Lower fuel consumption and lower noise emissions

Efficient chassis and drive technology



High mobility and great economy

The powerful diesel engine on the LTC 1050-3.1 enables it to be driven at high speeds. The automatic powershift transmission delivers excellent manoeuvrability and comfort. A torque converter allows for sensitive manoeuvring and minimal crawling speeds.

Drive train

- 6-cylinder Mercedes Benz turbo diesel engine, 260 kW/354 h.p., max. torque 1,400 Nm
- ZF powershift transmission with automatic gear shift, 6 forwards and 2 reverse gears
- Torque converter and lock-up clutch
- Axles 1 and 3 are driven, axle 2 as an option



"Niveaumatik" hydro-pneumatic axle suspension

- Suspension cylinders require zero maintenance
- Designed for high axle loads
- Spring travel +100/-100 mm
- Great lateral stability when cornering
- Suspension states selected using fixed programmes



Pneumatic disk brakes

- Improved braking performance, better control
- Improved lane stability
- No reduction in braking effect due to high brake temperatures (fading)
- Longer service lives
- Shorter working times for changing the pads
- Brake pads with wear indicators



Telma eddy current brake (option)

- No wear, low maintenance system
- Enhanced safety by very fast activation in milliseconds
- Reduction in running costs
- High comfort level due to braking absolutely without jolts
- Environmentally friendly braking system, zero emissions or particulates



Variable steering concept



High safety and economy levels with active rear axle steering

The LTC 1050-3.1 is easy to manoeuvre with its five steering programs. Its handling is stable even at high speed. Its active rear axle steering significantly reduces tyre wear.

Active rear axle steering

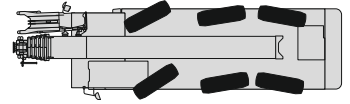
The front axle is steered mechanically using the steering wheel. The rear axles are actively steered by an electro-hydraulic system depending on the steering angle of the front axle and speed. All three axles on the LTC 1050-3.1 are steerable.

High safety standards – all Liebherr's expertise

- Centring cylinder for automatically straightening the rear axles in the event of a fault
- Two independent hydraulic systems with wheel-powered and engine-powered hydraulic pump
- Two independent control computers

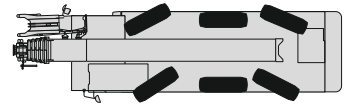
P1 Road steering

Axle 1 is steered mechanically using the steering wheel. Axles 2 and 3 are actively steered depending on the speed and the steering angle of the front axle. At speeds of 30 km/h they are set to straight ahead and fixed.



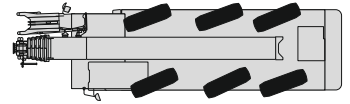
P2 All-wheel steering

Axle 3 is turned by the steering wheel depending on the steering angle of axle 1 to provide for minimum turning circles.



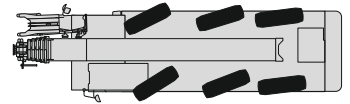
P3 Crab steering

Axles 2 and 3 are steered in the same direction as axle 1 using the steering wheel.



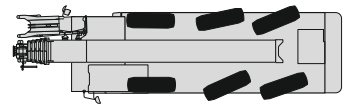
P4 Reduced swing-out

Axles 2 and 3 are actively steered depending on the steering angle of axle 1 to minimise the back swing of the rear of the chassis.



P5 Independent rear axle steering

Axle 1 is steered by the steering wheel, axles 2 and 3 are steered independently from the steering angle of axle 1 using a control lever.



Centring cylinder

- Automatically straightens the rear axles in the event of a fault

5 steering programs

- Program selection at the touch of a button
- Clear layout of the controls and indicators
- Programs can be changed whilst moving
- Crab steering comfortably controlled using the steering wheel



Comfort and functionality



Smart cabin concept for ergonomics and safe working

The crane cabin is moved to the front of the vehicle on a telescopic arm for driving on the road and secured mechanically. In this position, the crane handles well even at high speed and the driver feels like he is driving a two-cabin crane. The adjustable cabin enables Liebherr to offer perfect visibility in the LTC 1050-3.1 city crane.



