Mobile crane
Product advantages

LTM 1300-6.1

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

Electric/electronic crane control with integrated safe load indicator
- Control of winches, slewing gear as well as lifting and telescoping motions via LICCON system (PLC control)
- Four working motions can be performed independently from one another
- Speeds of hoisting/lowering, slewing and lifting are preselectable in 5 steps
- Lifting speed controlled automatically dependent on the tower height
- Extremely short response times when initiating working motions

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

Electric/electronic crane control with integrated safe load indicator
- Control of winches, slewing gear as well as lifting and telescoping motions via LICCON system (PLC control)
- Four working motions can be performed independently from one another
- Speeds of hoisting/lowering, slewing and lifting are preselectable in 5 steps
- Lifting speed controlled automatically dependent on the tower height
- Extremely short response times when initiating working motions

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
- 3rd 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

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

Subject to modifications. PN 122.00.E05.2004
Liebherr-Werk Ehingen GmbH
Postfach 1361, D-89582 Ehingen
+49 7391 5 02-0, Fax +49 7391 5 02-33 99
www.liebherr.com, E-Mail: info@lwe.liebherr.com
Compact, manoeuvrable and safe

• Overall length 19 m, length of carrier 15.3 m
• Large front and rear overhang angles, front up to 17°, rear up to 19°
• Small turning radius due to 5-axle steering
• Overall load distribution due to hydropneumatic suspension “Niveaumatik”
• 12.5 t basic counterweight, biparted swing-away [8] and telescopic boom guying system can be transported with crane
• In addition to the service and parking brakes, the following sustained-action brakes for safe travel are part of the standard equipment: retarder (in the automatic transmission), TELMA-type eddy current brake on 4th axle and exhaust brake with Liebherr auxiliary brake system by valve control (ZBS)

Drive

• Drive 12 x 6, axles 1, 5 and 6 are driven
• Drive 12 x 8, axles 1, 3, 5 and 6 are driven, 3rd axle can be activated for off-road travel

Transmission

• Electronically controlled Allison automatic transmission type CLBT 755 with 5 forward speeds and 1 reverse gear, a robust and reliable automatic gear which decisively improves the driving comfort

Suspension

• Transfer case with off-road ratio and transfer differential

Braking system

• In addition to the service and parking brakes, the following sustained-action brakes for safe travel are part of the standard equipment: retarder (in the automatic transmission), TELMA-type eddy current brake on 4th axle and exhaust brake with Liebherr auxiliary brake system by valve control (ZBS)

Steering

• Variable drive and steering concept
• Standard 5-axle steering, 5th and 6th axle can also be steered independently (2-axle steering/diagonal displacement, see 3- and 4-th pair of axles)
• Drive 12 x 6, axles 1, 5 and 6 are driven
• Drive 12 x 8, axles 1, 3, 5 and 6 are driven, 3rd axle can be activated for off-road travel
• Electronically controlled Allison automatic transmission type CLBT 755 with 5 forward speeds and 1 reverse gear, a robust and reliable automatic gear which decisively improves the driving comfort
• Driving axles with differential locks for transvers locking in off-road ratio

Ballasting

• The basic counterweight of 12.5 t, the biparted swing-away [8] 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

Diesel engine

• 172 LTM 1300-6.1

Automatic transmission

• CLBT 755

Radiator

• D 9408 TI-E

Transfer case

• VG 2000 with off-road ratio

LTM 1300-6.1

12.5 t
Multivariable counterweight system

- Counterweight variants of 112.5, 87.5, 50, 37.5 and 12.5 t, thus a wide application spectrum
- Counterweight data with ideal transport dimensions
- Counterweight radius only 5.6 m
- Counterweight frame of modular set-up, consisting of basic frame and two snatch packs, compact transport unit
- The counterweight basic slab (12.5 t) with the ballasting ram, the 6 counterweight slabs (12.5 t each) as well as the counterweight frame with swash 3 and 3 (folded), can be mounted separately
- 12.5 t basic counterweight can be carried during transport and can be mounted separately
- Work 3 and swash 3 are mountable by pins and consequently are readily exchangeable if required, e.g. for the operation of a second LTM 1300
- Connection of the winches to the crane hydraulic system by rapid action couplings
- Standard auxiliary winch with transportable control panel for reeving of the hoist and luffing ropes

