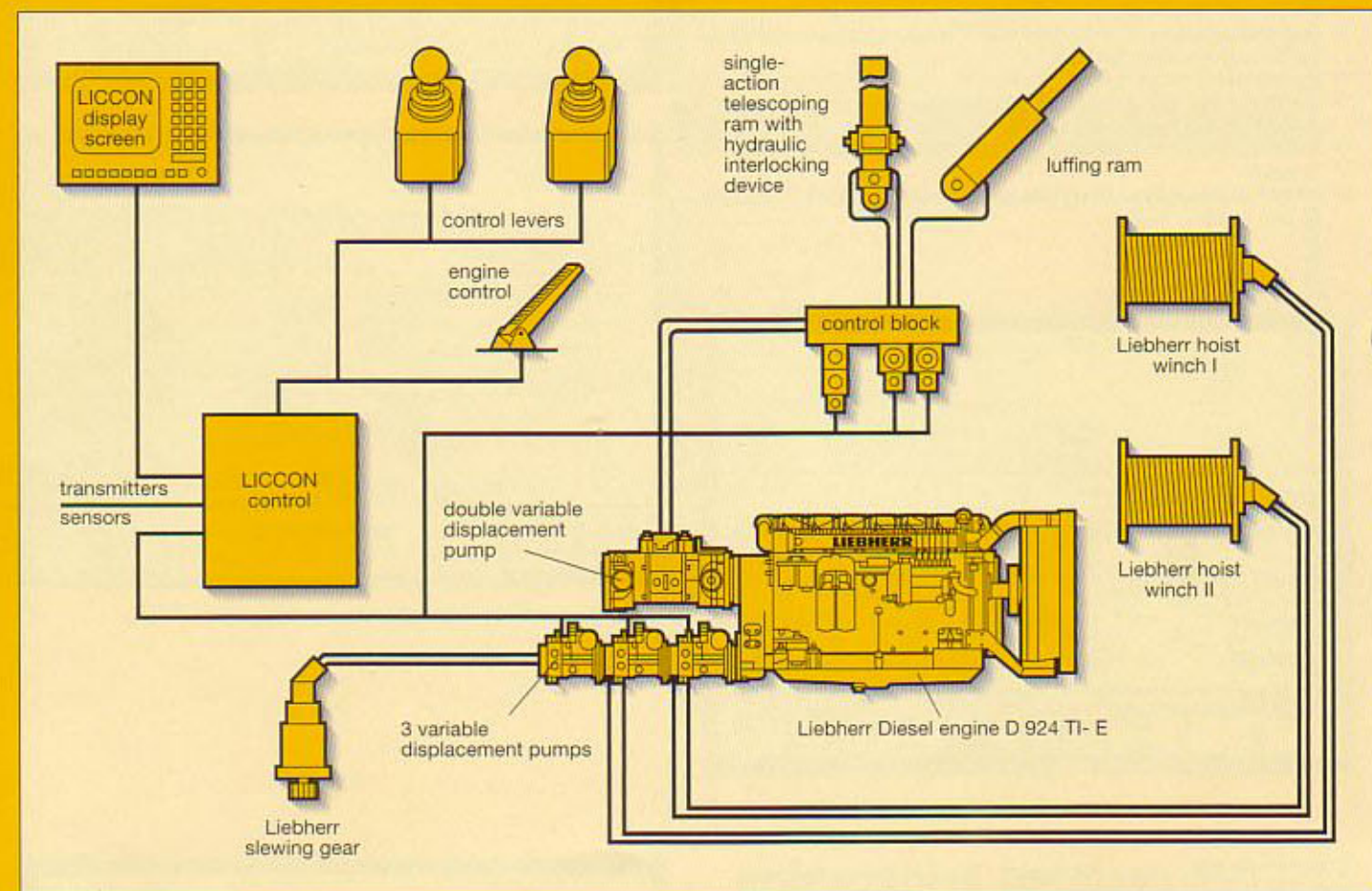


Electric/electronic PLC crane control and test system.