Modern driver's and crane cabin

- All-round safety glass, tinted windows, large lines of vision with excellent all-round visibility
- Opening front and roof windows
- Independent additional heating system
- Air-conditioning system
- Pneumatic driver's seat with lumbar support, multiply adjustable
- Heated, electrically adjustable exterior mirrors
- Crane cabin can be tilted 20° backwards

Telescoping crane cabin

The optional telescoping crane cabin delivers excellent visibility during crane operations. It takes the crane driver to an eye level of up to 7.8 m. The lift cabin makes a valuable contribution to high safety levels.



Supporting the crane – fast, convenient and safe

The supports are extended fully hydraulically. They are controlled using the BTT Bluetooth Terminal or from the crane cabin. Four integral lights provide excellent lighting of the support area. The extension system requires very little maintenance.

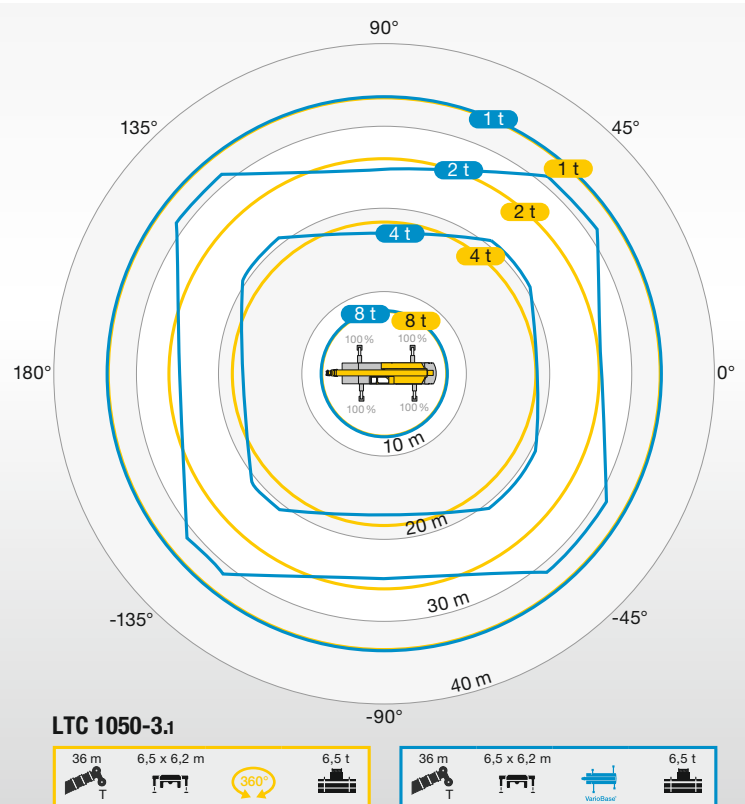
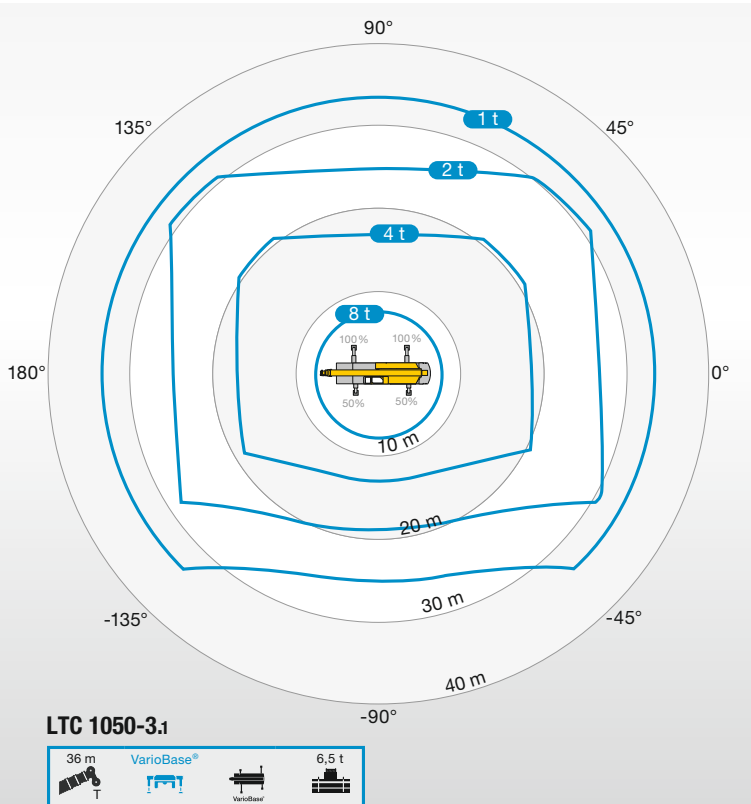