Setting crane on outriggers - quick, convenient and safe

- Supporting basis 8.85 m x 8.5 m or 8.85 m x 5.58 m
- Fixed lightweight supporting pads (plastic) with lateral compensation
- Supporting rams with 600 mm travel
- Level control of supporting system, automatic levelling of the crane during the supporting procedure by "push-button control"
- 2 x 9° lateral inclination even with locked suspension
- Inclinometer (electronic display of inclination) with two indicators on the carrier and display on the LICCON monitor in the crane cabin
- 2 indicators of supporting forces in the control panels on the carrier and on the LICCON monitor
- Control of outriggers with display of the state of extension on the LICCON monitor (optional)
- Operation of the outriggers in accordance with the rules for the prevention of accidents

Ballasting

- Stack the counterweight slabs on the carrier frame, the basic slab with the ballasting ram in the carrier slab
- Pick up, fixed, the counterweight frame with winches 2 and 3 and counter weight to the fixing devices
- Depending on the counterweight required, close the lateral counterweight slabs and pin them to the counterweight frame
- Connect hydraulic couplings and remote control panel
- Extend ballasting rams and push counterweight frame upwards
- Swing superstructure into the longitudinal axis to the counterweight frame, lower the counterweight frame by retracting the ballasting rams and pin counterweight frame to superstructure
- Rake support
- Disconnect hydraulic couplings and remote control panel
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
  - 10.0 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 3), 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 %

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

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, precisely manufactured light structural components

- Weight-optimized scrap telescopes

- The application of STE 960 (960 N/mm²) for all supporting members

- Hydraulic oil and fuel tanks as well as trim panels made of aluminium

Crane drive with proven components

- 4-cylinder Liebherr turbo-charged Diesel engine type D 9408 TI-E with charge cooling, 440 kW/598 h.p., engine speed controlled electronically, engine easy-to-service located at right angles to the rear of the superstructure

- Enclosed “power pack” (diesel/hydraulic drive assembly) for reduced noise emission

- Pump distribution gear with 4 servo-controlled axial piston variable displacement pumps operating in a closed oil circuit

- 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

- Optimum control linkage arrangement

- Weight-optimized, jointed steel mounted

- The perfected and robust axles are manufactured in large series and are mouldable components

- The carrier chassis are maintenance-free, easy and quick fitting of the carrier chassis due to 72° diagonal bolting and 4 fixing screws

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

- Optimum control linkage arrangement

- Weight-optimized, jointed steel mounted

- The perfected and robust axles are manufactured in large series and are mouldable components

- The carrier chassis are maintenance-free, easy and quick fitting of the carrier chassis due to 72° diagonal bolting and 4 fixing screws

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

- Optimum control linkage arrangement

- Weight-optimized, jointed steel mounted

- The perfected and robust axles are manufactured in large series and are mouldable components

- The carrier chassis are maintenance-free, easy and quick fitting of the carrier chassis due to 72° diagonal bolting 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

- Low equipment tolerances with “Niveaumatik” can be adjusted to the loading of the crane

- Stabile correct running ability of the crane due to cross mounting of the hydraulic suspension

- Automatic control switch-over of the suspension for travelling and luffing, controlled from the driver’s cabin

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, precisely manufactured light structural components

- Weight-optimized scrap telescopes

- The application of STE 960 (960 N/mm²) for all supporting members

- Hydraulic oil and fuel tanks as well as trim panels made of aluminium

Crane drive with proven components

- 4-cylinder Liebherr turbo-charged Diesel engine type D 9408 TI-E with charge cooling, 440 kW/598 h.p., engine speed controlled electronically, engine easy-to-service located at right angles to the rear of the superstructure

- Enclosed “power pack” (diesel/hydraulic drive assembly) for reduced noise emission

- Pump distribution gear with 4 servo-controlled axial piston variable displacement pumps operating in a closed oil circuit

- Double axial variable displacement pump operating in an open oil circuit for luffing/telescoping, oil cooler in the hydraulic oil circuit
Load handling – precise and safe

