



# Mobile crane LTM 1750-9.1

Max. capacity:	750 t
Max. hoisting height:	154 m
Max. radius:	112 m



# LIEBHERR



# **Mobile crane LTM 1750-9.1**

## **Powerful and universally useable**





The LTM 1750-9.1 can carry the 52 m long telescopic boom, two folding outriggers and the main winch within the maximum axle load of 12 t. Considerable capacity increases are accomplished with the Y-telescopic boom suspension. Short set-up times, an extraordinary mobility as well as extensive comfort and safety appointments mark the mobile crane LTM 1750-9.1 from Liebherr.

- **Universally useable** – extensive and flexible boom system for the operation areas of industry, infrastructure and energy industry
- **High mobility** – numerous axle load versions enable the operation on public roads worldwide
- **Self erection** – fast and comfortable set-up with limited space requirements
- **Highest availability** – unique drive concept enables the control of all crane functions from the superstructure engine as well as from the chassis engine
- **VarioBase®** – arbitrary, praxis oriented supporting due to the Variable Supporting Base





# Extensive operation spectrum with high performance and variable boom systems

## Ship assembly

Load 56 t at max. 34 m radius

System TY

Telescopic boom 52 m + Y-suspension





# Assembly of a steel construction

Load 22 t at max. 58 m radius

System TYVENZF  
Telescopic boom 49.1 m + Y-suspension  
+ adapter 7.7 m + hydraulically adjustable  
fly jib 13 m at 0° angular offset





# Outstanding capacities at large radii with luffing fly jib

## Disassembly of suspended scaffolding

Max. load 9.7 t at 100 m radius

System TYV2EN  
Telescopic boom 49.1 m  
+ Y-suspension + adapter 19 m  
+ luffing fly jib 91 m





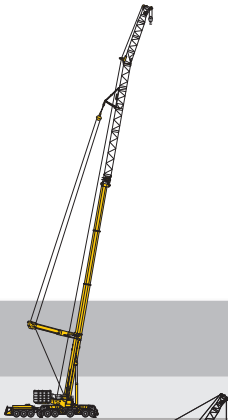




# Optimized for the installation of wind power plants

Telescopic boom + Y-guying system + fixed jib

Height of hub of wind power generator	Max. capacity at radius	Hook height	System
80 m	58.5 t x 16 m	88 m	TYV23E3F 10°



Telescopic boom + Y-guying system + luffing jib

Height of hub of wind power generator	Max. capacity at radius	Hook height	System
80 m	84.7 t x 20 m	90 m	TYV2EN
100 m	59.7 t x 25 m	107 m	TYV2EN
100 m	54.1 t x 26 m	110 m	TYV2EN
120 m	30.3 t x 34 m	130 m	TYV2EN
130 m	22.2 t x 42 m	140 m	TYV2EN
140 m	13.3 t x 48 m	150 m	TYV2EN





# Economical transportation and variable axle loads

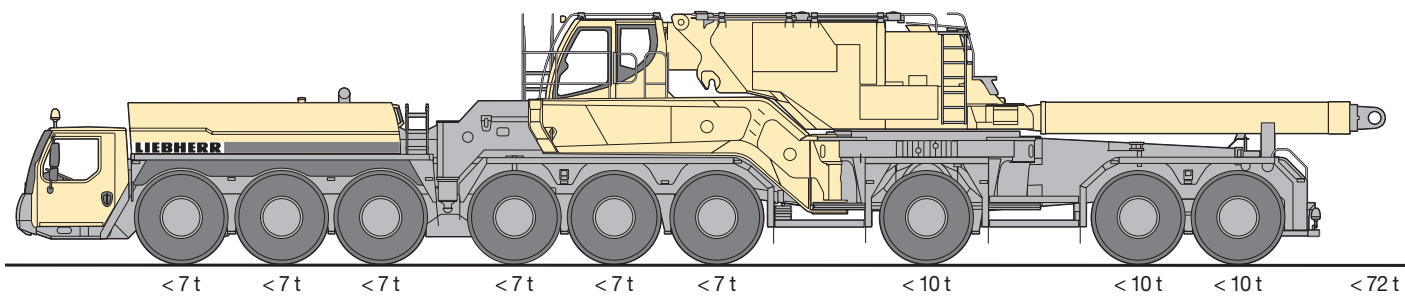
The LTM 1750-9.1 drives with its telescopic boom, the front folding outriggers and complete hoist winch with a total weight of 108 t at 12 t axle load. By dismounting the folding outriggers the weight decreases to 99 t at 11 t axle load. The vehicle weight and the axle loads can further be reduced by dismounting of equipment. On the job site the LTM 1750-9.1 moves with extensive equipment.