VarioBase®



Variable supporting base for greater safety and higher lifting capacity

VarioBase® allows each individual crane support to be extended to variable lengths. At the same time, the crane's work is secured by the LICCON controlled load moment limiter. The extension length and support force of each outrigger is measured and the maximum load capacities for exactly this situation are calculated by the crane controller.



Greater safety

VarioBase® ensures safe operation in constricted working conditions. The maximum lifting capacities are calculated individually and precisely for every situation. This ensures safe working practice with any chosen supporting base.

Higher lifting capacity and larger working range

Even with the maximum support base VarioBase® delivers higher lifting capacities and a larger working area. The greatest advantages are made in the operating ranges directly above the supports. The variable supporting base also makes improvements for hoisting to the front and rear.

LICCON work planner in the crane cabin

The VarioBase® system is integrated in the LICCON work planner. Dispatchers can plan jobs using the variable supporting base in advance. The work planner is also installed in the LICCON control in the crane cabin to ensure that hoists can be simulated on the site.



Intelligent crane control



The LICCON computer system for function, safe crane operations

Liebherr developed the software and hardware for its mobile crane control in-house. The heart of the system is the LICCON (Liebherr Computed Control) computer system. Its ongoing development by Liebherr specialists and its modern and future-oriented control architecture enable it to adjust to the continually growing needs of the market.

Specially developed for cranes

- Integral LML load moment limiter
- The key components are manufactured by Liebherr
- Guaranteed availability of spare parts
- Proven in a wide variety of climatic conditions
- User friendly
- Highly reliable due to the use of data bus technology

€COMode

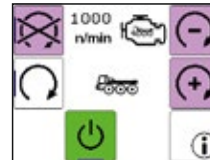
ECOMode for more efficient jobs

- Lower fuel consumption
- Lower noise emissions

In ECOMode the crane driver sets the required working speed using the control lever. The perfect engine speed is calculated by the LICCON2 controller and set on the crane's engine by the engine management system. It reduces fuel consumption by up to 10%.

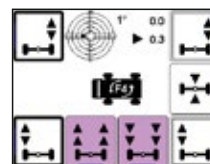
Remote crane control

The mobile BTT Bluetooth Terminal control and display unit enables set-up processes to be completed quickly, conveniently and safely.



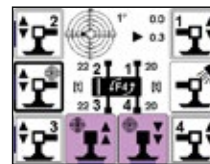
Diesel engine

- Engine start/stop
- Engine speed control



Axle suspension

- Raise/Lower the vehicle
- Axle blocking



Supporting

- Electronic angle indicator
- Fully automatic levelling

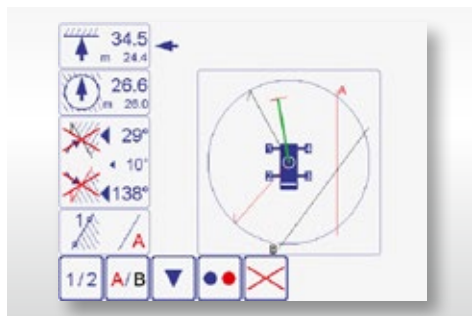


Hook block installation

- The hook block is attached and detached with direct sight contact
- Operation of winch and telescopic boom