- Control of the winches, slewing gear as well as luffing and telescoping motions via the LICCON computer system (PLC control)
- Four working motions can be performed independent of one another
- Speeds of hoisting/lowering, luffing and slewing preselectable by 5 steps
- Very short response rate when initiating the crane motions
- Hoist gear and slewing gear are operating within a "closed oil circuit". This enables particularly precise hoisting, lowering or slewing of the load. Moreover, the potential energy generated during the lowering of a load is not converted into heat but can be re-employed for a second motion. This offers the particular advantage in saving fuel and reduced thermal exposure of the oil than in an open circuit.
- Functional test of all essential components by the LICCON test system



Optional features extend the application spectrum and increase comfort and safety.

- On the carrier**
 - Auxiliary heater Thermo 90 S with engine pre-heating
 - Eddy-current-brake
 - Supporting pressure indication on carrier and in crane operator's cabin
 - Stow-away box for sling gear and stand timber
 - Air-conditioning system
 - Trailer coupling D12/D19
 - Radio preparation
 - Seat heating for driver's and co-driver's seat
 - Fog lamps
 - Cassette radio set
- On crane superstructure/telescopic boom**
 - 2nd hoist gear
 - Auxiliary heater Thermo 90 S with engine pre-heating
 - Air-conditioning system
 - Seat heating
 - Work area limitation
 - Aircraft warning light
 - Work projector 1 x 70 W on cabin roof
 - Work projector 2 x 150 W on boom base section, electrically adjustable
 - Whip line
 - erection jib
 - GSM module for remote diagnostics
 - Radio preparation
 - Cassette radio set

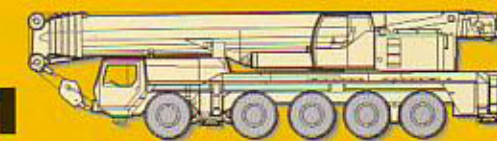
Further optional features by request.

Subject to modification.

TP 313. 01.01

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Product advantages Mobile Crane LTM 1200/1



Max. lifting capacity: 200 t
Max. height under hook: 100 m
Max. radius: 84 m



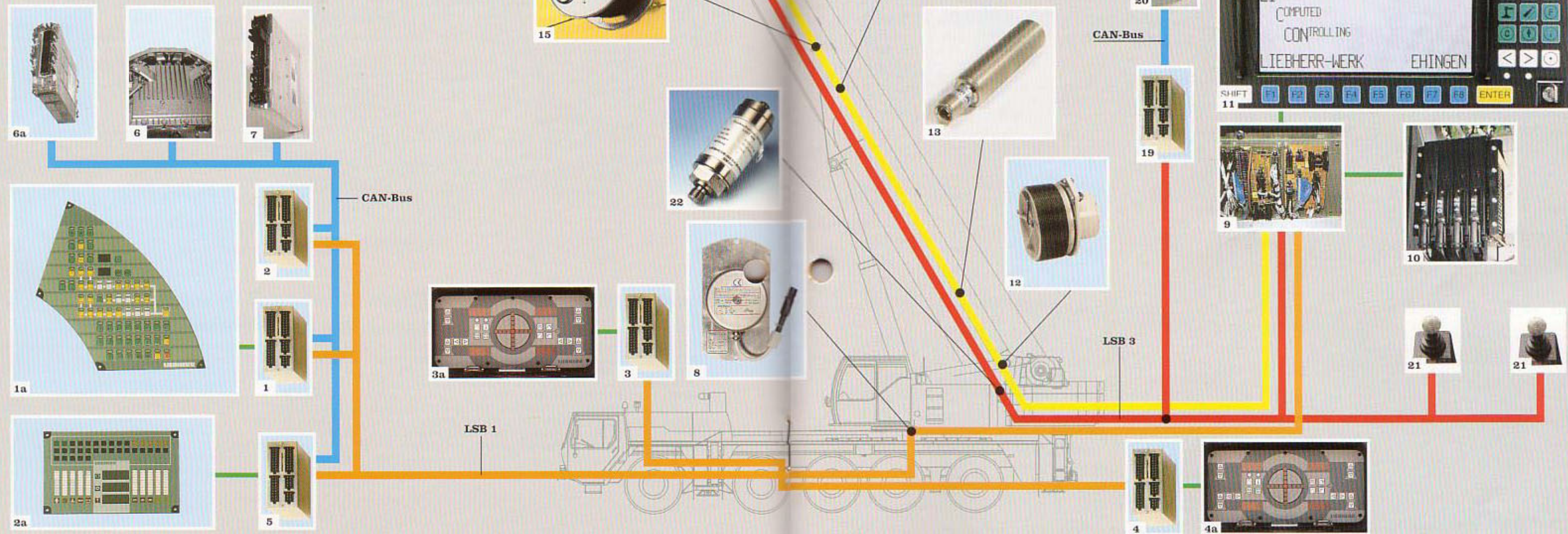
Performance profile of the LTM 1200/1 at a glance.

