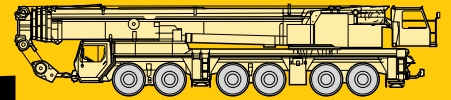




# Product advantages

## Mobile crane LTM 1300/1



**Max. lifting capacity: 300 t at 3 m radius**

**Max. height under hook: 116 m with lattice luffing jib**

**Max. radius: 92 m with lattice luffing jib**



### Performance profile of the LTM 1300/1 at a glance:

- 6-axle carrier, 5-section, 60 m long telescopic boom
- 72 t total weight (12 t axle load)
- Multivariable boom system: 60 m telescopic boom, telescopic boom guying system, fixed or lattice luffing jib
- Outstanding lifting capacities, flexible apportionment of counterweight - 112.5 t (for TA, TAK, TAF, TN, TAN equipment), 87.5 t, 50 t, 37.5 t and 12.5 t
- Most modern boom technology, optimized oviform boom profile, patented internal interlocking system of telescopes, rapid-cycle telescoping system „Telematik“
- Ultra-modern data bus technique with 5 Liebherr system busses, electronically controlled drive management by CAN bus
- Powerful, energy-saving and emission-optimized Liebherr Diesel engines, carrier engine of 440 kW output (EURO 2), crane engine of 180 kW output (IMO 1)
- Wide, slewable crane cabin with ergonomically designed interior, cabin tiltable by 20°
- The LTM 1300/1 is manufactured by Liebherr within the scope of a quality assurance system acc. to DIN EN ISO 9001

# LIEBHERR

The better crane.





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## Ultra-modern boom technology.

- Focal points of the new boom technology:
  - optimized oviform boom profile
  - patented internal interlocking system of the telescopes
  - automatic telescoping system „Telematik“
- Telescopic boom with electronically controlled telescoping system
- Boom bearings of low maintenance polyamide slide blocks
- Outstanding lifting capacities, e.g.
  - 87.0 t at 10 m radius
  - 42.5 t at 20 m radius
  - 25.9 t at 30 m radius
  - 16.9 t at 40 m radius
  - 10 t at 60 m radius
  - 1.1 t at 92 m radius

## Powerful carrier drive.

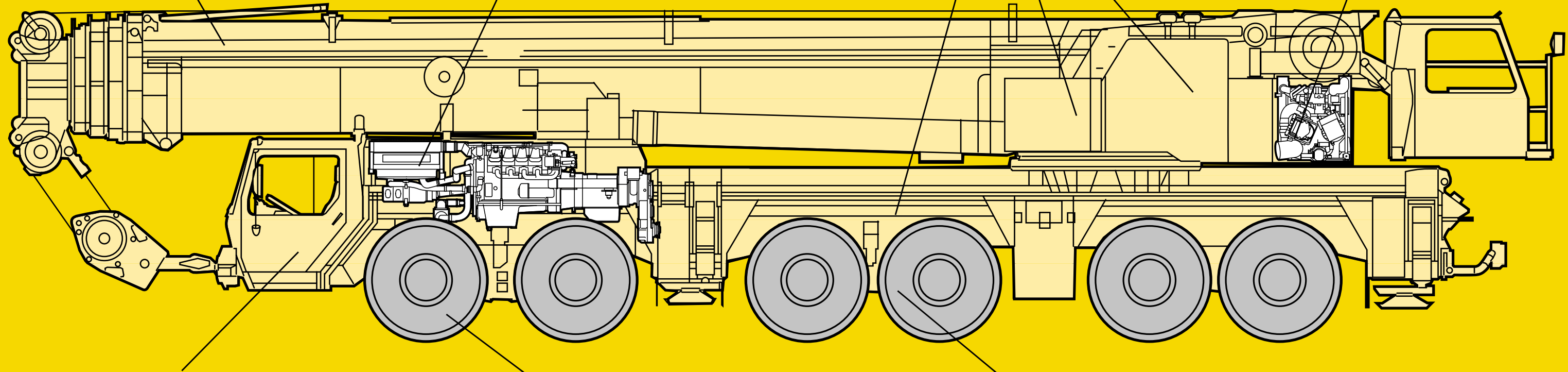
- 8-cylinder Liebherr turbo-charged Diesel engine type D 9408 TI-E with charge cooling, 440 kW/598 h.p. (EURO 2), energy-saving, emission-optimized, robust and reliable, electronic engine management
- Allison automatic transmission with torque converter and hydrodynamic brake, electronic transmission management, 5 forward speeds and 1 reverse gear, proved and well tested serial transmission
- 2-step, robust transfer case with transfer differential
- Robust crane axles, welded design
- Max. driving speed 76 km/h, max. gradability 43 %