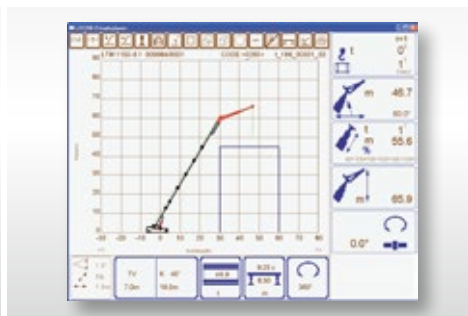
The LICCON working range limiting system

- Assists the crane driver by automatically monitoring the working range limits such as bridges, roofs, etc.
- Simple programming



The LICCON work planner

- Computer program for planning, simulating and documenting crane work
- Search for a suitable crane
- Calculation of maximum support forces and wind speeds



Complete remote control

- All crane movements can be controlled from outside the crane cab
- Greater economy
- Clear lines of vision and proximity to the load



Optimized dimensions

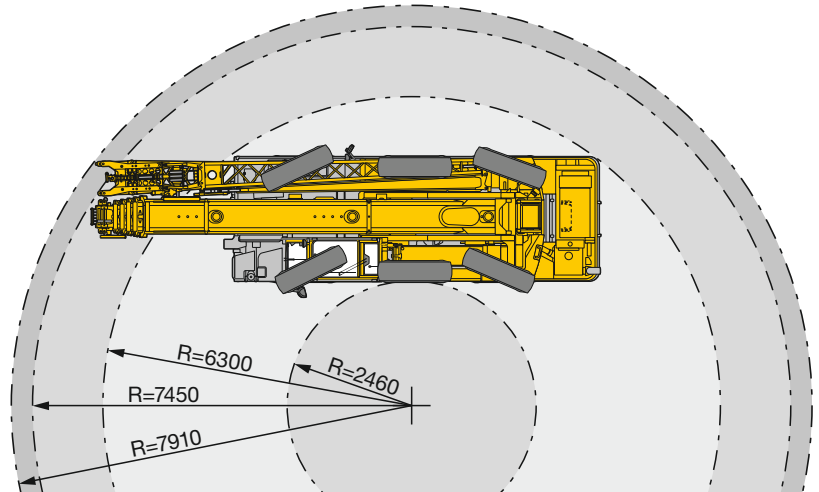


Spacious, compact and functional – city crane with lots of room

The LTC 1050-3.1 compact crane features extremely small dimensions. The front storage box can be removed to make it even smaller. A whole host of storage compartments can be used for accessories such as attachment equipment and support timbers.

Compact design

Its turning circle radius over the telescopic boom with 385/95 R25 (14.00) tyres is just 7.5 m. In particularly constricted areas the boom can be luffed upwards to bring the turning circle of the chassis into play. The chassis length is 8.9 m and can be reduced to 7.7 m by removing the front storage box. Even with 16 size tyres the vehicle width stays within 2.55 m.

