EN-US

LRH 200 unplugged

LRH 3102.07
www.liebherr.com

LIEBHERR

Piling and drilling rigs

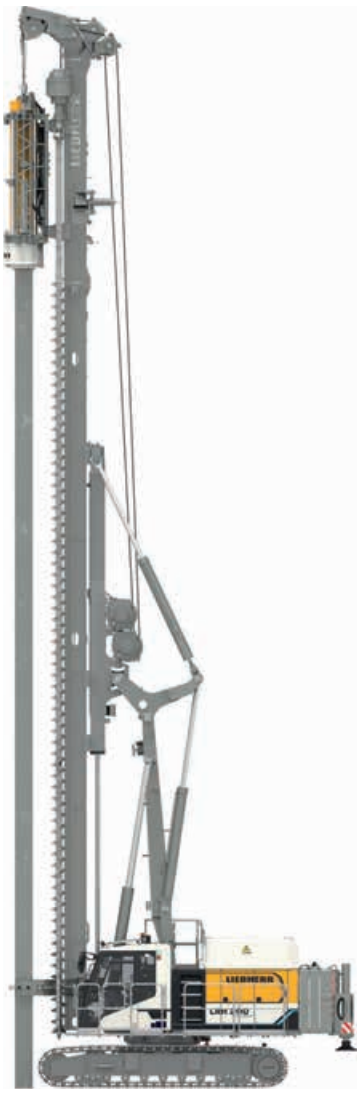
Concept and characteristics

PDE®
Process Data Recording

MyJobsite

LIPOS®
Positioning System

LiDAT®
Data Transmission



Ground
Pressure
Visualization

Radio remote
control

The robust universal machine for a wide variety of applications
- Hydraulic hammer
- Pre-drill
- Continuous flight auger drilling
- Full displacement drilling
- Soil mixing
- Down-the-hole drilling

Assistance systems
- Cruise Control for all main functions
- Joystick control for all machine functions
- Ground Pressure Visualization
- Radio remote control
- Leader inclination memory
- Positioning system
- Drilling assistant
- Free-fall winches with slack rope monitoring and prevention

Technical description

Drive system

Max. drive power	255 kW
Battery type	High Performance Battery System
Technology	Li-Ion NMC (nickel manganese cobalt)
Max. charging power	40 kW (CEE socket 63 A / 400 V AC) 20 kW (CEE socket 32 A / 400 V AC)
Option	80 kW (CEE socket 125 A / 400 V AC)
Mains voltage	400 V AC (3 phase + N + PE)
Capacity	standard 4 h* option 8 h

* in normal operation

Hydraulic system

Pump for working tools	2x 73 gal/min
Separate pump for kinematics	34 gal/min
Hydraulic oil tank capacity	159 gal
Max. working pressure	5,076 PSI
Hydraulic oil	electronic monitoring of all filters use of synthetic environmentally friendly oil possible

Crawlers

Drive system	with fixed axial piston hydraulic motors
Crawler side frames	maintenance-free, with hydraulic chain tensioning device
Brake	hydraulically released, spring-loaded multi-disc holding brake
Drive speed	0-0.83 mph
Track force	149,498 lbf
Grousers	width 35.4 inch (option 27.6 and 31.5 mm)

Swing gear

Drive system	with fixed axial piston hydraulic motors, planetary gearbox, pinion
Swing ring	triple-row roller bearing with external teeth
Brake	hydraulically released, spring-loaded multi-disc holding brake
Swing speed	0-3.75 rpm continuously variable

Hammer winch with free fall

Line pull (effective)	44,962 lbf
Line pull in pile driving operation	40,466 lbf
Rope diameter	24 mm
Rope speed	0-184 ft/min

The winch is outstanding in its compact design and easy assembly.
Clutch and braking functions on the free-fall system are provided by a compact designed, low wear and maintenance-free multi-disc service brake.

Pile winch with free fall

Line pull (effective)	44,962 lbf
Line pull in pile driving operation	35,969 lbf
Rope diameter	24 mm
Rope speed	0-184 ft/min