## Weight-optimized steel structure of the crane.

- Carrier, superstructure and telescopic boom in light-gauge design, calculated by the F.E.M. method and thus weight-optimized; particularly torsionally rigid structural components
- Tensile property of material with high safety factors through the application of STE 960 (960 N/mm<sup>2</sup>) for all supporting members
- Hydraulic oil and fuel tanks as well as trim panels made of aluminium

## Crane drive with proved components.

- 4-cylinder Liebherr turbo-charged Diesel engine type D 924 TI-E with charge cooling, 180 kW/245 h.p., (IMO 1), engine speed controlled electronically, engine easy-to-service located at right angles to the rear of the superstructure
- Eclosed „power pack“ (dieselhydraulic drive assembly) for reduced noise emission
- Pump distribution gear with 4 servo-controlled axial piston variable displacement pumps operating in a closed oil circuit for winches 1, 2, 3 and slewing gear, 1 servo-controlled double axial variable displacement pump operating in an open oil circuit for luffing/telescoping; oil cooler in the hydraulic oil circuit



## Data bus technique revolutionizes crane electric system.

- The data transmission to the individual functional blocks is realized digitally by just a few data cables instead of the traditional electric wiring. Thus, increased reliability due to considerably less contacts
- Self-manufactured Liebherr bus systems (LSB), especially adapted to the requirements of a mobile crane
- The vehicle and crane electrics with all cockpit functions, the outrigger system and boom sensor system are interconnected by 5 Liebherr system busses
- Comprehensive diagnostic facilities, quick localization of errors
- The new data bus technique provides a distinctive increase in functionality and efficiency of the mobile crane

## Outstanding carrier technology for on-road and off-road application.

- Weight-optimized axles, almost maintenance-free, made of high-tensile steel, perfect track keeping and lateral stability due to special control linkage arrangement
- The maintenance-free steering knuckles are steel mounted
- The perfected and robust axles are manufactured in large series and are troublefree components
- The cardan shafts are maintenance-free; easy and quick fitting of the cardan shafts due to 70° diagonal toothing and 4 fixing screws

## Crane- and road-preserving Niveaumatik suspension.

- Maintenance-free suspension rams, free of lateral forces and protected against damage by synthetic tubes
- Level adjustment (suspension set to „travel mode“) can be performed automatically by push-button control from any position
- Stable cornering ability of the crane due to cross mounting of the hydraulic suspension
- Axle locking system (locking of the suspension for travelling with equipment) integrated into the suspension ram and controllable from the driver's cabin

# The LTM 1300/1 – successful with inovative crane technology.





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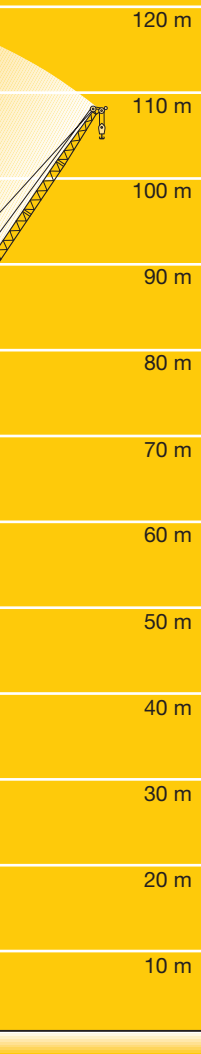
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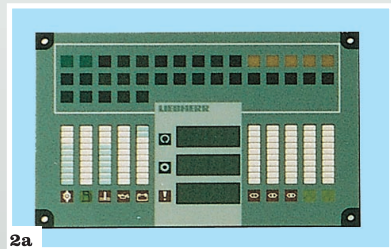
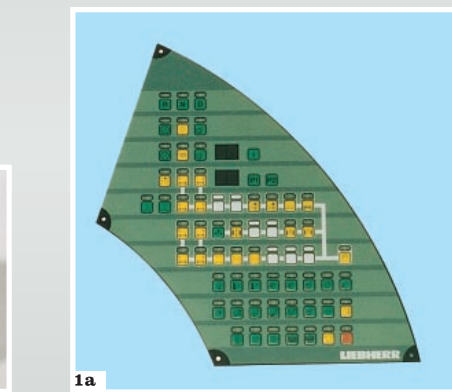