- 5-section, 60 m long telescopic boom for 60 m height under hook and 58 m radius
- Optimum, oval boom profile with continuous curvature of the lower shell and joint offset upwards, particular torsional rigidity
- Wide boom profile for the strengthening of the lateral neutral axis and the stabilization of long auxiliary jibs
- Patented internal locking system of the telescopes - functional reliability and maintenance-free
- High functionality of the boom system due to the automatic telescoping system "Telematik"
- Optimal utilization of the telescopic boom through numerous telescoping variants

LICCON computer system with practical application programs

- Standard application programs: Safe load indicator (SLI), configuration program with configuration image, operating program with operating image, telescoping program with telescoping image, supporting pressure indication, control parameter program, test system, optional extra work area limitation and LICCON work planner
Comfortable driver's cab of outstanding functionality

- Modern and comfortable driver's cab of modern design
- Heat and sound absorbing internal panelling
- Ergonomically arranged operating and display elements for safe and convenient handling at permanent operation
- Digital display and keyboard units interconnected with the function blocks by data bus technique
- Air-conditioned driver's and co-driver's seats, headrests, driver's seat with pneumatically supported lumbar support
- Height and inclination adjustable steering wheel
- Heated and electrically adjustable rear mirrors
- Side panes with electric lifters
- Air-cushioned driver's and co-driver's seats, headrests, driver's seat with pneumatic lumber support
- Height and inclination adjustable steering wheel
- Heated and electrically adjustable rear mirrors
- Side panes with electric lifters
- Additional engine independent warm water heater "Thermo 90"
- Safety belts for driver and co-driver
- Green-tinted windows for heat absorption
- Automatic windscreen washers/wipers with intermittent control
- Delayed disconnection of interior lighting
- Various racks and boxes
- Optional equipment:
  - Air conditioning, seat heating, 3rd seat with headrest, sleeper berth, cassette radio, and more

Spacious comfortable crane cabin

- Galvanized crane cab with tinted panes all-round, front knock-out window with large parallel windowpane, large skylight of bullet-proof glass with large parallel windowpane, side glass on sliding, space-saving sliding door, sound absorbing internal panelling
- Spring-mounted and hydraulically cushioned crane operator's seat with pneumatically supported lumbar support
- Convenient armrest-integrated controls, vertically and horizontally adjustable master switch console with armrests, control panel of auxiliary winch, LICCON monitor
- Heat and sound absorbing internal panelling
- Display of all essential operational data on the LICCON monitor

Multi-variable boom configuration system

- Multivariable boom T 10 - 60 m, also with additional guying system TA
- Single swing-away Jk 12 - 16 m, biparted swing-away Jk 12 - 30 m, both mountable at 0°, 20° or 40°, also with additional guying system TAM
- Extended lattice boom T 10 - 60 m, mountable at 0°, 20° or 40°, also with additional guying system TAF
- Luffing lattice boom T 10 - 25 m, mountable at 0°, 20° or 40°, also with additional guying system TAM
- Fixed lattice jib TF 10 - 60 m, mountable at 0°, 20° or 40°, also with additional guying system TAM
- Luffing lattice jib TN 10 - 60 m, mountable to the 15 m - 56.4 m long telescopic boom at 82°, 74° and 66°, also with additional guying system TAM
- Jib A-frames with T-adapter and N-base section form a complete mounting/transport unit and can be mounted with 4 pins only
- Easy-to-rig stay rods which remain on the intermediate sections during transportation
- Standard auxiliary winch on the ballasting frame for easy reeving of the hoist and luffing ropes
- Easy-to-store Jk and Jk-frames in suspended condition on lattice boom TF and TN
- Winch 2 for 2-hook operation
- Winch 3 for luffing of the jib
- Steepless load capacity interpolation during luffing of the boom combinations Th 90 to Th 502 between 82° and 22° inclination of the telescopic boom

<table>
<thead>
<tr>
<th>Boom Name</th>
<th>Range (m)</th>
<th>Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>T/TA</td>
<td>10 - 60</td>
<td></td>
</tr>
<tr>
<td>TN/TAK</td>
<td>10 - 60</td>
<td></td>
</tr>
<tr>
<td>TF/TAF</td>
<td>10 - 60</td>
<td></td>
</tr>
<tr>
<td>TN/TAN</td>
<td>10 - 60</td>
<td></td>
</tr>
</tbody>
</table>
The electrical and electronic components are interconnected by the most modern data bus transmission technique.