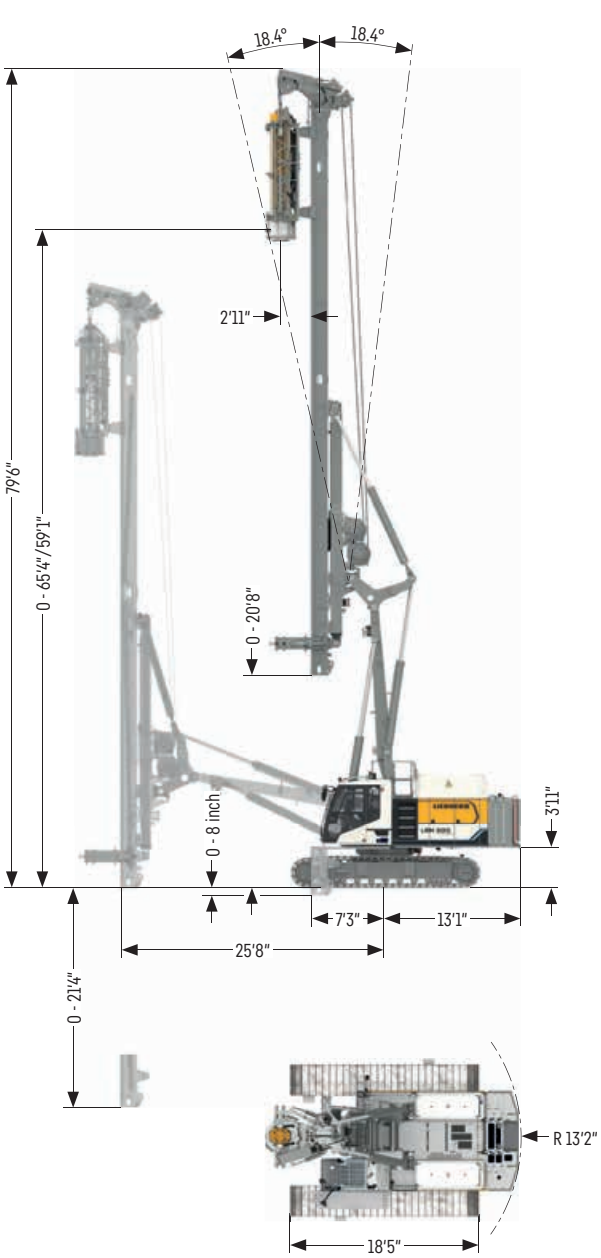
The winch is outstanding in its compact design and easy assembly.
Clutch and braking functions on the free-fall system are provided by a compact designed, low wear and maintenance-free multi-disc service brake.

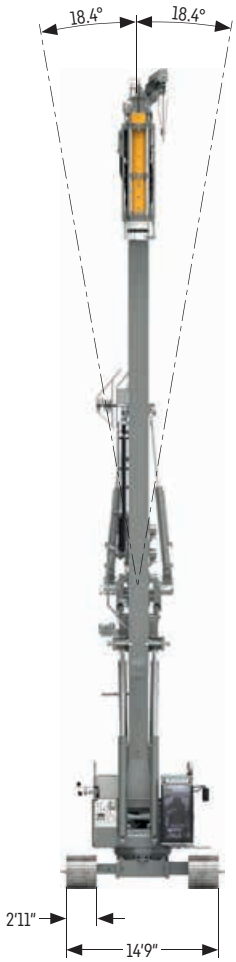
Remarks:

- Illustrations showing the types of application (e.g. full displacement drilling, continuous flight auger drilling etc.) are examples only.
- Weights and transport dimensions can vary with the final configuration of the machine. The figures in this brochure may include options which are not within the standard scope of supply of the machine.