- Operative weight 60 t, with drive 10 x 8 and tyre equipment 16.00 R 25
- Powerful, emission-optimized Liebherr Diesel engines, carrier engine of 400 kW output (EURO 3) and with fully electronic engine management, crane engine of 180 kW output (acc. to directive 97/68 EU) and fully electronic engine management
- Ultramodern data bus technique with 2 CAN busses and 3 Liebherr system busses
- Convenient electronic crane control with integrated LICCON system
- Compact, 6-section telescopic boom 13.3 m - 60 m long with oviform boom profile for high lateral stability
- Rapid-cycle telescopic system "Telematik" with patented internal interlocking system, fully automatic or manually controlled telescoping practicable
- 12.2 m - 36 m long swing-away jib, mountable at 0°, 20° and 40°, hydraulic erection aid
- Telescopic boom extension with 7 m long lattice section, max. height under hook with swing-away jib 100 m
- LICCON, the most modern crane computer system worldwide, with comprehensive informative, monitoring and control functions
- Diesel engine, slewing rim, slewing gear and winches are self-manufactured and quality-checked components
- The LTM 1200/1 is manufactured by Liebherr within the scope of a quality assurance system acc. to DIN ISO 9001

LIEBHERR

The better crane.

- The electric and electronic components are interconnected by the latest data bus transmission technique
- Instead of the traditional electric wiring, the data transmission to the individual function blocks is performed digitally just by a few data cables, thus improved reliability due to essentially less contacts
- Self-manufactured Liebherr bus systems, specially adapted to the requirements of a mobile crane
- Carrier engine, AS-TRONIC gear, interarder and engine brake, as an integrated automated power train, are controlled via a CAN data bus. The fully electronic drive management reduces fuel consumption and improves the exhaust gas emission
- The crane engine is controlled via a CAN data bus
- The carrier and crane electric systems, including all cockpit functions, the outrigger system and the boom sensor system are interconnected by 3 Liebherr system busses
- The activation of the function blocks is realized by I/O modules, the programming of which is performed via the Liebherr system busses. The control intelligence is integrated into the LICCON central unit
- Comprehensive diagnostic facilities, quick error detection, operator error display
- Test programs for the functional test of the keyboard and display unit as well as for the check of the control devices for engine and gear management, Liebherr additional brake system, hydraulic ventilator, hydraulic suspension and outrigger control panels
- The new data bus technique clearly contributes to an increase in functionality and efficiency of the mobile crane



Data bus technique improves functionality and efficiency.

Torsional rigid telescopic boom.

- Ovoid boom profile of particular inherent stability
- Telescopes mounted on maintenance-free polyamide slide pads
- First-rate lifting capacities, e.g.
 - 61.0 t at 10 m radius
 - 27.8 t at 20 m radius
 - 15.9 t at 30 m radius
 - 9.9 t at 40 m radius
 - 5.8 t at 50 m radius
 - 4.1 t at 60 m radius
 - 2.4 t at 70 m radius
 - 1.0 t at 84 m radius
- Telescoping by rapid cycle, approx. 340 s for boom length 13.3 m - 60 m

Modern and powerful carrier drive.