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- Legend:
- LSB – Liebherr system bus 1 (also for TN mode)
  - LSB – Liebherr system bus 2
  - LSB – Liebherr system bus 3 (also for TN mode)
  - LSB – Liebherr system bus 4
  - LSB – Liebherr system bus 5 (also for TA mode)
  - CAN bus
  - SCI – serial communication interface

- 1 Input/out module for electronic control of suspension, Liebherr Diesel engine, automatic transmission, operating functions, compressed air control for brake function
- 1a Instruments - key board unit in driver's cabin
- 2 Input/output module for differential locks, display functions
- 2a Instruments - display unit in driver's cab
- 3 Input/output module for outriggers - right
- 3a Control unit for outriggers - right
- 4 Input/output module for outriggers - left
- 4a Control unit for outriggers - left
- 5 Input/output module for engine brake, tempostat, tempostat, electronic control of Diesel engine (steering column switch, right) and automatic transmission
- 6 Control of Allison automatic transmission
- 7 Control of injection pump Liebherr Diesel engine/ carrier
- 8 Slewing sensor within slipring unit
- 9 Connection Liebherr system bus (LSB 1, 2, 3, 4, 5)

- 10 LICCON central unit
- 11 LICCON monitor in the crane cabin (2nd LICCON monitor for TA mode)
- 12 Length sensor and cable drum/energy cable for interlocking of gripper/telescopic boom
- 13 Inductive sensor (12x)
- 14 Angle sensor on base section
- 15 Cable drum for items 16, 17, 18 and jib
- 16 Wind sensor
- 17 Hoist limit switch
- 18 Angle sensor
- 19 Input/output module for electronic control of Diesel engine/superstructure, air flap, ventilator clutch, exhaust flap
- 20 Control injection pump Liebherr Diesel engine/superstructure
- 21 Control sensor
- 22 Pedal for telescoping



technique increases functionality and efficiency.





