

# Mobile crane

# LTM 1040-2.1

Max. lifting capacity: 40 t

Max. lifting height: 44 m

Max. working radius: 39 m



# LIEBHERR



# Mobile crane LTM 1040-2.1

## Strong and economical

A long telescopic boom, high capacities, an extraordinary mobility as well as a comprehensive comfort and safety configuration marks the mobile crane LTM 1040-2.1 from Liebherr. The 40-ton crane offers state of the art technology for more convenience for the practical operation.

- 35 m long telescopic boom
- 9.5 m long swing away jib
- 24 t total weight incl. 1.5 t ballast at 12 t axle load
- Carrier width 2.50 m with tyres 445/95 R 25 (16.00 R 25)
- Great operational flexibility due to top capacities with full and partial ballast
- Sensitive working by electronic crane control
- LICCON2-control with mobile display unit BTT
- Wireless remote control (option)





# State-of-the-art chassis and drive technology

## High mobility and cost effectiveness

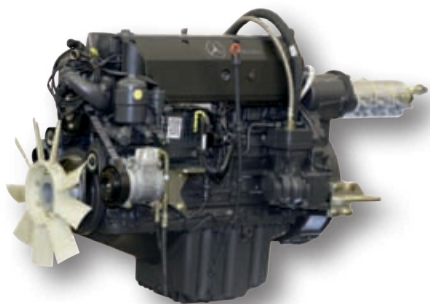
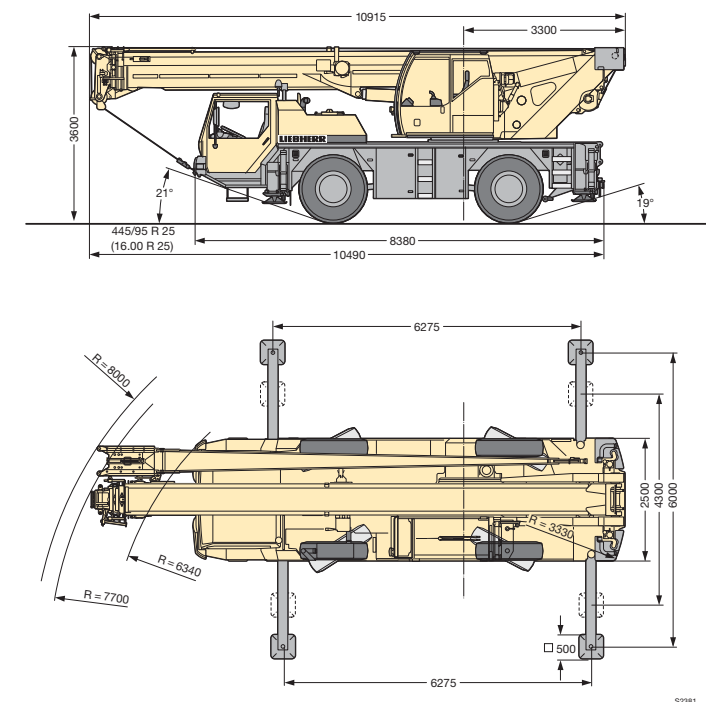
A powerful six-cylinder turbo diesel engine with 205 kW/278 HP ensures swift driving performance. The ZF-power shift gearbox with automatic gear changing provides best maneuverability and high comfort.

- Minimum crawling speed by torque converter
- ABV automatic locking preventer with ASR drive slip control
- Crab steering

## Compact, agile and weight-optimised

Thanks to its extremely compact design, the LTM 1040-2.1 can operate on the smallest of construction sites. At an axle load of 12 t it can drive with up to 1.5 t ballast making it flexible and economical to use.