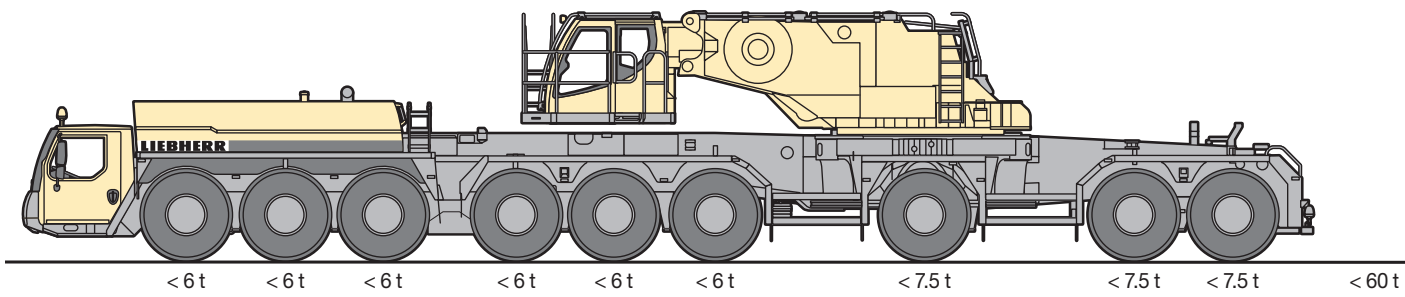
Total weight 108 t at 12 t axle load with front outriggers



Total weight 99 t at 11 t axle load without outriggers

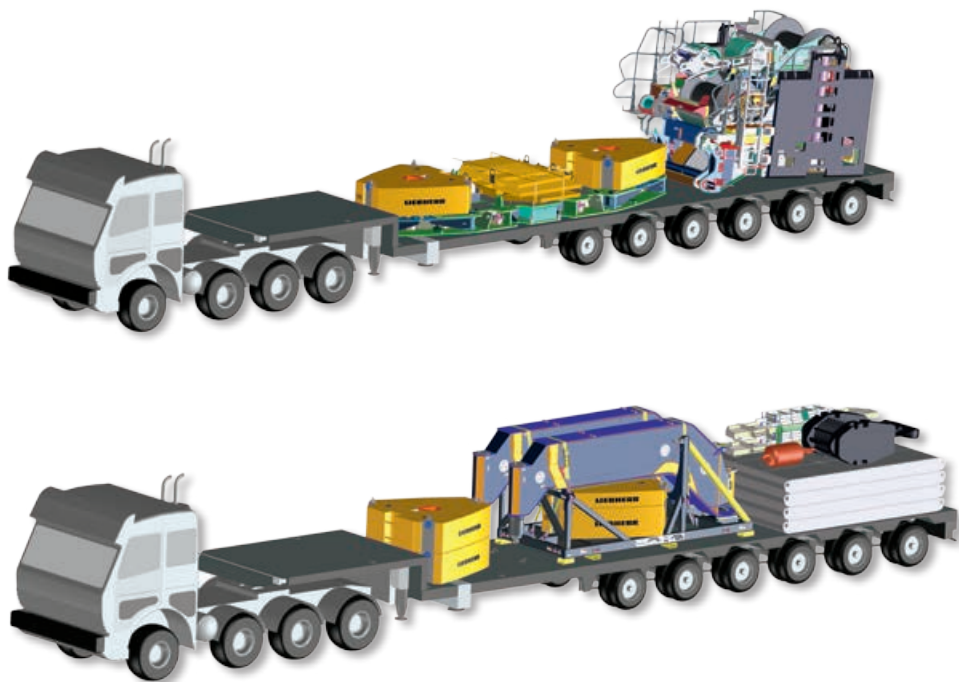


For axle loads below 10 t the telescopic boom is dismantled. One folding outrigger front left, the luffing cylinders and the hoist winch can be carried.



Without luffing cylinders and folding outriggers the total weight can be reduced to below 60 t.