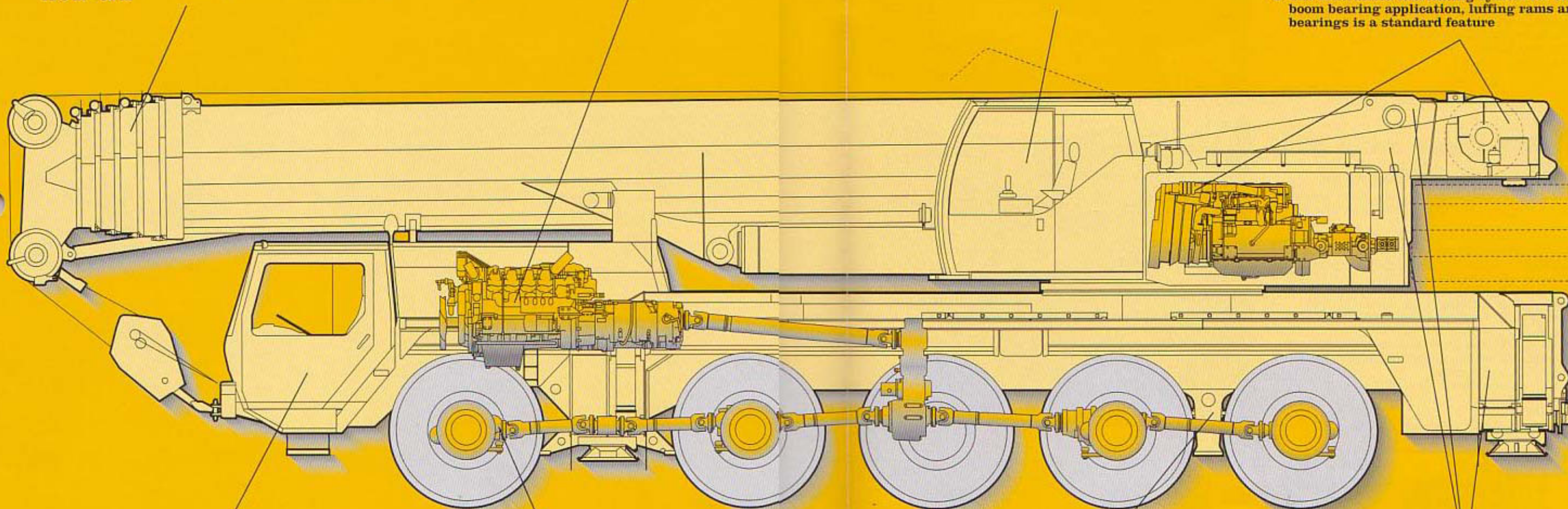
- Carrier engine: 8-cylinder Liebherr turbo-charged Diesel engine type D 9408 TI-E of 400 kW/544 h.p. (EURO III), robust and reliable, electronic engine management, optimized fuel consumption
- Entire exhaust gas system of stainless steel
- ZF power shift gear with automatic shifting system AS-TRONIC, 16 forward speeds, 2 reverse speeds, electronic gear management
- Max. driving speed 80 km/h, max. gradability 60 %
- Very efficient noise abatement of engine and gear compartment as a standard feature

Crane cabin of modern design.

- Steel-fabricated and corrosion-resistant crane cabin, powder-coated, with internal sound and heat absorbing panelling, modern interior design, tinted panes all-round, front knockout window with large windscreen wiper and washer, skylight of bullet-proof glass with large parallel windscreen wiper and washer, roller blinds on front window and skylight, space saving sliding door
- Pneumatic operated footboard for safe access to the carrier
- Crane cabin tiltable backwards by 20°

Crane drive with field-proven components.