Dimensions

Standard



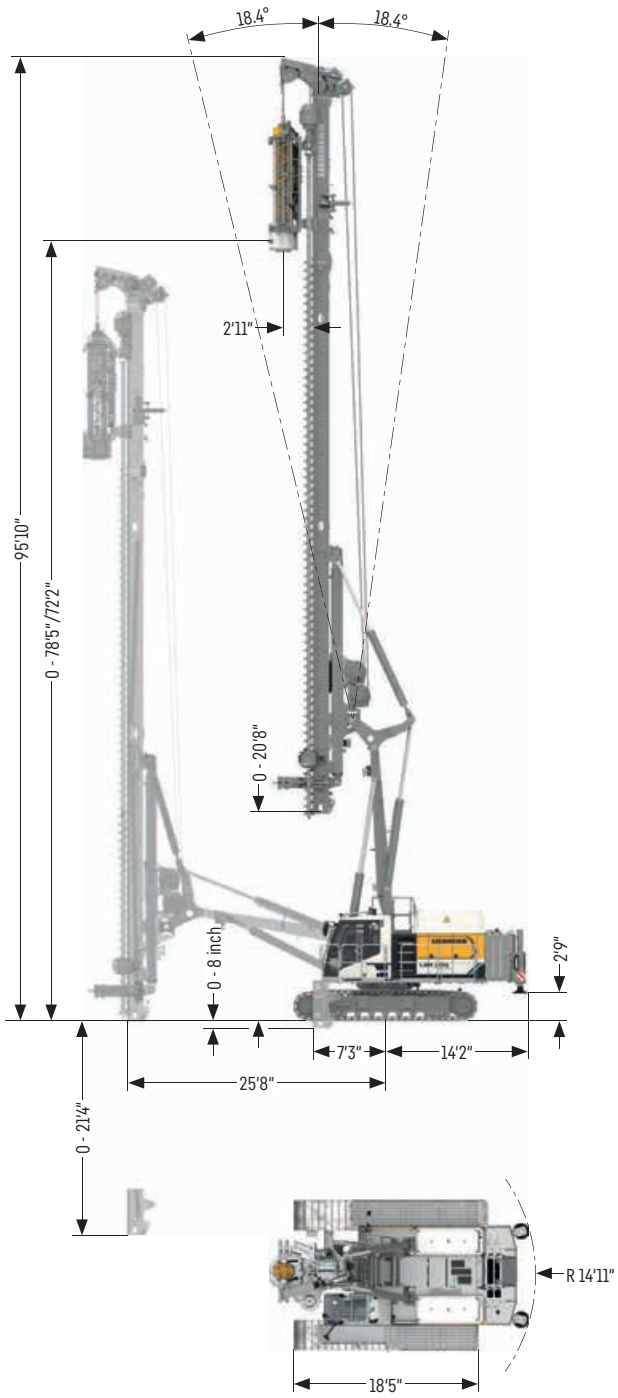


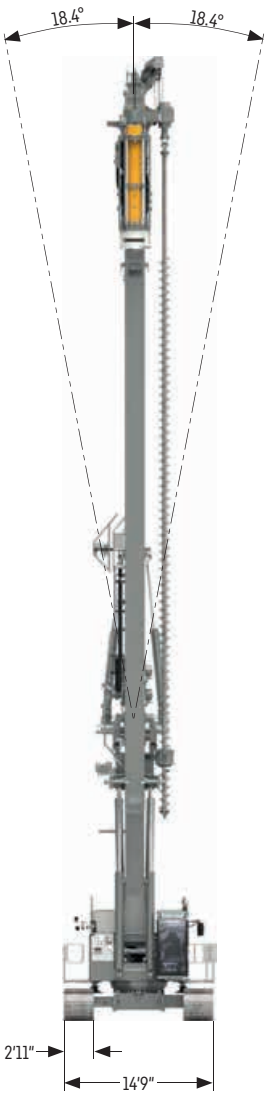
Operating weight

Total weight with hammer H 6-6	lbs	179,677
Total weight with hammer H 10-100	lbs	194,007

The operating weight includes the basic machine LRH 200 unplugged and 39,683 lbs counterweight.
* Hammer H 10-100

Folding leader



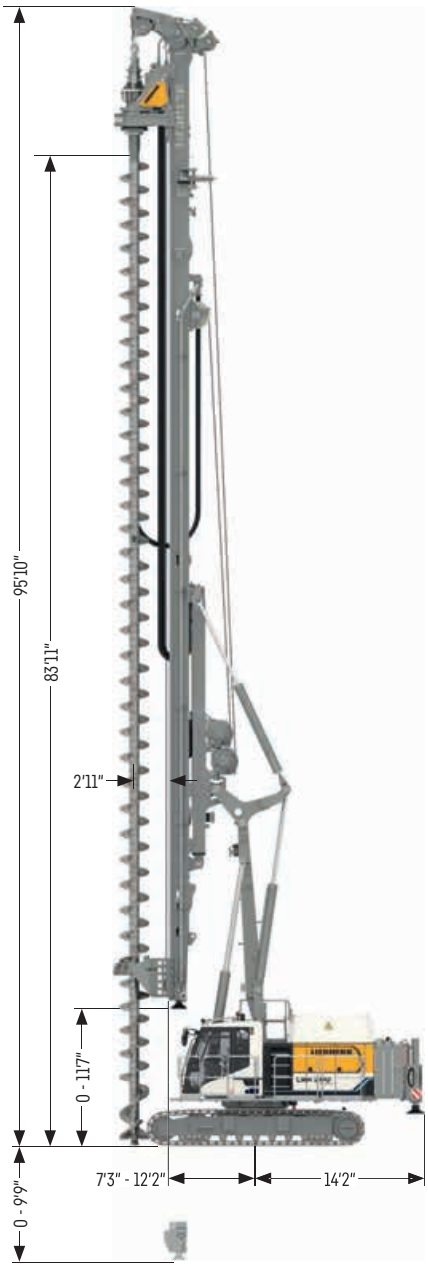


Operating weight

Total weight with hammer H 6-6	lbs	187,172
Total weight with hammer H 10-100	lbs	201,503