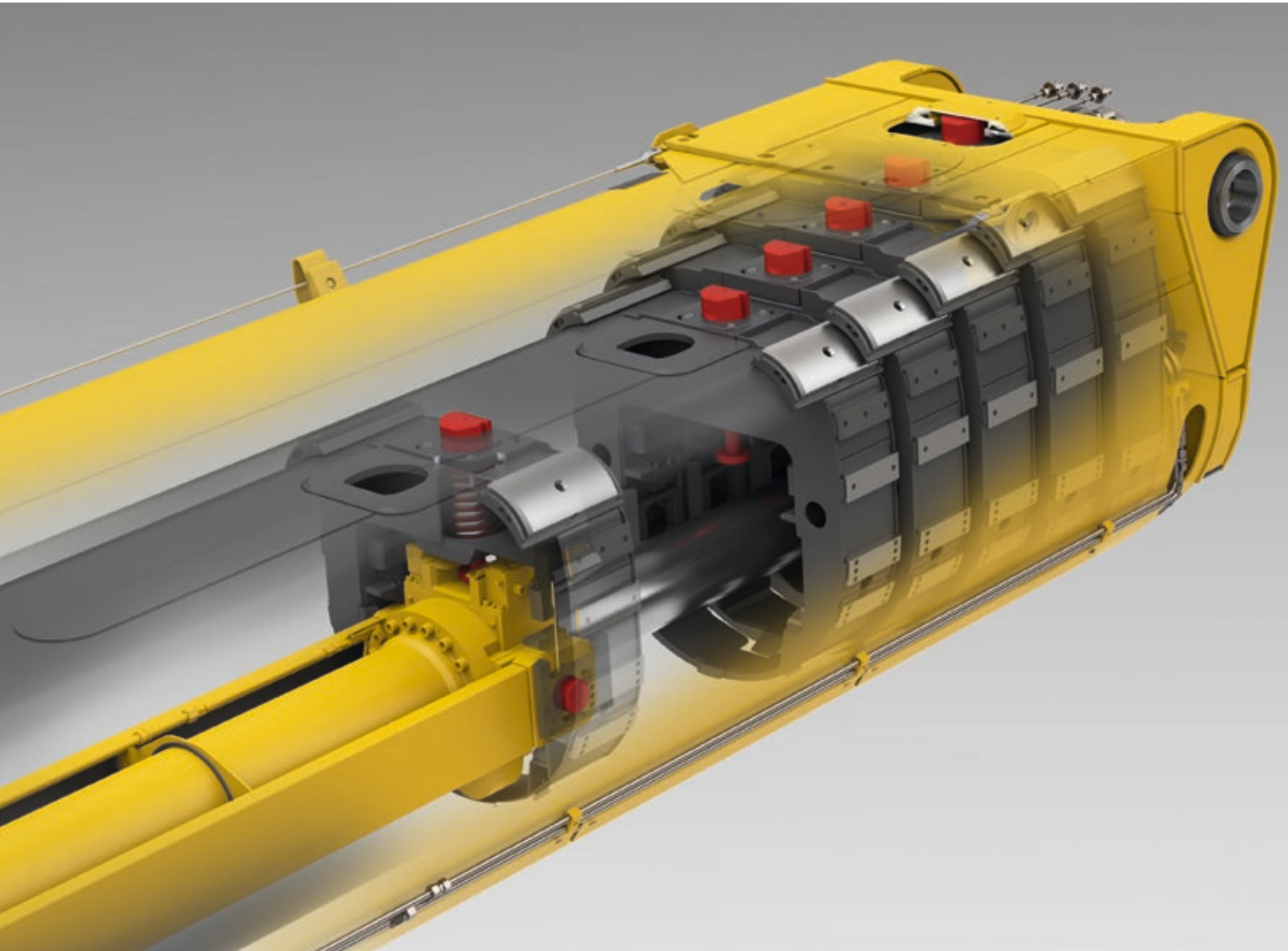


All-in crane

The LTC 1050-3.1 carries all the equipment it needs on the crane. With an axle load of 12 t it can drive with the basic ballast of 6.5 t and the folding jib. As an option the basic ballast can be divided to give the crane a gross weight of 11 t. The spacious storage compartments provide space for additional equipment.



High lifting capacities with long boom



Time-tested technology from Liebherr

The automatic rapid action TELEMATIK telescoping system makes Liebherr cranes more powerful and more efficient. It operates using just one hydraulic cylinder and an internal locking system for the individual telescoping sections. It delivers excellent lifting capacity properties since the various telescopes can be extended in any order and completely independently of each other.

Powerful, long telescopic boom

The telescopic boom consists of a pivot section and 5 telescopic sections which can be extended to the required lengths and pinned conveniently and automatically using the proven TELEMATIK one-cylinder telescoping system.