- Crane engine: 4-cylinder Liebherr turbo-charged Diesel engine type D 924 TI-E of 180 kW/245 h.p. (acc. to directive 97/68 EC), robust and reliable, located opposite to the crane cabin, thus reduced noise pollution: electronic engine management, optimized fuel consumption, exhaust gas system of stainless steel, very efficient noise abatement of the dieselhydraulic crane drive
- Slewing rim, slewing gear and the winches are self-manufactured components specially matched for the application on mobile cranes
- The centralized lubricating system for slewing rim, boom bearing application, luffing rams and winch bearings is a standard feature



Modern comfortable driving cabin.

- Steel-fabricated, corrosion resistant driving cab, cataphoretic dip-primed, front section on rubber shock absorbers, rear section on hydraulic dampers, internal sound and heat absorbing panelling, modern interior design of outstanding functionality
- Safety glass all-round, green tinted heat-isolating front and side window panes, electric window lifters
- Standardized digital operating and control elements arranged in an operator-friendly halfround shape

Outstanding carrier technology for on-road and off-road operation.

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

Niveaumatik suspension - preserving crane and road.

- Maintenance-free suspension rams, free from lateral forces, protected against damage by synthetic tubes
- Level position (suspension on "travelling mode") can be automatically adjusted by pushbutton control from the driving cabin
- Stable cornering ability due to cross mounting of the hydraulic suspension
- Axle locking system (locking of the suspension for the displacement with loads) controlled from the driving cab
- Suspension travel +100 mm/-150 mm

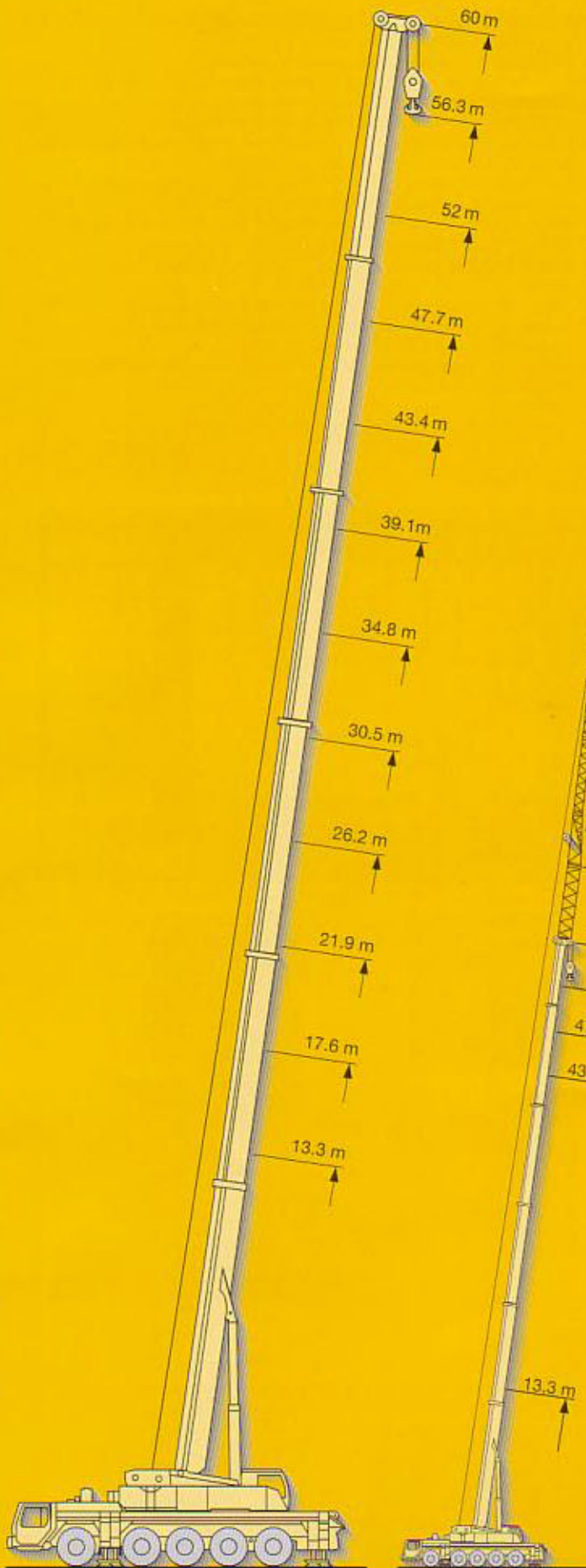
Weight-optimized steel structure.