The operating weight includes the basic machine LRH 200 unplugged , rotary BA 35 and 39,683 lbs counterweight.
* Hammer H 10-100

Drilling version

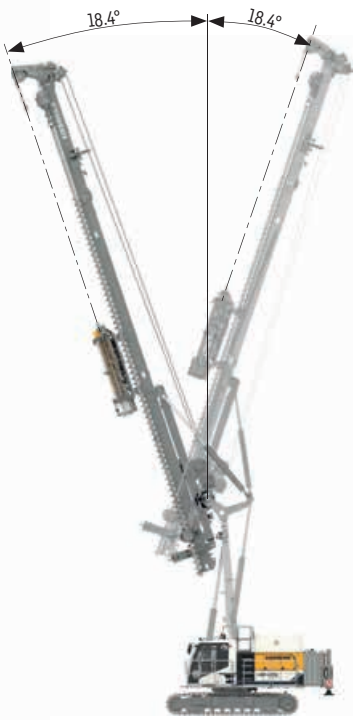


Operating weight

Total weight with 35.4 inch 3-web grousers	lbs	200,621

The operating weight includes the basic machine LRH 200 unplugged incl. rotary BAT 250, auger, auger cleaner and 39,683 lbs counterweight.

Inclinations for pile driving operation



Local zero emission

Emission-free
The new machines with alternative electro-hydraulic drive have a very low noise level and are also emission-free. That is a huge advantage in areas sensitive to noise and also for the people working on the jobsite.

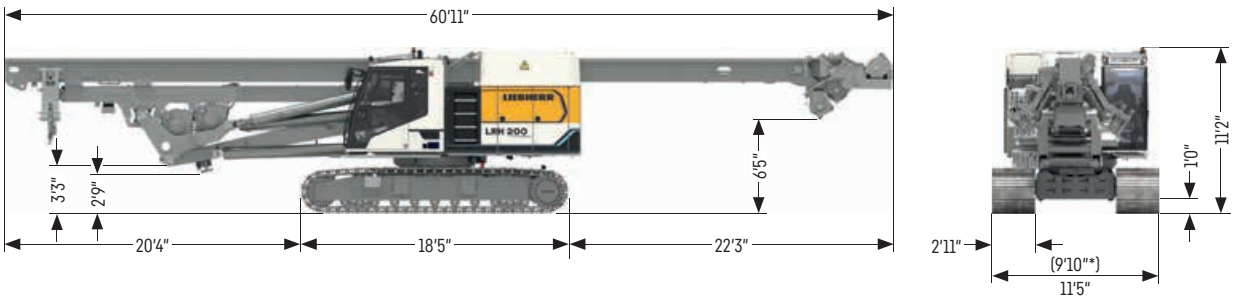
Operation
The LRH 200 unplugged can be operated both connected to the power supply (plugged in) or powered by battery (unplugged).

Sustainability
Liebherr is aware of its responsibility towards society and the environment and, with the unplugged series, strives for the best possible combination of environmental sustainability, customer benefit and efficiency.

Plugged in
When connected to the power supply, there are no restrictions in performance and application of the machine when compared to the conventional version with diesel engine. The battery is constantly charged when connected to the power supply and therefore always provides sufficient energy.

Unplugged
The battery is designed for an operating time of 4 hours as a standard and 8 hours as an option. It can be simply recharged using a conventional jobsite electric supply (32 A, 63 A). Using a 125 A supply, the battery can be fast-charged in barely 2.5 hours.

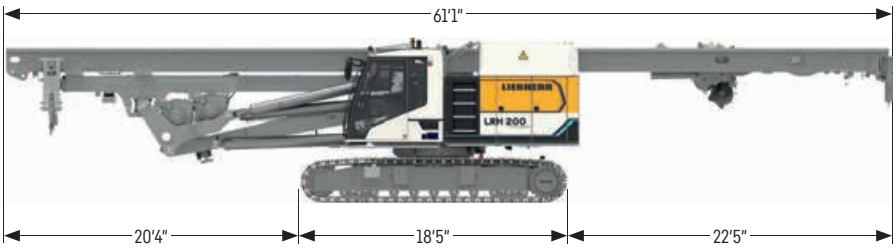
Transport dimensions and weights



Transport standard

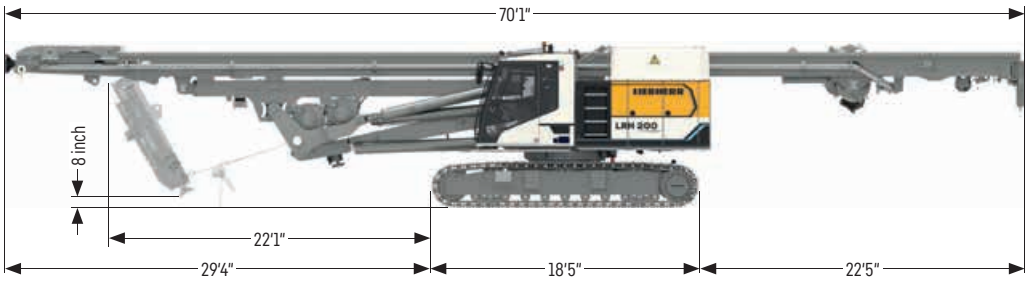
includes the basic machine (ready for operation) with leader, without counterweight	lbs	53.1