**Crane equipment optimized for transportation**





# Self-assembly on the job site

## Fast set-up without assisting crane

The LTM 1750-9.1 arrives at the job site with 12 t axle load with its telescopic boom and the front outriggers. By means of the optional additional support at the tail of the vehicle the rear supports can be self-assembled without an auxiliary crane. Also the ballast and the drive assembly for the crane superstructure are mounted to the crane by self-assembly. The drive assembly consists of the superstructure engine, the hydraulics and an integrated ballasting device. The standard wireless remote control with the BTT Bluetooth Terminal warrants the comfortable and safe set-up.



① LTM 1750-9.1 supported on the front outriggers



② Additional support at the tail of the vehicle



③ Self-assembly of the rear outriggers



④ Self-assembly counterweight



⑤ Mounting ballast



⑥ Self-assembly counterweight frame with drive assembly





7 Cylinder of the counterweight frame fixed to the ballast ground plate



8 Connecting hydraulic and electric quick couplings



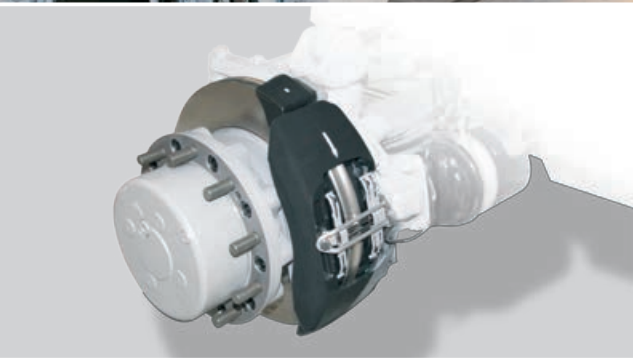


# Chassis and drive technology



## Hydro-pneumatic axle suspension "Niveaumatik"

- Maintenance-free suspension cylinders
- Large dimensions to cope with high axle loads
- Spring travel +175/-125 mm
- High side stability at cornering
- Selecting of the drive conditions via fixed programmes



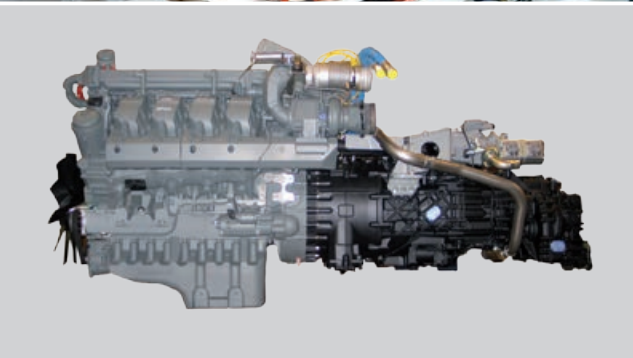
## Pneumatic disc brakes

- Higher brake performance, better control
- Improved track stability
- No brake fading at higher operation temperatures
- Higher service life
- Shorter working times for changing of the brake pads
- Brake pads with wear indication



## Intarder and Telma-Eddy Current brake as standard

- No wear, low maintenance system
- Increased safety due to fast activation in milliseconds
- Reduction of operation costs
- Higher comfort due to absolute shockfree braking
- Environmentally friendly brake system, no emission and respirable dust



## Chassis engine

- Powerful 8-cylinder Liebherr turbo diesel engine with 505 kW/686 HP, max. torque 3,000 Nm
- Automatic 12-speed-gear changing system ZF-TC Tronic HD with torque converter and intarder directly at the gearbox offers high efficiency and best comfort
- Axle 2, 3, 5 and 6 are driven axles



## Superstructure engine

- 6-cylinder Liebherr turbo diesel engine, 300 kW/408 HP, max. torque 1,870 Nm
- Optimized fuel consumption by electronic engine management