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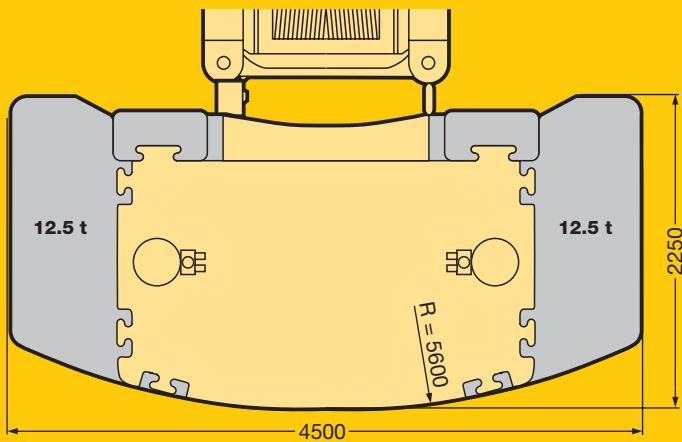
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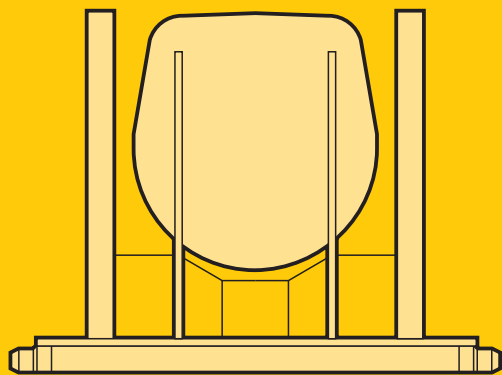
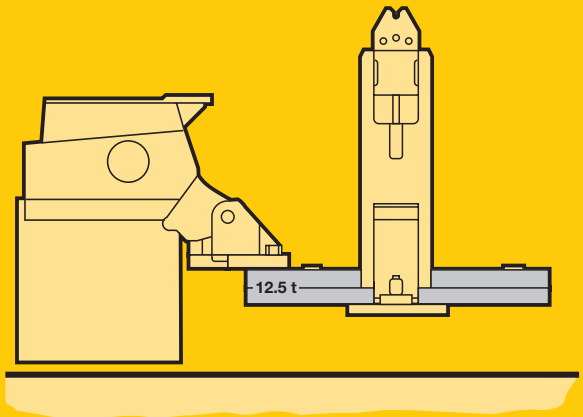
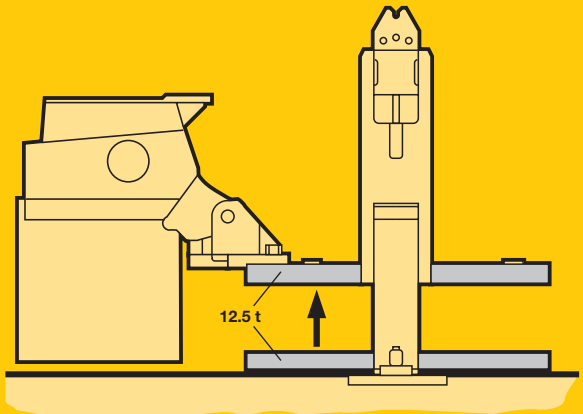
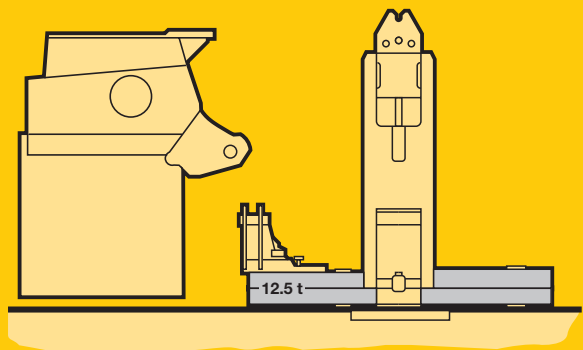


## Immediately operational with partial counterweight.

- The basic counterweight of 12.5 t, the biparted swing-away jib as well as the telescopic boom guying system can be transported on the crane. Ballasting is performed without auxiliary crane within a few minutes.

### Ballasting:

- Crane on outriggers, the basic counterweight placed on the carrier frame; after the telescopic boom has been raised, the superstructure is slewed into longitudinal direction to the basic counterweight
- Connect hydraulic couplings and remote control panel
- Extend ballasting rams entirely and pin basic counterweight to superstructure
- Retract ballasting rams entirely and raise support
- Disconnect hydraulic couplings and remote control panel