* with 27.6 inch grousers, without all round platform and railings



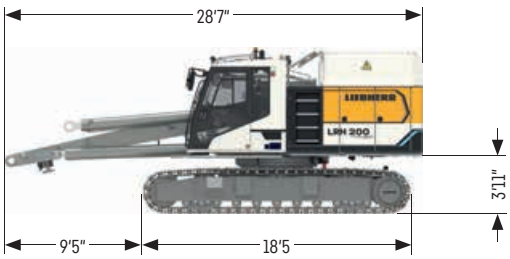
Transport folding leader

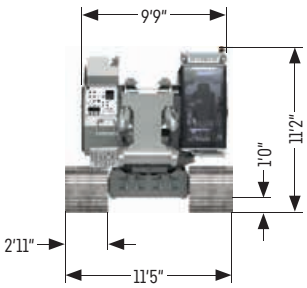
includes the basic machine (ready for operation) with leader, without counterweight	lbs	120,813



Transport drilling version

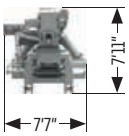
includes the basic machine (ready for operation) with leader, concrete supply line and multi-sledge, without counterweight	lbs	126,766

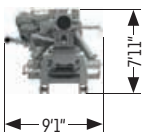




Basic machine

with crawler side frames, without counterweight	lbs	79,807





Leader

Weight standard leader	lbs	37,258
Weight folding leader	lbs	41,006
Weight drilling version	lbs	46,958

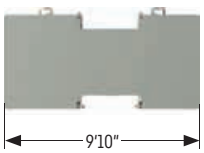
* leader lower part folded

Options

Concrete supply line	lbs	1,323
All round platform with railings	lbs	882

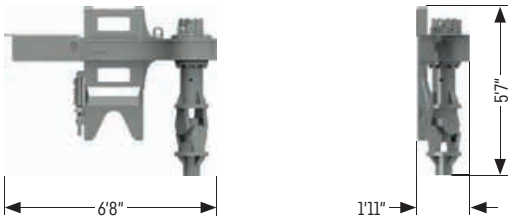
Counterweight

Weight	lbs	17,637



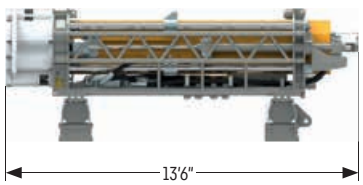
Intermediate slab

Weight	lbs	11,023



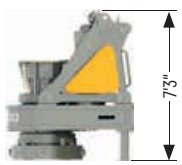
BA 35

Weight	lbs	3,086



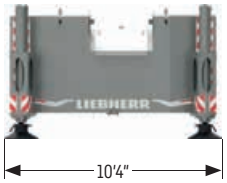
Hammer H 6-6

Weight incl. 13,228 lbs drop weight	lbs	21,385



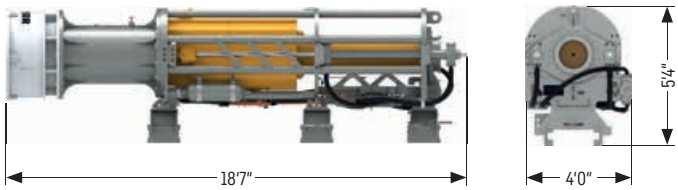
BAT 250

Weight	lbs	14,330



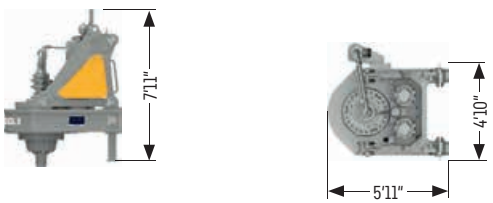
Counterweight with rear support unit

Weight	lbs	17,637



Hammer H 10-100

Weight incl. 22,046 lbs drop weight	lbs	35,715



MAT 100.1

Weight	lbs	12,566

Hydraulic hammer H 6 and H 10

Performance data

Hammer type		H 6-3	H 6-4	H 6-5	H 6-6	H 10-75	H10-100
Drop weight	lbs	6,614	8,818	11,023	13,228	16,535	22,046
Max. rated energy	lbf-ft	26,552	35,403	44,254	53,104	66,381	88,507
Blow rate	blows/min	50-150	50-150	50-150	40-150	50-150	50-150
Max. pile length*	ft	80.0	80.0	80.0	80.0	73.8	73.8
Hammer weight incl. pile helmet and dolly	lbs	14,771	16,976	19,180	21,385	30,203	35,715