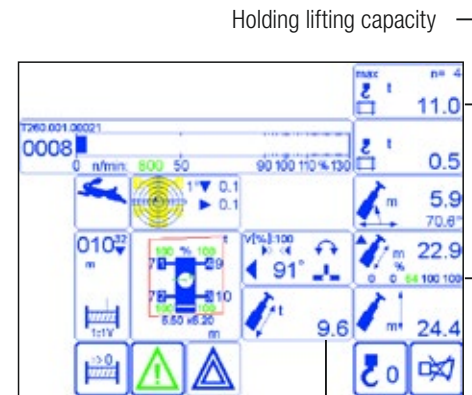
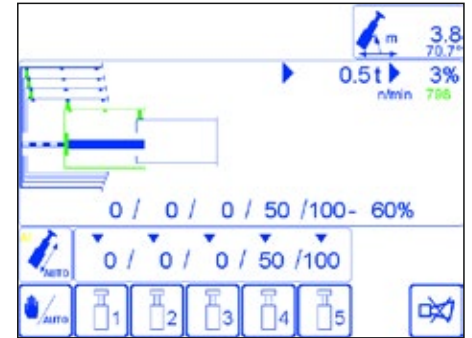
- 36 m telescopic boom
- 7.5 m – 13 m double folding jib, can be attached at 0°, 20°, 40° and 60°
- Improved lifting capacities with a wide range of extension variants
- High lateral stability due to the oval boom section

The "TELEMATIK" fully automatic telescoping system

- Increased lifting capacities for long booms and large radii with the "lightweight" telescoping system
- One-stage hydraulic cylinder with hydraulic drive pin
- Telescoping system requires zero maintenance
- Fully automatic telescoping
- Very easy to operate, the telescoping process is controlled using the LICCON monitor

High lifting capacities with unpinned boom

- High telescoping lifting capacities
- Separate lifting capacity tables to hold loads with unpinned booms
- Display on the LICCON monitor



Holding lifting capacity

Telescoping lifting capacity

Unpinned telescope length

Hoist gear

- Hoist winch with integral planetary gear and spring-loaded multi-disk brake
- 48 kN hoist at the outer layer
- Max. rope speed 111 m/min
- 2nd hoist gear optional

Slewing gear

- Planetary gear, spring-loaded multi-disk brake
- Adjustable slewing gear as standard: open or hydraulically clamped
- Slewing speed from 0 to 1.9 rpm, infinitely adjustable

Central lubrication

- Standard central lubrication system for turntable, boom bearing, luffing cylinder and winch bearing
- Uniform supply with lubricant
- Level can be seen at any time in a transparent reservoir