# Variable steering concept

## Active rear axle steering

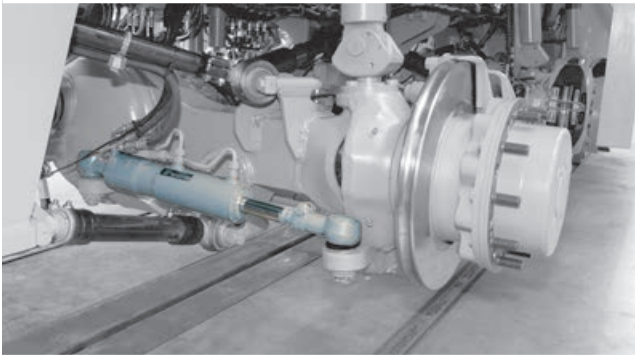
- Electro hydraulic steering of the rear axles depending on the speed and the steering angle of the front axle
- Distinct reduction of the tyre wear
- Improved manoeuvrability
- Stable driving performance
- All 9 axles steerable, no lifting of the centre axles at crab steering

## High safety standards

- Centralizing cylinders for automatic straightening of the rear axles in case of failure
- Two independent hydraulic circuits with wheel driven and engine driven hydraulic pump
- Two independent control computers

## 5 steering programmes

- Programme selection by simple push button
- Well-arranged control elements and displays
- Programmes changeable during driving
- Crab steering comfortable controlled via the steering wheel



P1 Road steering



P2 All-wheel steering



P3 Crab steering



P4 Reduced swing out



P5 Independent rear axle steering

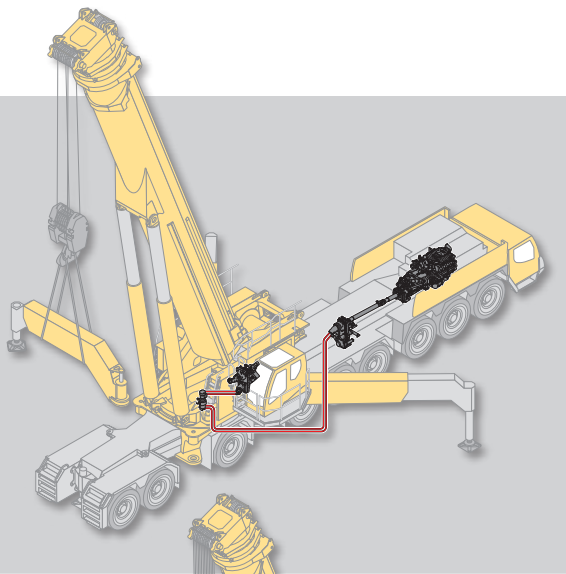




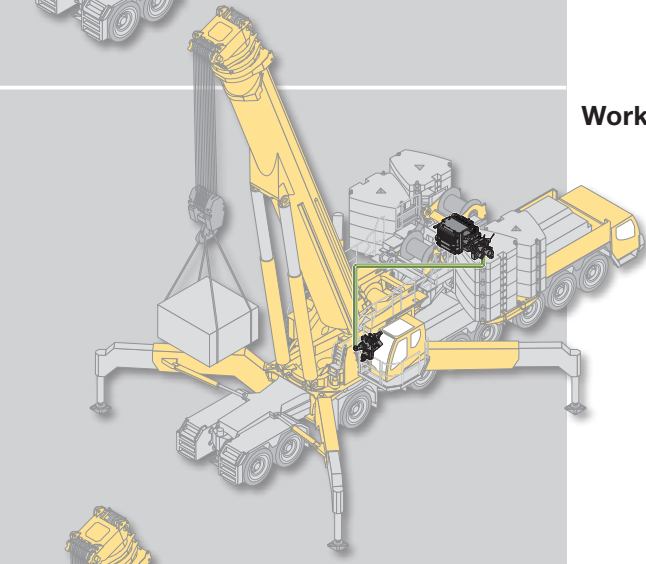
# Innovative drive concept

The innovative drive concept of Liebherr enables the complete self-assembly of the LTM 1750-9.1 and warrants a high operational safety.

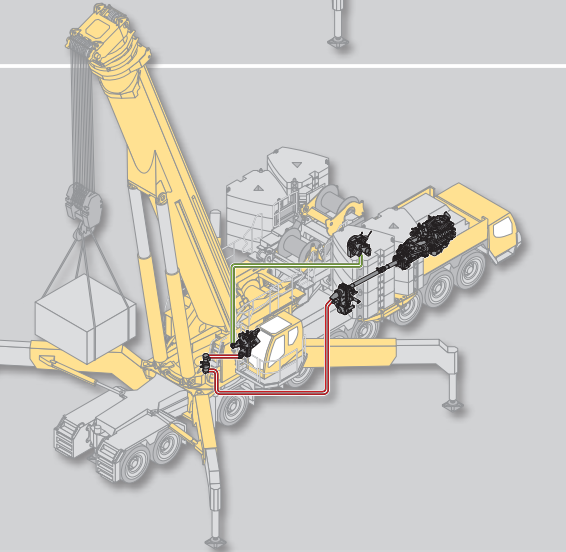
During set-up of the crane the functions are driven by the chassis engine. All crane functions for the working operation are driven by the superstructure engine. In case of a failure of the superstructure drive all crane functions can be driven by the chassis engine by fast and easy switching over three electrical connections.