Various pile helmet sizes up to diameters of 2.1 ft for the hammer H 6, up to up to 2.6 ft for the hammer H 10 and in square design available as standard.
Other pile helmet sizes available on request
* For the version without leader upper part the max. pile length is reduced by 16.4 ft.

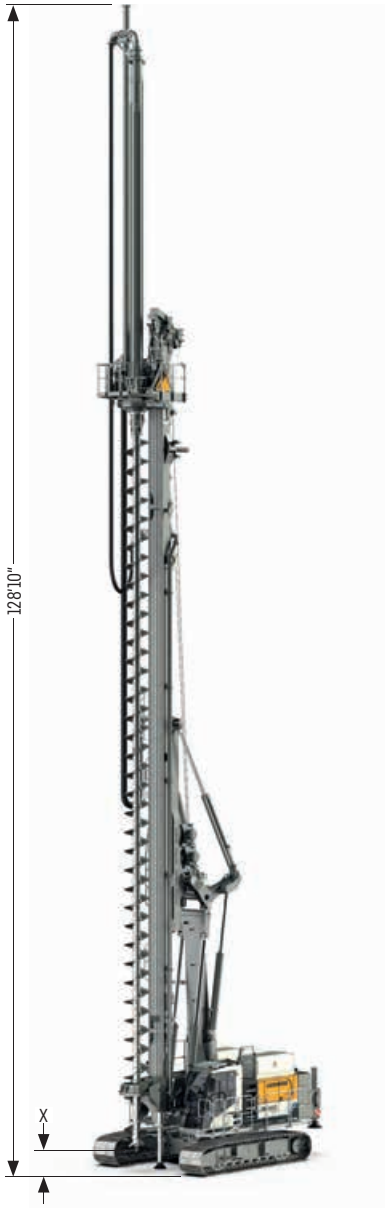
Pre-drill BA 35

Performance data

Rotary drive - torque	lbf-ft	0 - 25,815
Rotary drive - speed	rpm	0 - 20
Max. drilling diameter	ft	0 - 1.2
Max. pile length* H 6/H 10	ft	76.9/70.6
Max. drilling depth* H 6/ H 10	ft	57.1/50.6
Additional crowd force		hammer weight

Other drilling diameters available on request
* For the version without leader upper part the max. drilling depth and max. pile length are reduced by 16.4 ft.

Continuous flight auger drilling



Performance data

Rotary drive - torque	lbf-ft	169,639
Rotary drive - speed	rpm	58
Max. drilling diameter*	ft	3.3
Drilling depth without Kelly extension**	ft	80.4
Drilling depth with 32.8 ft Kelly extension**	ft	113.2
Max. pull force	lbf	89,923
Max. crowd force	lbf	44,962

Above drilling depths take into account that an auger cleaner is used and the cardan joint has been removed.
Above drilling depths are valid for the use of standard tools and for an X value of 1.3 ft (see above illustration).
* Other drilling diameters available on request
** For the version without leader upper part the drilling depth is reduced by 16.4 ft.

Full displacement drilling

Performance data

Rotary drive - torque	lbf-ft	169,639
Rotary drive - speed	rpm	58
Max. drilling diameter*	ft	1.6
Drilling depth without Kelly extension**	ft	82.7
Drilling depth with 32.8 ft Kelly extension**	ft	115.5
Max. pull force	lbf	89,923
Max. crowd force	lbf	44,962

Above drilling depths are valid for the use of standard tools and for an X value of 0.6 ft (see above illustration).
* Other drilling diameters available on request
** For the version without leader upper part the drilling depth is reduced by 16.4 ft.

Soil mixing

Performance data BAT 250

Rotary drive - torque	lbf-ft	169,639
Rotary drive - speed	rpm	58
Max. mixing diameter*	ft	1.6
Mixing depth**	ft	79.7
Mixing depth with 32.8 ft Kelly extension**	ft	112.3
Max. pull force	lbf	89,923
Max. crowd force	lbf	44,962

Above mixing depths are valid for the use of standard tools and for an X value of 3.7 ft for MAT 100.1, and 1.9 ft for BAT 250 (see above illustration).
* Other mixing diameters available on request
** For the version without leader upper part the mixing depth is reduced by 16.4 ft.