- Digital data transmission to the individual functional blocks by only a few data cables instead of the traditional electric wiring reduces installation space, increases reliability due to considerably less contacts.
- Self-manufactured Liebherr bus systems, especially adapted to the requirements of a mobile crane.
- Diesel engine and automatic transmission are controlled via a CAN data bus. The fully electronic drive management reduces fuel consumption and improves the emission of exhaust gases.

- The electric systems of the vehicle and crane as well as all control functions, the outriggers and sensor systems are interconnected by 5 Liebherr system busses.
- The control of the functional blocks is realized by I/O modules, the programming of which is performed by means of the Liebherr system busses. The control intelligence is integrated into the LICCON central unit.
- Comprehensive diagnostic facilities, quick error location, operating error display.
- Test programs for functional test of keyboard and display unit as well as for the test of the control devices of the engine and transmission management, anti-slip system (optional), Liebherr additional brake system, hydraulic ventilator, hydraulic suspension and outrigger operating units.

The new data bus technique distinctly increases functionality and efficiency of the crane.
Comfortable driver's cab of outstanding functionality

- Modern and comfortable driver's cab of modern design
- Heat and sound absorbing internal panelling
- Ergonomically arranged operating and display elements for safe and convenient handling at permanent operation
- Digital display and keyboard units interconnected by data bus technique
- Spring mounted and hydraulically cushioned crane operator's seat with pneumatic lumber support and headrest
- Heated and electrically adjustable rear mirrors
- Side panes with electric lifters
- Additional engine independent warm water heater "Thermo 90"
- Safety belts for driver and co-driver
- Green tinted windows for heat absorption
- Automatic windscreen washers/wipers with intermittent control
- Delayed disconnection of interior lighting
- Various racks and boxes
- Optional equipment: Air conditioning, seat heating, 3rd seat with headrest, sleeper berth, cassette radio, and more

Spacious comfortable crane cabin

- Galvanised crane cab with tinted panes all round, front knock-out window with large parallel windscreen wiper, large skylight of bullet proof glass with large parallel windscreen wiper, seat plate for seat, space-saving sliding door, heat and sound absorbing internal paneling
- Digital display and keyboard units interconnected with the function blocks by data bus technique
- Air cushioned driver's and co-driver's seats, headrests, driver's seat with pneumatic lumber support and headrest
- Height and inclination adjustable steering wheel
- Heated and electrically adjustable rear mirrors
- Side panes with electric lifters
- Additional engine independent warm water heater "Thermo 90"
- Safety belts for driver and co-driver
- Green tinted windows for heat absorption
- Automatic windscreen washers/wipers with intermittent control
- Delayed disconnection of interior lighting
- Various racks and boxes
- Optional equipment: Air conditioning, seat heating, 3rd seat with headrest, sleeper berth, cassette radio, and more

Multi-variable boom configuration system

- Metallic booms T, 10 m – 60 m, also with additional guying system TA
- Single swing-away jib K, 12.1 m long, luffing swing-away jib K, 12.1 m long, both mountable at 0°, 20°, or 40°, also with additional guying system TA
- Telescopic boom T, 12.5 m – 60 m, mountable at 0°, 20° or 40°, also with additional guying system TAF
- Luffing jib K, 12.1 m long, movable to the left or right up to 28°, also with additional guying system TAF and TAFK
- Standard auxiliary winch on the ballasting frame for easy reeving of the hoist and luffing ropes
- Rigging of the jib is practicable in suspended condition on restricted sites
- Winch 2 for 2-hook operation
- Winch 3 for luffing of the jib
- Stepless load capacity interpolation during luffing of the booms combinations Tk of 6° from 82° to 66° inclination of the telescopic boom