- Steel structure of the carrier, superstructure and telescopic boom in lighth-gauge design, calculated by the F.E.M method, weight-optimized and of outstanding torsional rigidity
- Tensile property of the material with high safety factors through the application of STE 960 (960 N/mm²) for all supporting members. Telescopic boom bottom shell of ultrahigh-tensile steel S 1100 (1100 N/mm²)
- Weldment joints of outstanding quality are performed by computer-aided welding machines
- The weld quality is documented by ultrasonic test

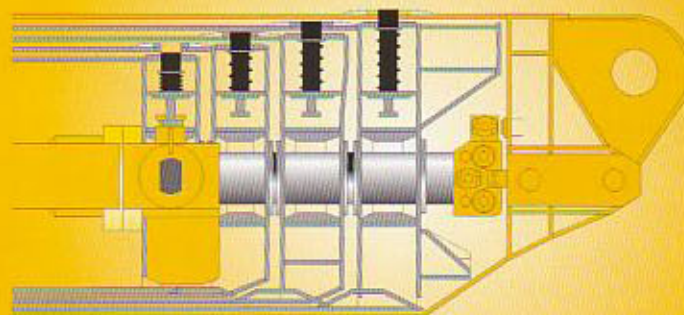
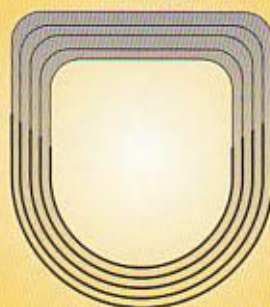
ugh advanced technology.

Lifting loads - precise and safe.

- 6-section, 60 m long telescopic boom with rounded, oviform bottom shell for maximum lateral stability
- Optimal utilization of the telescopic boom through a multitude of telescoping variants
- 12.2 m - 22 m long biparted swing-away jib, extendable to 29 m and 36 m
- Swing-away jib mountable at 0°, 20° and 40°, hydraulic fitting aid
- Telescopic boom extension 7 m, thus base section fixing point of swing-away jib higher by 7 m
- Easy and quick re-reeving of the hoist rope due to the self-locking rope dead end connection
- Load hook with self-locking rope dead end connection, cylindrically shaped hook for easy displacement by rolling on hard surface