- Chassis length only 8.38 m
- Smallest turning radius only 6.34 m
- Chassis width only 2.50 m, even with 445/95 R 25 tyres (16.00 R 25)
- Tail swing radius only 3.33 m



### Drive train

- 6-cylinder Mercedes-Benz diesel engine, 205 kW/278 HP at 2200 rpm, max. torque 1100 Nm at 1200 – 1600 rpm
- Power shift gearbox with automatic gear changing ZF Typ 6 WG 210, 6 forward, 2 reverse gears
- Torque converter and lock-up clutch
- Axles 1 and 2 driven



### Hydro-pneumatic suspension "Niveaumatik"

- Maintenance-free suspension cylinders
- Large dimensions to cope with high axle loads
- Suspension travel +100/-100 mm
- High lateral stability when cornering
- Choice of driving states using fixed programmes



# Comfort und functionality

## Modern driver's cab and crane cab

Both the modern driver's cab and the crane cab offer a comfortable and functional working environment. The control elements and displays are ergonomically arranged. Thus a safe and fatigue free working is assured.

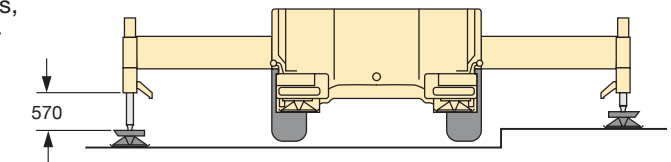
## Speedy and safe set-up

Setting of the outriggers, counterweight assembly and attachment of additional equipment have all been designed with speed, safety and comfort in mind. Specific ascents and handholds are provided to ensure the safety of the operating staff.



### Supporting the crane – fast, comfortable and safe

- BTT blue tooth terminal, mobile control and display unit
- Electronic inclination display
- Fully automatic levelling by push button
- Engine start/stop and speed control
- Support area lighting with four integrated lights
- Support cylinder stroke: 570 mm
- One-stage outrigger beams, fully hydraulic, low-maintenance extension system



### The driver's cab

- Corrosion-resistant steel plate execution, cataphoretic dip-primed and powder coated
- Safety glass on all sides
- Tinted glass
- Heated and electrically adjustable outside mirrors
- Air-sprung driver's seat with lumbar support



### The crane cab

- Corrosion-resistant galvanized steel plate execution, powder coated
- Safety glass on all sides
- Tinted glass, front screen hinged for opening
- Roof window with bullet proof glass
- Operator's seat with lumbar support



# High lifting capacities and flexible boom system

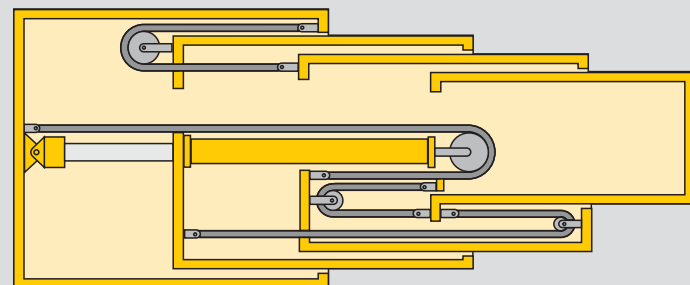
## High-capacity, long telescopic boom and functional lattice extensions

The telescopic boom comprises of the base section and three telescopic sections which can be extended comfortably by a hydro-mechanic extension system to any requested length.

- 35 m long telescopic boom
- 9.5 m swing away jib, attachable at 0°, 20°, 40° and 60°

## High lifting capacities both with full and partial counterweight offer a wide operational range

- High lateral stability due to the oval boom profile
- Telescoping under load
- Lifting capacity 7.4 t at 34 m lifting height
- Maximum hook height 44 m
- Maximum radius 39 m



### Proven hydro-mechanical telescoping system

- Reliable single step double acting hydraulic cylinder
- Low centre of gravity due to double sheave block for telescopic section 2 and 3
- Section 1 extended/retracted by hydraulic cylinder, sections 2 and 3 by ropes
- High telescopic loads