Multi-variable boom configuration system

- Telescopic boom T, 15 m – 60 m, also with additional guying system TA
- Single swing-away jib K, 12.1 m long, luffing swing-away jib K, 12.1 m long, both mountable at 0°, 20°, or 40°, also with additional guying system TAF
- Telescopic boom T, 12.5 m – 60 m, mountable at 0°, 20° or 40°, also with additional guying system TAF
- Luffing jib K, 12.1 m long, movable to the left or right up to 28°, also with additional guying system TAF and TAFK
- Standard auxiliary winch on the ballasting frame for easy reeving of the hoist and luffing ropes
- Rigging of the jib is practicable in suspended condition on restricted sites
- Winch 2 for 2-hook operation
- Winch 3 for luffing of the jib
- Stepless load capacity interpolation during luffing of the booms combinations Tk of 6° from 82° to 66° inclination of the telescopic boom
Comfortable driver’s cab of outstanding functionality

- Modern and comfortable driver’s cab of modern design
- Heat and sound absorbing internal paneling
- Ergonomically arranged operating and display elements for safe and convenient handling at permanent operation
- Digital display and keyboard units interconnected with the function blocks by data bus technique
- Air-conditioned driver’s and co-driver’s seats, headrests, driver’s seat with pneumatic lumbar support
- Height and inclination adjustable steering wheel
- Heated and electrically adjustable rear mirrors
- Side panes with electric lifters
- Additional engine independent warm water heater “Thermo 90”
- Safety belts for driver and co-driver
- Green-tinted windows for heat absorption
- Automatic windscreen washers/wipers with intermittent control
- Delayed disconnection of interior lighting
- Various racks and boxes
- Optional equipment: Air conditioning, seat heating, 3rd seat with headrest, sleeper berth, cassette radio, and more

Spacious comfortable crane cabin

- Galvanized crane cab with tinted panes all-round, front knock-out window with large parallel windscreen with large parallel windscreen wiper, large skylight of bullet-proof glass with large parallel windscreen wiper, side glass on the right, space-saving sliding door, driver’s seat with pneumatic lumbar support
- Spring-mounted and hydraulically cushioned crane operator’s seat with pneumatic lumbar support and headrest
- Convenient armrest-integrated controls, vertically and horizontally adjustable master switch with control unit, armrests, and control unit
- Heat and sound absorbing internal paneling
- Display of all essential operational data on the LICCON monitor
- Green-tinted front and side panes for heat absorption
- Windscreen washers/wipers for front window and skylight
- Two working projectors, 70 watt each, at the front and rear of the cabin
- Additional engine independent warm water heater “Thermo 90”
- Green-tinted front and side panes for heat absorption
- Windscreen washers/wipers for front window and skylight
- Two working projectors, 70 watt each, at the front and rear of the cabin
- Additional engine independent warm water heater “Thermo 90”

Multi-variable boom configuration system

- Telescopic booms T, 15 m - 60 m, also with additional guying system TA
- Single swing-away jib K, 12.1 m long, biparted swing-away jib K, 12.1 - 24.2 m long, also with additional guying system TA
- Single swing-away jib K, 17.5 m - 35.0 m, also with additional guying system TA
- Single swing-away jib K, 12.1 m - 24.2 m, also with additional guying system TA
- Single swing-away jib K, 17.5 m - 35.0 m, also with additional guying system TA
- Telescopic boom T, 15 m - 60 m, also with additional guying system TA
- Swivel Crane Jib K, 12.1 m long, biparted swing-away jib K, 12.1 - 24.2 m long, both mountable at 0°, 20° or 40°, also with additional guying system TAF
- Stroke crane jib K, 12.1 m - 21 m long, also with additional guying system TAF
- Fixed lattice jib TF, 10.5 m - 49 m, also with additional guying system TAF
- Jib A-frames with 3 pins only
- Easy-to-rig stay rods which remain on the intermediate sections during transportation
- Optional auxiliary winch on the ballasting frame for easy reeving of the hoist and luffing ropes
- Jib A-frames with 3 pins only
- Optional auxiliary winch on the ballasting frame for easy reeving of the hoist and luffing ropes
- Optional auxiliary winch on the ballasting frame for easy reeving of the hoist and luffing ropes
- Optional auxiliary winch on the ballasting frame for easy reeving of the hoist and luffing ropes
**Load handling – precise and safe**