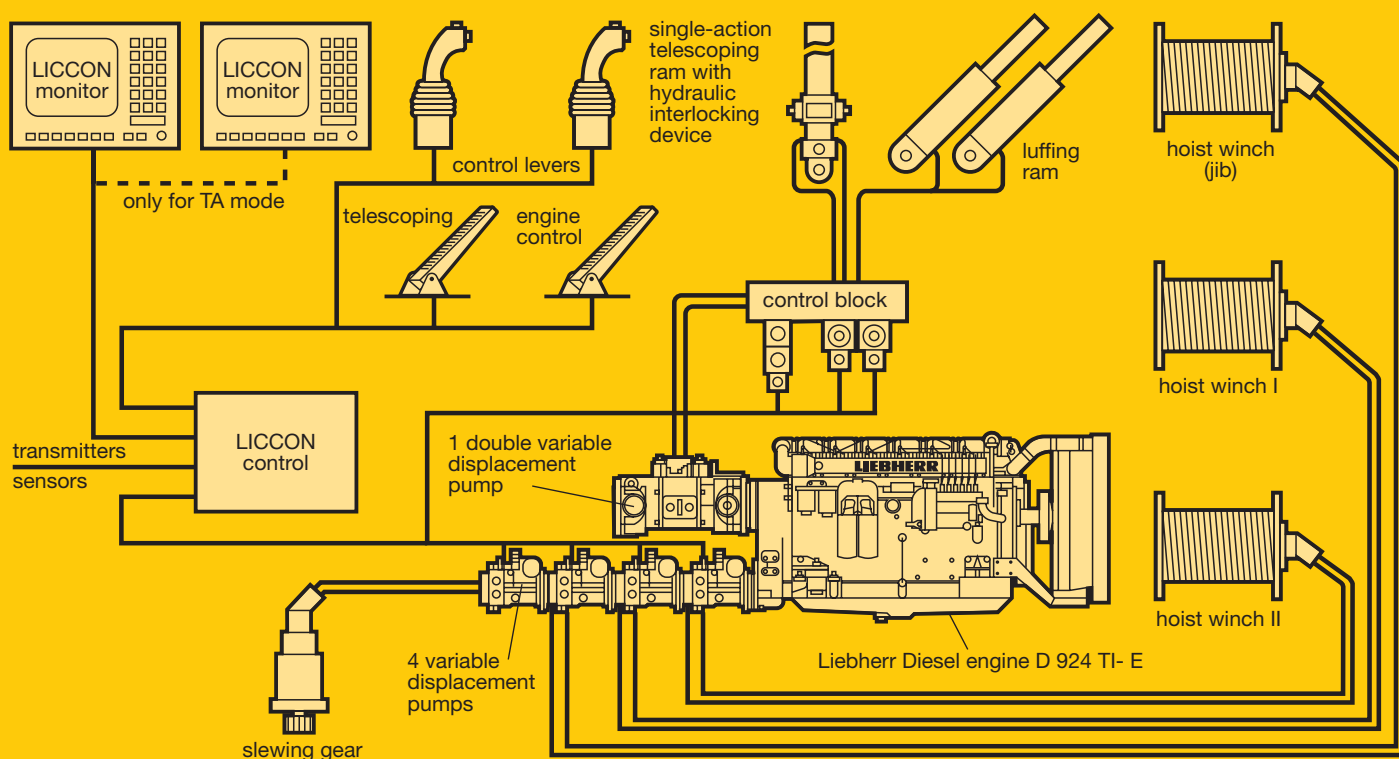






## Electric/electronic crane control with integrated safe load indicator.

- Control of winches, slewing gear as well as luffing and telescoping motions via LICCON system (PLC control)
- Four working motions can be performed independent from one another
- Speeds of hoisting/lowering, slewing and luffing are preselectable in 5 steps
- Luffing speed controlled automatically dependent on the boom length
- Extremely short response times when initiating working motions
- Hoist gear and slewing gear are operating in a „closed oil circuit“. This ensures high-precision lifting, lowering and slewing of loads. Moreover, the potential energy generated during lowering is not transformed into heat but can be reemployed for a 2nd motion which results in the particular advantage of fuel saving and less thermal effects on the oil compared to an open circuit. No overheating of the oil.



## Optional features contribute to an expansion of the application spectrum and increase comfort and safety.

### On carrier

- Eddy-current-brake
- Outrigger control
- Rope box
- Air-conditioning system
- Radio preparation device
- Seat heating for driver's and co-driver's seat
- 3<sup>rd</sup> seat
- Shunting coupling
- Fog lamps
- Cassette radio set

### On crane superstructure

- Air-conditioning system
- Seat heating
- Mirror installation on hoist gear
- Work area limitation system
- Wind warning device – telescopic boom/swing-away jib
- Aircraft warning light
- Work projector 2 x 150 W on telescopic boom base section
- GSM module for remote diagnostic
- Radio preparation device
- Cassette radio set

Further optional features by request.

### Please contact

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