### The swing away jib





# Variable counterweight

## Counterweight assembly - a matter of minutes

- Multiple counterweight variations 1.5 t, 3.2 t, 3.3 t and 6.5 t
- Rapid ballasting with keyhole technology from within the crane cab (option)
- Compact counterweight dimensions, at 6.5 t counterweight only 2.48 m counterweight width
- Tail swing: only 3.33 m
- 24 t total weight incl. 1.5 t counterweight at 12 t axle load

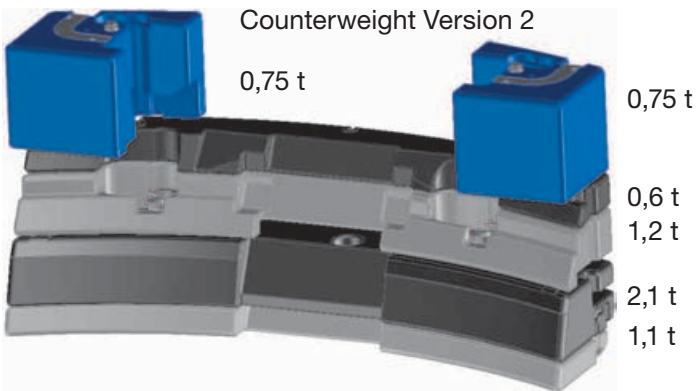
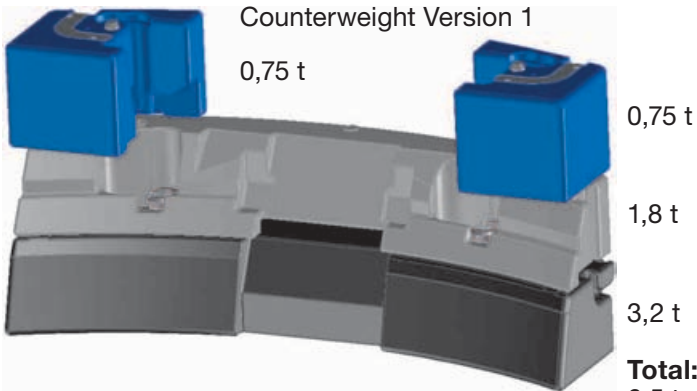
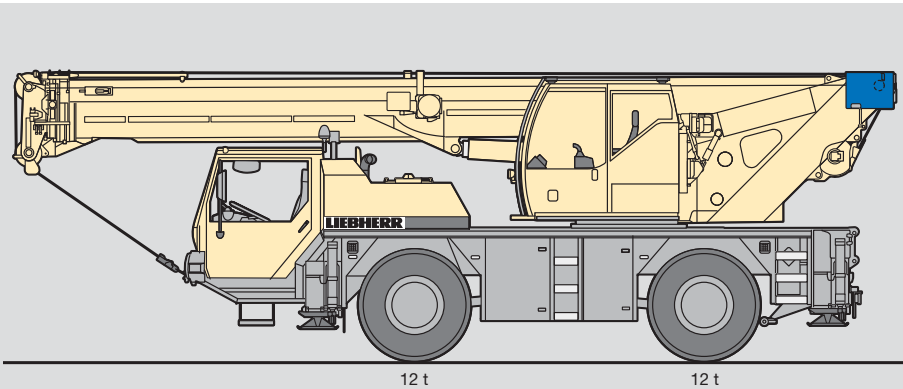


### The hoist gear

- Hoist winch with integrated planetary gear and spring loaded multiple disc brake
- Line pull 33 kN at the outer layer
- Max. line speed 120 m/min