- 5-section, 60 m long telescopic boom for 60 m height under hook and 58 m radius
- Optimized, uniform boom profile with continuous curvature of the lower shell and joint offset upwards, particular torsional rigidity
- Wide boom profile for the strengthening of the lateral neutral axis and the stabilization of long auxiliary jibs
- Patented internal locking system of the telescopes - of functional reliability and maintenance-free
- Wide boom profile for the strengthening of the lateral neutral axis and the stabilization of long auxiliary jibs
- High functionality of the boom system due to the automatic telescoping system "Telematik"
- Optimal utilization of the telescopic boom through numerous telescoping variants

**LICCON computer system with practical application programs**

- Standard application programs: Safe load indicator (SLI), configuration program with configuration image, operating program with operating image, telescoping program with telescoping image, supporting pressure indication, control parameter program, test system, optional extra work area limitation and LICCON work planner
Telescoping by single-stage hydraulic ram with hydraulic driving tenons

Telescoping procedure controllable on the LICCON monitor, convenient and simple guide mode on the monitor, precise approach of the interlocking positions

Telescopic loads are displayed on the monitor operating image

“Automatic operation”, fully automatic telescoping to the desired boom length, rapid-cycle telescoping system with high working speeds

Extremely light telescoping system, thus increase in lifting capacity, especially with long booms and at large radii

Automatic cushioning of telescopes in end positions during telescoping and retracting for the preservation of structural members

LICCON-assisted telescoping system

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/mm²) for all supporting members

Hydraulic oil and fuel tanks as well as trim panels made of aluminium

4-cylinder Liebherr turbo-charged Diesel engine type D 924 TI-E with charge cooling, 160 kW/215 h.p., engine speed controlled electronically, engine easy-to-service located at right angles to the rear of the superstructure

Closed “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 and one double axial variable displacement pump operating in an open oil circuit for luffing/telescoping, oil cooler in the hydraulic oil circuit

Weight-optimized steel structure of the crane

Maintenance-free suspension ram, free of lateral forces and protected against damage by synthetic tubes

Level adjustment devices (with “CraneMaster” can be set from any position)

Stable cornering ability of the crane due to cross mounting of the hydraulic suspension

Safe boiling pattern doublets on the suspension for travelling

Crane- and road-preserving Niveaumatik suspension

The LICCON work area limitation system

It relieves the crane operator, especially in situations where the handling of large engine is full attention, by controlling the work area limits. Work areas can be restricted by buildings, bridges, roofs, high-tension lines, pipe lines or adjacent cranes. The automatic work area limitation system can easily be programmed. Four different limitation functions are available:

- Height limitation of pulley head
- Radius limitation
- Slewing angle limitation
- Limitation of edges

Crane drive with proven components

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

Safe boiling pattern doublets on the suspension for travelling

Maintenance-free suspension ram, free of lateral forces and protected against damage by synthetic tubes

Level adjustment devices (with “CraneMaster” can be set from any position)

Stable cornering ability of the crane due to cross mounting of the hydraulic suspension

Safe boiling pattern doublets on the suspension for travelling

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

Safe boiling pattern doublets on the suspension for travelling
The LICCON test system

• The test system assists the servicing personnel in quickly localizing errors of the sensor system without needing any further measuring instruments

• Convenient interactive functions permit the observation of all in- and outputs of the general system by different displays on the monitor even during crane operation. It equally visualizes the allocation of the individual sensors to the system as well as their function and the terminals concerned in the control cabinet

• The table of contents enables the display of the contents and the state of development of the program modules as well as the load charts on the monitor

• The service starts on the monitor, error detection becomes a matter of seconds

The LICCON test system

The service and diagnostic system LiSSy

• This service and diagnostic system enables the data base assisted administration of the programmed errors in the crane control, including error text, description of cause of error as well as the measures for the error elimination

• The system provides the facility of a remote diagnostic analysis due to the rapid online access to the service documentation such as electric circuit diagram and workshop manual

• The possibility to memorize also the experiences of the crane users contributes to a progressive growth of the service and diagnostic system LiSSy to a data base of experience and knowledge