Performance data MAT 100.1

Rotary drive - torque	lbf-ft	70,068
Rotary drive - speed	rpm	100
Max. mixing diameter*	ft	3.3
Mixing depth**	ft	79.7
Max. pull force	lbf	89,923
Max. crowd force	lbf	44,962

Down-the-hole drilling

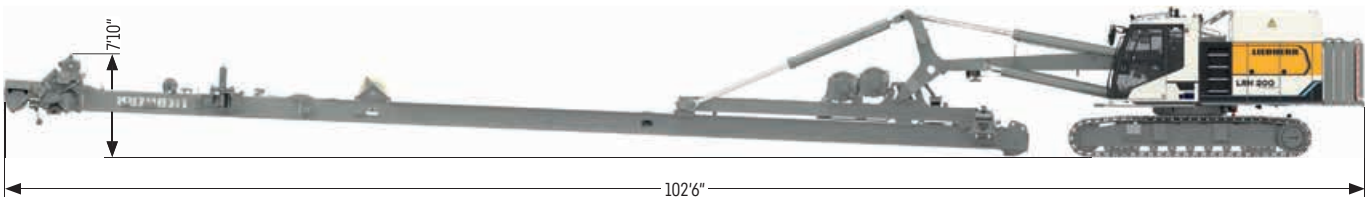
Performance data DHR 110

Rotary drive - torque	lbf-ft	78,182
Rotary drive - speed	rpm	41
Max. drilling depth	ft	82.7
Max. pull force	lbf	89,923
Max. crowd force	lbf	44,962
Leader inclination (forward/backwards/sideways)	°	5.7/18.4/9.5

Elevation mode

By supporting the leader on the ground and extending the rear support cylinders, the carrier machine is elevated. The undercarriage can thus be swivelled on the spot, which makes it easier to move the piling rig in restricted spaces.

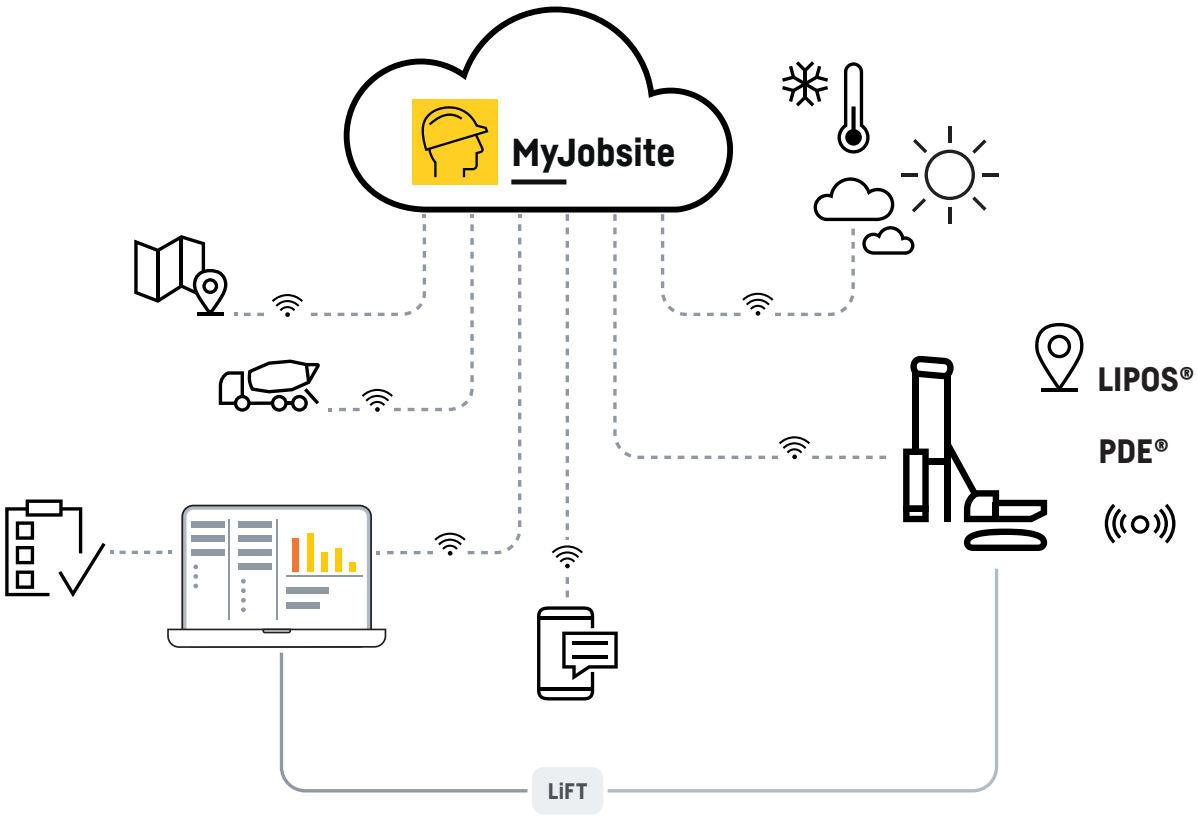
Service mode (without attachments)



For maintenance and service work on the leader and carrier machine, the leader can be folded forward. In this position the piling rig cannot move or travel.