Assembly operation by chassis engine



Working operation by superstructure engine



Emergency operation by chassis engine



# Variable Supporting Base

### More safety

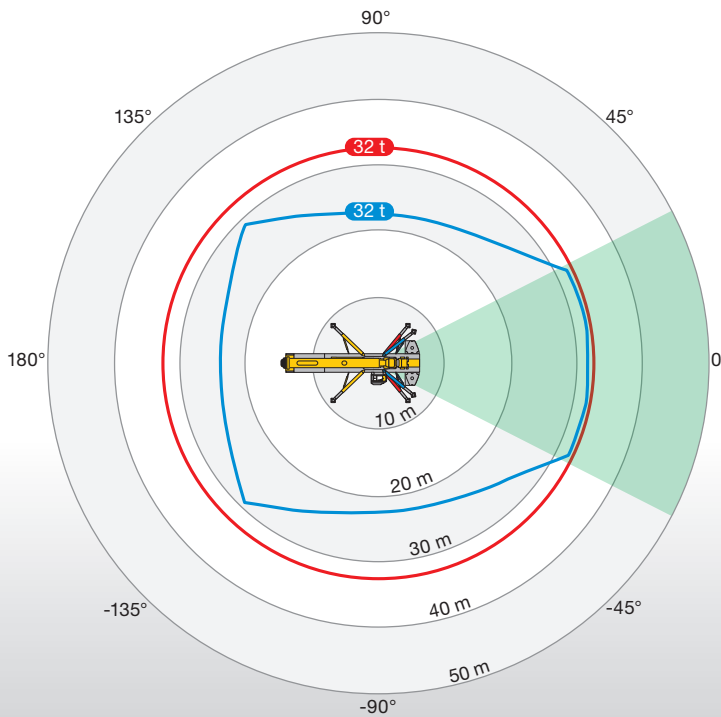
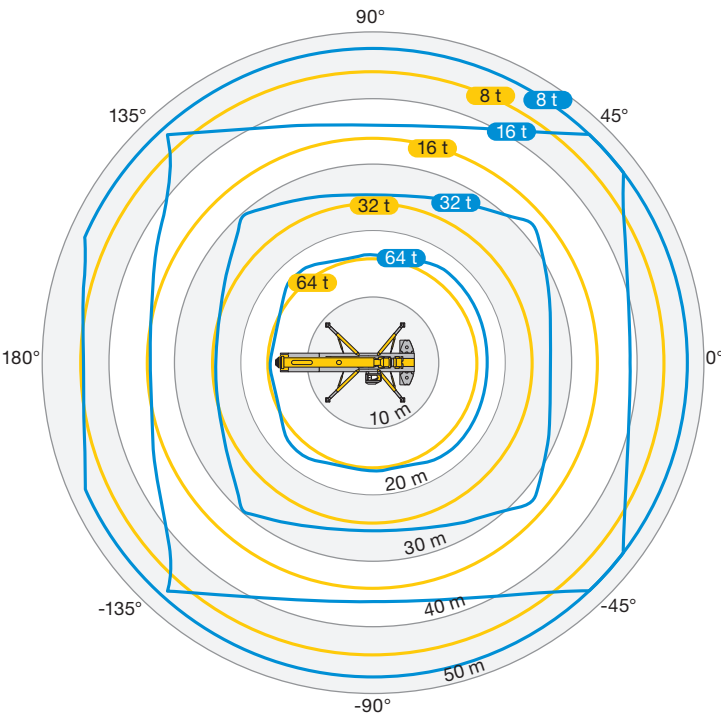
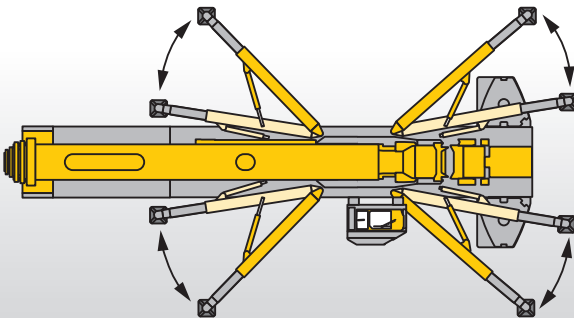
With the Variable Supporting Base VarioBase® each individual crane support can be positioned differentially. At the same time the crane operation can be secured by the load moment limiter of the LICCON control. The extension condition and the support force of each individual folding beam is measured and for exactly this condition the permissible load is calculated in real-time by the crane control. VarioBase® is applicable for operations with main boom or fixed jib.