The service and diagnostic system LiSSy

The LICCON work planner

• Focal points of the new boom technology:
  - optimized oval-shaped 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
  - 10.0 t at 60 m radius
  - 1.1 t at 92 m radius

• 8-cylinder Liebherr turbo-charged Diesel engine type D 9408 TI-E with charge cooling, 440 kW/598 h.p. (EURO 3), energy-saving, emission-optimized, robust and reliable, electronic engine management

• Allison automatic transmission with torque converter and hydrodynamic brake, electronic transmission management

• 8-step transfer case with transfer differential

• Cabin with sliding roof and folded design

• Max. driving speed 70 km/h, max. gradability 43 %

• 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.

• Ultra-modern boom technology

• Weight-optimized axle, almost maintenance-free, made of high-tensile steel, perfect track keeping and lateral stability

• The special control linkage arrangement

• Weight-optimized axles, almost maintenance-free, made of high-tensile steel, perfect track keeping and lateral stability

• The special control linkage arrangement

• 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.

Data bus technique revolutionizes crane electric system

Powerful carrier drive

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

Ultra-modern boom technology
Multivariable counterweight system

- Counterweights: 112.5, 87.5, 50, 37.5, and 12.5 t, suitable for various applications
- Counterweight frame with ballasting rams
- Counterweight radius: 5.6 m
- Counterweight slabs with ideal transport dimensions
- Counterweight basic slab with ballasting rams, consisting of basic frame and two slabs
- Ballasting rams:
  - 12.5 t basic slab with ballasting rams, the 6 counterweight slabs (12.5 each) and the counterweight frame with ballasting rams, the 6 counterweight slabs (12.5 each) can be extended separately
  - 31° lateral inclination even with locked suspension
- Inclinometer (electronic display of inclination) with two indicators on the carrier and display on the LICCON monitor in the crane cabin
- Indicators of supporting forces in the control panels on the carrier and on the LICCON monitor
- Control of outriggers with display of the state of extension on the LICCON monitor (optional)
- Operation of the outriggers in accordance with the rules for the prevention of accidents

Ballasting

- Stack the counterweight slabs on the carrier frame, the basic slab with the ballasting ram in the carrying side
- Pick up, separate, the counterweight frame with winches 2 and 3 and insert and pin to the fixing devices
- Depending on the counterweight required, drag the lateral counterweight slabs on the carrier frame and pin them to the fixing devices
- Connect hydraulic couplings and remote control panel
- Extend ballasting rams and push counterweight frame upwards
- Swing superstructure into the longitudinal axis to the counterweight frame
- Lower the counterweight frame by retracting the ballasting rams and pin counterweight frame to superstructure
- Raise support
- Disconnect hydraulic couplings and remote control panel

Setting crane on outriggers - quick, convenient and safe

- Supporting basis: 60.85 m x 9.66 m or 5.58 m
- Field lightweight supporting pads (plastic) with lateral compensation
- Automatic leveling of the crane during the supporting procedure by "push-button control"
- 2 indicators of supporting forces in the control panels on the carrier and on the LICCON monitor in the crane cabin
- Indicators of supporting forces in the control panels on the carrier and on the LICCON monitor in the crane cabin
- Operation of the outriggers in accordance with the rules for the prevention of accidents
### Compact, manœuvreable and safe
- Overall length 19 m, length of carrier 15.3 m
- Large front and rear overhang angles, front up to 17°, rear up to 19°
- Small turning radius due to 5-axle steering
- Standard 5-axle steering, 5th and 6th axle can also be steered independent from axles 1 - 3.
- During crab steering/diagonal displacement, axles 3 and 4 are raised hydraulically.
- Drive 12 x 6, axles 1, 5 and 6 are driven.
- Drive 12 x 8, axles 1, 3, 5 and 6 are driven, 3rd axle can be activated for off-road travel.
- Electronically controlled Allison automatic transmission type CLBT 755 with 5 forward speeds and 1 reverse gear, a robust and reliable automatic gear which decisively improves the driving comfort.
- Transfer case with off-road ratio and transfer differential.
- Driving axles with differential locks for transvers locking in off-road ratio.
- Overall length 19 m, length of carrier 15.3 m
- Large front and rear overhang angles, front up to 17°, rear up to 19°
- Small turning radius due to 5-axle steering
- Standard 5-axle steering, 5th and 6th axle can also be steered independent from axles 1 - 3.
- During crab steering/diagonal displacement, axles 3 and 4 are raised hydraulically.
- Drive 12 x 6, axles 1, 5 and 6 are driven.
- Drive 12 x 8, axles 1, 3, 5 and 6 are driven, 3rd axle can be activated for off-road travel.
- Electronically controlled Allison automatic transmission type CLBT 755 with 5 forward speeds and 1 reverse gear, a robust and reliable automatic gear which decisively improves the driving comfort.
- Transfer case with off-road ratio and transfer differential.
- Driving axles with differential locks for transvers locking in off-road ratio.