oviform boom profile



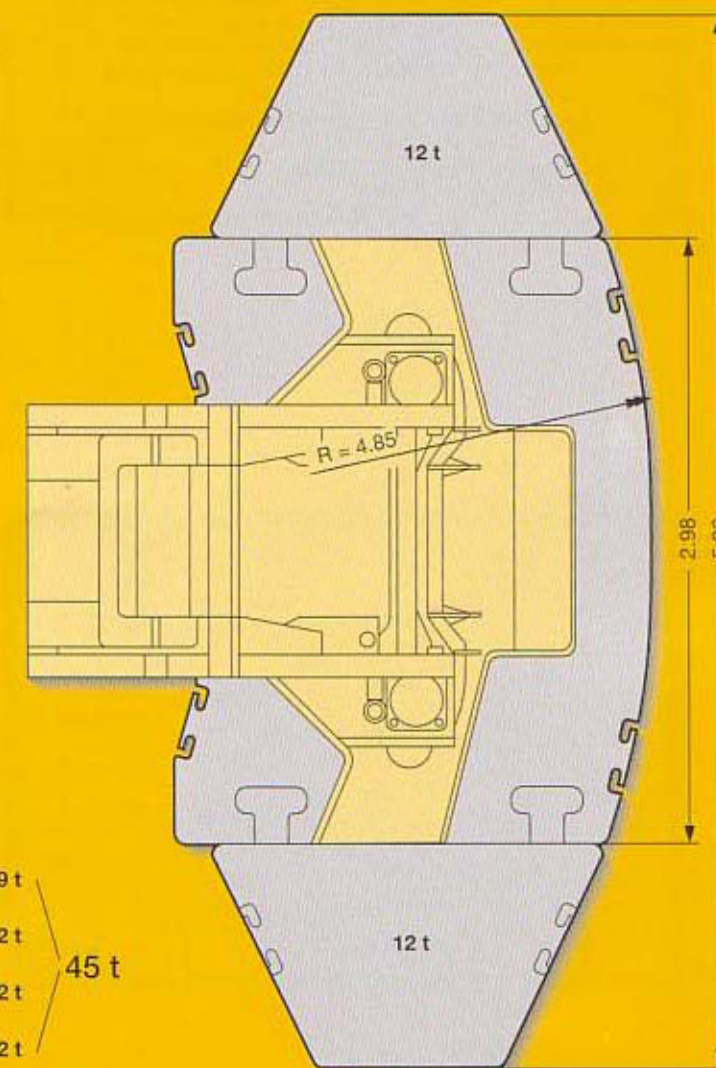
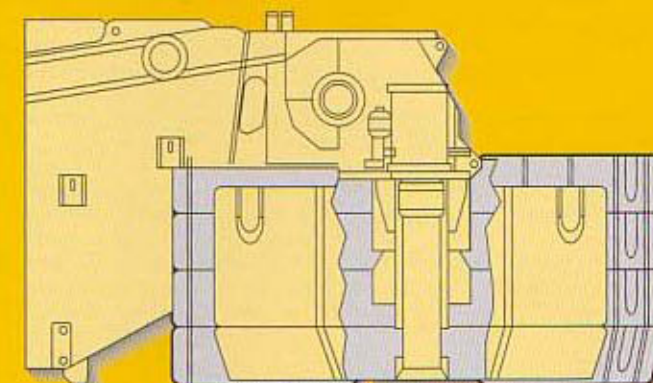
The LICCON work planner.

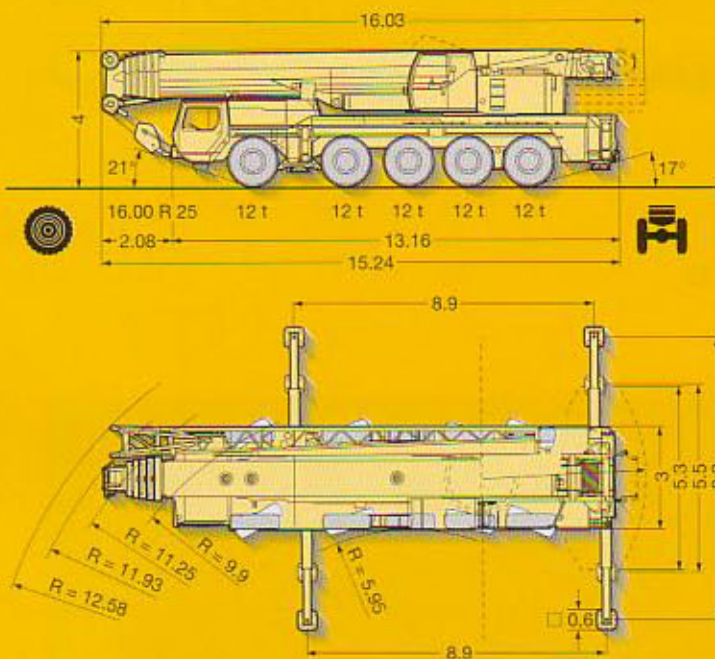
- The LICCON work planner consists of a software program on diskettes for planning, simulation and documentation of crane applications on the monitor
- The 2-D planner allows to draw buildings, to write texts and to represent a crane model true to scale including its entire motions within a fictional construction site
- The work planner enables the preparation of more transparent offers, it facilitates the briefing of the crane operators and it can be run on a laptop at the construction site



Mounting of counterweight - just a matter of minutes.