Digitalization in deep foundation work

As deep foundation expert, Liebherr has created a combination of the most diverse assistance systems and software solutions in order to record and evaluate complex processes and to be able to provide the corresponding evidence.



LIPOS - Liebherr Positioning System
Using pre-installed components, LIPOS enables the direct integration of machine control systems from Trimble and Leica. These systems are based on modern DGNSS technology (Differential Global Navigation Satellite System) and so achieve the best possible conditions for a precise and efficient positioning of Liebherr machines and their attachment tools.

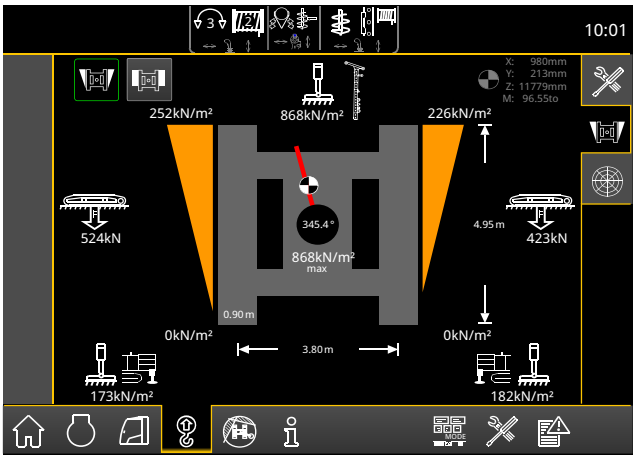
PDE
All working processes can be electronically recorded and visualized using the process data recording system PDE. The system is operated and displayed on the PDE touchscreen in the operator's cab. PDE records operating data from the Litronic control system, as well as data from external sensors.

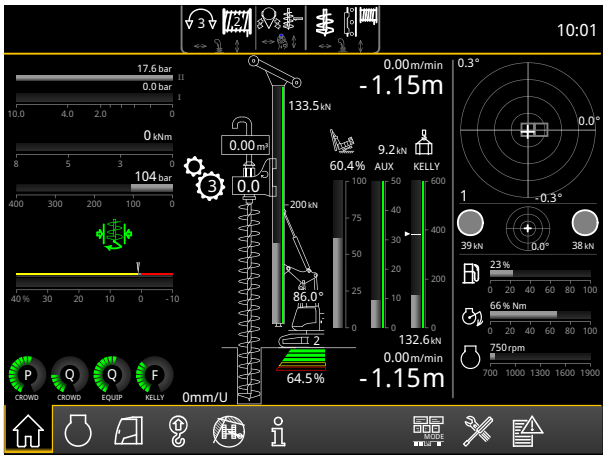
MyJobsite
Using the MyJobsite software solution all relevant process, machine, construction site and positioning data (LIPOS) can be recorded, displayed, analysed, managed and evaluated in one central location. The collected data can be accessed via a web browser when an internet connection is active.

With the recorded PDE data, such as the driving progress of the pile per blow, the total number of blows, or the impact frequency per minute, a driving protocol is automatically generated as proof of quality directly after completion of a work process. The parameters of the driving protocol can be defined and assigned in advance. Using the templates saves a lot of time when creating the protocols.

MyJobsite is THE tool for quality control and documentation. The deluge of data, which s accrued each day from a wide variety of sources on the jobsite, can be recorded precisely and processed in an informative manner. Unpopular bureaucratic work is kept to a minimum and the amount of time required for it is significantly reduced. At the same time, the quality of administration work is maximised.

Ground Pressure Visualization





Features:

- The actual ground pressure is calculated in real time
- The maximum admissible ground pressure can be individually predefined
- The utilization is continuously calculated and displayed on the monitor in the operator's cab
- Audible and visual warnings when the predefined values are approached

Your benefits:

- Increased safety on the jobsite due to consideration of prevailing ground conditions
- Higher operator comfort thanks to clearly displayed information and warning signals
- Prevention of critical or stressful situations before they occur
- User-friendly and intuitive handling in the operator's cab

Download datasheet

Please contact us.

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