### More capacity and larger working range

The VarioBase® offers higher capacities and a larger working range for operations with partial ballast also at maximum support base. The highest increases result especially at the working areas over the supports.

### Optimized support base due to adjustable folding beam angle

At the LTM 1750-9.1 with VarioBase® the folding beam angle of the stellate support can be variably adjusted. At smaller folding beam angle the support base increases to the front and to the rear, by which considerable higher capacities result in these working areas. By this the LTM 1750-9.1 with less ballast nearly reaches the capacities of the standard chart with high ballast. Thus for crane jobs ballast transportation can be reduced.





# Comfort and functionality

The modern driver cab as well as the movable crane cab offer a comfortable and functional working environment. The control elements and displays are arranged according to ergonomic principals. By this a safe and fatigue-proof working is warranted.

## The driver cab

- Corrosion resistant
- All around safety glazing
- Tinted screens
- Heatable and electrically adjustable outside mirrors
- Air cushioned driver seat with lumbar support
- Engine independent additional heating, air condition

## The crane cab

- Optimized heating and ventilation system, automatic temperature control, engine independent additional heating, air condition
- Enlarged visual field due to large screens
- Crane driver seat with lumbar support, multiply adjustable
- 20° tiltable to the rear



Comfortable crane cab

Camera monitoring of the winches



Well-arranged control elements in the spacious and comfortable driver cab



**Crane supporting – fast, comfortable and safe**

- BTT Bluetooth Terminal, mobile control and display unit
- Electronic inclination display
- Fully automatic levelling by push button
- Display of supporting forces
- Engine start/stop and speed regulation
- Illumination of the support area with 4 integrated floodlights
- Stroke of supporting cylinders 800 mm
- Folding beams slewable and telescopable

**Safely working with elaborate solutions**

The supporting, the boom and ballast assembly as well as the installation of additional equipment are designed for speed, safety and comfort. For the safety of the crane personnel steps, handholds and railings are provided. For the observance of the winches and the Y-suspension in operational condition cameras are installed which transfer their pictures to the crane cab. Also a reversing camera system for a safe and comfortable reversing is available.

Camera monitoring of the rear of the crane cab



Camera monitoring of the slewing platform



High safety due to railings



Self-assembly of cat walks



# Intelligent crane control

## For functional and safe crane operation, the LICCON computer system

The soft- and hardware of the mobile crane control are in-house developed by Liebherr. In 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
- User friendliness

## The databus technology

Liebherr mobile cranes are completely linked via the databus system. All important electric and electronic components are equipped with their own microprocessors and communicate over only a few data cables. For the special requirements of the mobile crane Liebherr has developed its own bus system (LSB – Liebherr-System-Bus). The databus technology improves the reliability, the comfort and the safety in drive and crane operation:

- Higher reliability due to considerable fewer electric cables and contacts
- Constant self-tests of the “intelligent sensors”
- Extensive diagnosis possibilities, fast fault finding

## Wireless remote control (standard)

- Comfortable set-up via joy sticks
- Control of the crane functions for working outside of the cab



## The LICCON work planner

- Computer program for planning, simulation and documentation of crane jobs at the computer and in the crane cab
- Display of all load charts belonging to the crane
- Automatic searching of the suitable crane by entering the load case parameters load, radius and lifting height
- Simulation of crane jobs with drawing functions and support force display



All relevant information at a glance



Integrated work planner





# LTM 1750-9.1



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The pictures contain also accessories and special equipment not included in the standard scope of delivery. Subject to modification.

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