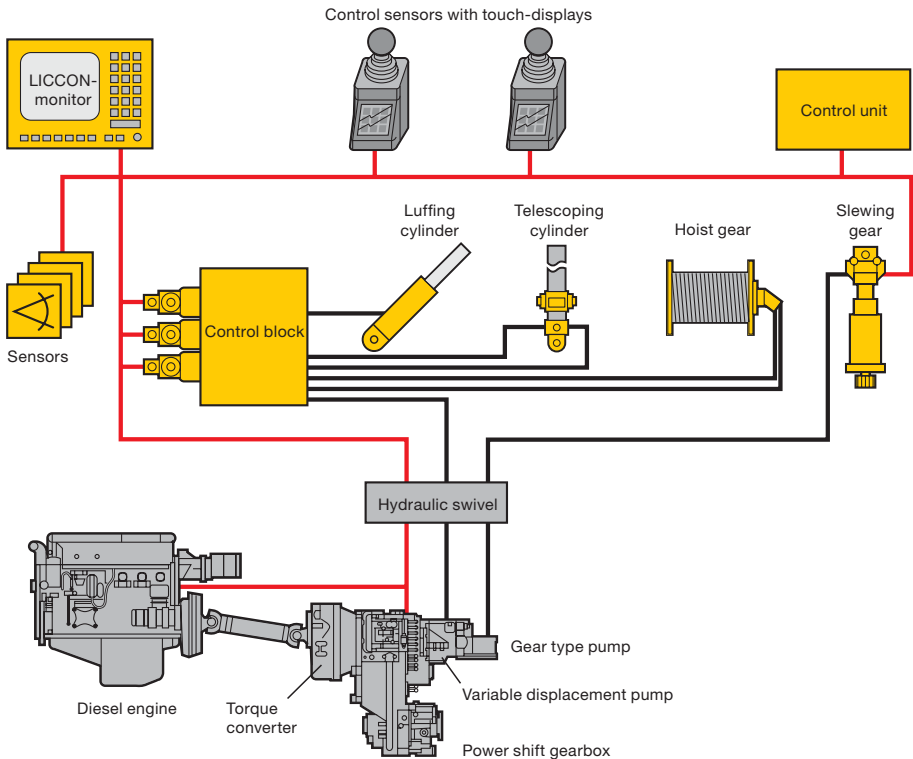
# High-power crane drive



## With tried-and-tested components

The drive components for crane operation are designed for high performance and ensure sensitive and precise load handling. They are specially designed to suit the crane's usage and have been subjected to hard endurance tests.

- Crane drive from chassis diesel engine
- Optimised fuel consumption by electronic engine management
- Diesel-hydraulic crane drive, open hydraulic circuits with electronic "Load Sensing" control, 4 working movements simultaneously possible
- Electric/electronic SPS crane control through the LICCON computer system
- Comfort armrest control with 2 self-centering, 4-fold multifunctional joysticks, stepless control of all crane movements, with vibration joysticks for slewing gear and winch operation, electronic pilot control
- Slewing system changeable from open to hydraulically locked as standard, thus the movement can ideally be adjusted to the different operational conditions, e. g. sensitive control for assembly work or fast cycle work



### The slewing gear

- Planetary gear, spring loaded multi-disc brake
- Slewing speed from 0 – 2.5 rpm stepless adjustable
- Slewing gear changeable from open to hydraulically locked



### Centralised lubrication

- Centralised lubrication system as standard for slewing ring, boom bearings, luffing ram and winch bearings
- Uniform application of lubricant
- Lubricant level visible in transparent container at all times



# Intelligent crane controls

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

Both the software and hardware for operating the mobile crane have been developed by Liebherr in-house. The base is the LICCON computer system (Liebherr Computed Controlling). This system performs various information, control and monitoring functions. The control components have proved themselves worldwide in the most diverse climatic conditions.