- Counterweight variants of 12 t, 24 t, 36 t, 45 t, 57 t and 69 t
- Ballasting controlled from the crane cabin
- Quick ballasting due to a new "keyhole" system
- Ballast rams fixed-mounted to the superstructure
- Compact counterweight dimensions, e.g. 45 t counterweight of 3 m m width only





Compact, manoeuvrable and weight-optimized.

- Overall length 15.24 m, length of carrier 13.16 m
- Large front and rear overhang angles, front up to 21°, rear up to 17°
- Smallest turning radius of 11.25 m with all-wheel steering
- Just 4.85 m tail radius of counterweight
- 60 t total weight with drive 10 x 8 and tyre size 16, (axle load 5 x 12 t)
- Axle load equalization due to hydropneumatic suspension "Niveaumatik"
- 2 optional tyre sizes
 - 16.00 R 25 - vehicle width 3 m
 - 20.5 R 25 - vehicle width 3.25 m

Variable drive and steering concept.

- Drive 10 x 6, axles 1, 4 and 5 are driven
- Drive 10 x 8 (optional), axles 1, 2, 4 and 5 are driven; axles 1, 4 and 5 are driven for road travel; 2nd axle activatable for off-road travel
- Axles 1, 2, 4 and 5 are permanently steered during road travel; axles 4 and 5 are also steerable independent of axles 1 and 2 (for crab steering/diagonal displacement, the 3rd axle is raised for that purpose)
- Driving axles with differential lock for longitudinal and transverse lock during off-road displacement

Setting crane on outriggers - quick, convenient and safe.

- Variable supporting basis
 - Outriggers retracted
 - Supporting basis 5.3 x 8.9 m
 - Supporting basis 8.3 m x 8.9 m
- Fix-mounted, square supporting pads protected by splash guards, weight 40 kg
- Supporting ram travel of up to 700 mm
- Levelling control for outriggers, fully automatic levelling of the crane during the supporting procedure by "pushbutton"
- 2 x 9° lateral inclination of carrier and crane superstructure
- The control panels on either side of the carrier with membrane keyboard, with electronic inclination display as well as keyboard for ENGINE/START/STOP and engine control are illuminated and lockable
- 4 projectors for the illumination of the supporting area
- Operation of the outrigger system in accordance with the rule for the prevention of accidents

Comfortable driving cabin of outstanding functionality.

- Modern and comfortable driver's cab of high functionality and convincing design
- Ergonomically arranged operating and display elements for safe and convenient handling at continuous operation
- 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 lumbar support
- Safety belts for driver and co-driver
- Height and inclination adjustable steering wheel
- Heated and electrically adjustable rear mirrors
- Side panes with electric window lifters
- 3 windscreen wipers with automatic wiper/washer system and intermittent control
- Delayed disconnection of interior lighting
- Various racks and boxes
- Radio preparation



Comfortable crane cabin of outstanding functionality.

- Spring-mounted and hydraulically cushioned crane operator's seat with pneumatic lumbar support and headrest
- Operator-friendly armrest-integrated controls, vertically and horizontally adjustable master switch consoles and armrests, ergonomically adjustable operating consoles
- Ergonomic control levers with integrated winch rotation and slewing signalling device
- Modern supporting base with integrated LICCON monitor, display of all essential operating data on the LICCON screen
- Green tinted heat-isolating front and side window panes
- 3 windscreen wipers with automatic wiper/washer system and intermittent control
- Delayed disconnection of interior lighting
- Various racks and boxes
- Radio preparation
- 1 work projector 70 Watt on the cabin front



The LTM 1200/1 - more benefit through