Functional additional equipment

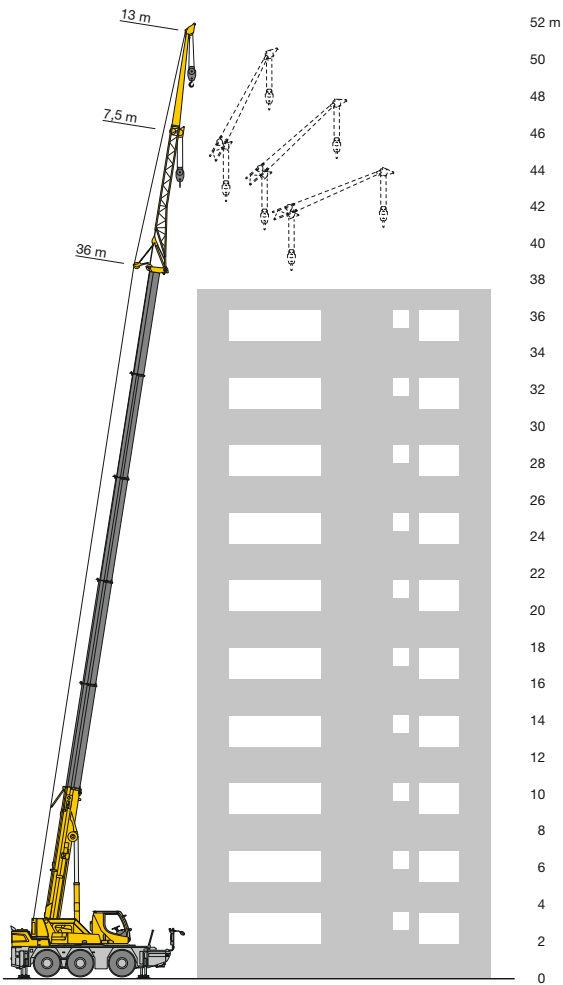


Smart solutions for any requirement

The functional additional equipment increases the flexibility and economy of the LTC 1050-3.1 even further.

Assembly work in very constricted areas

The 7.5 m to 13 m double folding jib includes a 1.5 m assembly jib. This can be attached at an angle of up to 60°. The assembly jib makes the LTC 1050-3.1 ideal for assembly work in very constricted areas and in low industrial buildings. A compact hook block with 3 sheaves and a double hook is available to use the perfect hoist heights for these applications. The maximum hoist height is achieved with a hook crossbar which is installed instead of the sheaves in the assembly jib.



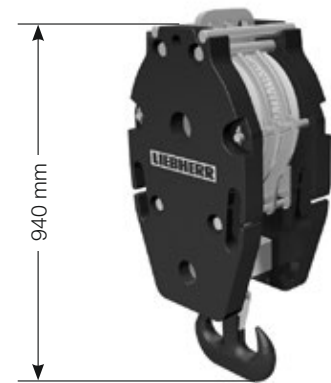
Assembly jib with sheave set



Assembly jib with hook crossbar



Compact hook block with 3 sheaves



Mobile and Crawler Cranes from Liebherr-Werk Ehingen GmbH

Liebherr-Werk Ehingen GmbH develops and manufactures highly modern telescopic and lattice boom cranes on mobile and crawler chassis. Its services also include the design and project completion of large parasols. The company is the global market leader in mobile cranes. The keys to this success are its innovative products, high quality and committed workforce. As the company attaches a great deal of value to high technological standards, Liebherr-Werk Ehingen GmbH invests heavily in research and development. The needs of the customer are

the primary focus from development to service. The objective is to set standards in quality, functionality and safety and ensure that the machines are highly reliable in use. Liebherr-Werk Ehingen GmbH is part of the global Liebherr Group of Companies. This family-run company is one of the largest manufacturers of construction machinery in the world and is also renowned as a supplier of technically advanced, user-focussed products and services in many other industries.



LTM mobile cranes



LTC compact cranes



LTF telescopic truck-mounted cranes



LG lattice boom mobile cranes



LTR telescopic crawler cranes



LR crawler cranes

LTM Mobile Cranes

The range of LTM cranes extends from the twin-axle 35-tonne model to a heavy duty crane with a load capacity of 1,200 tonnes. The all-terrain chassis is ideal for combined on-road and off-road use. The powerful, long telescopic booms can reach great working heights quickly and easily.

LTC Compact Cranes

Compact cranes are all-terrain cranes with a particularly compact design. They are ideal for use on extremely constricted sites.

LTF Telescopic Truck-Mounted Cranes

LTF truck-mounted cranes are a low cost alternative in the taxi crane class. Mounted on standard truck chassis, they cost very little to drive around to jobs.

LG Lattice Boom Mobile Cranes

LG mobile cranes with lattice booms can handle particularly heavy loads, enormous working heights and radii.

LTR Telescopic Crawler Cranes

Telescopic cranes on crawler chassis deliver short set-up times and excellent off-road manoeuvrability. They are particularly flexible to use.

LR Crawler Cranes

LR crawler cranes are used all over the world, wherever very heavy loads need to be moved safely and economically. With extremely variable boom systems and lifting capacities of up to 3,000 tonnes they can cover a particularly wide range of uses.

www.liebherr.com

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