## LICCON configuration and operating programme

- Application programmes:
  - Safe load indicator (LMB)
  - Configuration programme with configuration display
  - Operating programme with operating display
- Setting of the configuration by convenient interactive functions
- Display of all important data using graphic symbols
- Reliable cut-off when permissible load moments are exceeded
- Winch indications for highly precise lifting/lowering of load

## The data bus technology

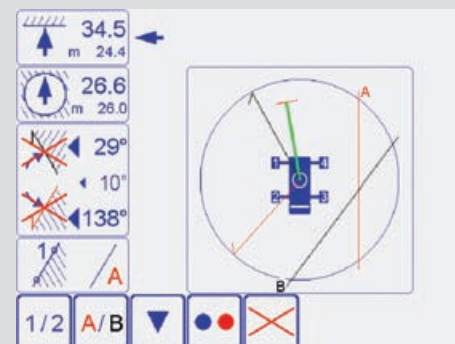
Liebherr mobile cranes are fully interlaced using data bus systems. All major electric and electronic components are fitted with their own microprocessors and communicate with each other via only a small number of data cables. Liebherr has developed a bus system to meet the special demands of mobile cranes (LSB - Liebherr-System-Bus). The data bus technology increases reliability, comfort and safety when driving and operating the cranes:

- Improved reliability due to greatly reduced number of electric cables and contacts
- Constant self-testing of the 'intelligent sensors'
- Extensive diagnosis possibilities, fast fault finding



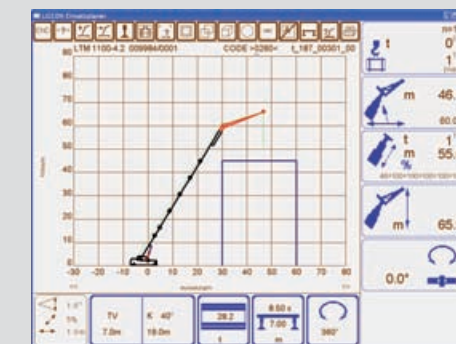
### The LICCON test system

- Rapid localisation of problems onscreen without any measuring instruments
- Display of error codes and descriptions
- Convenient interactive functions for monitoring all inputs and outputs
- Displays of functions and allocation of sensors and actuators



### The LICCON working area limiter (option)

- Relief of the crane driver by automatic monitoring of working area limits like bridges, roofs, etc.
- Simple programming
- Four different limiting functions:
  - Sheave head height limiting
  - Limiting of radius
  - Limiting of slewing angle
  - Limiting of borders



### The LICCON works planner

- Computer programme for planning, simulating and documenting crane operations on a PC
- Representation of all the crane's load charts
- Automatic search for suitable crane based on entry of load, radius and lifting height parameters
- Simulation of crane operations with outline functions and supporting force display



# The new control generation – LICCON2

The new generation of the Liebherr crane control offers an extended customer value and higher control comfort by additional user possibilities. The base for this is the modern and future oriented control architecture with components, which have been optimised for computing power and capacity.

## Attaching and detaching the hook block

The BTT – Bluetooth terminal allows the crane driver to attach the hook block or detach it from the front bumper within view by remote control of the hoist gear and the luffing cylinder of the telescopic boom.

## Crane supporting

By use of the BTT the mobile crane will be set up comfortably and safely. Engine start/stop and speed regulation, electronic inclination display and automatic levelling are standard. Optionally the BTT can also display the outrigger forces.



### Colour monitor

The readability of the data on the monitor of the LICCON2 control unit in the crane cabin is improved by the colour display. Warning indications and crane utilisation are more clearly visible.



### Touch display

Below the joysticks integrated in the arm rest touch displays are provided with which various working functions can be selected. Beside others these are the drive and steering programmes of the carrier, the axle suspension, the supporting of the crane, the adjustment of the working floodlights as well as the heating and ventilation control.



### Wireless remote control (option)

All crane movements can be controlled outside the crane cab. By this system the economy of crane operations is enhanced.

- Free visibility and closeness to the load
- Prevention of communication errors between crane driver and job side personnel
- Independent attaching of the load by the crane driver





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The illustrations also contain accessories and special equipment which are not contained in the standard scope of delivery. Subject to modifications

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