### Variable drive and steering concept
- Standard 5-axle steering, 5th and 6th axle can also be steered independent from axles 1 - 3. Changing side steering/diagonal displacement, axles 3 and 4 are raised hydraulically.
- Drive 12 x 6, axles 1, 5 and 6 are driven.
- Drive 12 x 8, axles 1, 3, 5 and 6 are driven, 3rd axle can be activated for off-road travel.
- Electronically controlled Allison automatic transmission type CLBT 755 with 5 forward speeds and 1 reverse gear, a robust and reliable automatic gear which decisively improves the driving comfort.
- Transfer case with off-road ratio and transfer differential.
- Driving axles with differential locks for transvers locking in off-road ratio.

### 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 remove control panel.

### Technical Data

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel engine</td>
<td>D 9408 TI-E</td>
</tr>
<tr>
<td>Automatic transmission</td>
<td>CLBT 755</td>
</tr>
<tr>
<td>Transfer case</td>
<td>VG 2000 with off-road ratio</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wheel组</th>
<th>Drive</th>
<th>Steer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st axle</td>
<td>Non driven</td>
<td>Steered</td>
</tr>
<tr>
<td>2nd axle</td>
<td>Non driven</td>
<td>Non driven</td>
</tr>
<tr>
<td>3rd axle</td>
<td>Driven</td>
<td>Steered</td>
</tr>
<tr>
<td>4th axle</td>
<td>Non driven</td>
<td>Non driven</td>
</tr>
<tr>
<td>5th axle</td>
<td>Driven</td>
<td>Steered</td>
</tr>
<tr>
<td>6th axle</td>
<td>Driven</td>
<td>Steered</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Radiator</th>
<th>Size</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1st radiator</td>
<td>5.58</td>
<td></td>
</tr>
<tr>
<td>2nd radiator</td>
<td>4.5</td>
<td></td>
</tr>
<tr>
<td>3rd radiator</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wheel Size</th>
<th>Load</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12.5 t</td>
<td>12 t</td>
<td></td>
</tr>
<tr>
<td>15.58 t</td>
<td>12 t</td>
<td></td>
</tr>
<tr>
<td>19.06 t</td>
<td>12 t</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Turning Radius</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>R = 5.6</td>
<td>0.6</td>
</tr>
<tr>
<td>R = 6.42</td>
<td>4.86</td>
</tr>
<tr>
<td>R = 11.4</td>
<td>8.2</td>
</tr>
<tr>
<td>R = 13</td>
<td>10.4</td>
</tr>
<tr>
<td>R = 14.45</td>
<td>12.65</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Load Capacity</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.5 t</td>
<td>12 t</td>
</tr>
</tbody>
</table>
Mobile crane 
Product advantages

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

LTM 1300-6.1

Electric/electronic crane control with integrated safe load indicator
- Control of winches, slewing gear as well as lifting and telescoping motions via LICCON system (PLC control)
- Four working motions can be performed independently from one another
- Speeds of hoisting/lowering, slewing and lifting are programmable in 3 steps
- Lifting 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 converted into hydraulic power 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.

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
- 3rd seat
- Shunting coupling
- Engine heater

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

Further optional features by request

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
- 3rd seat
- Shunting coupling
- Engine heater

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

Further optional features by request