

EN

# LRH 200

LRH 3002.07

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## LIEBHERR

Piling and drilling rigs

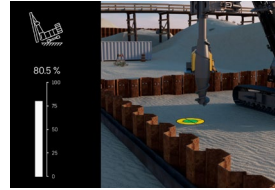


# Assistance systems



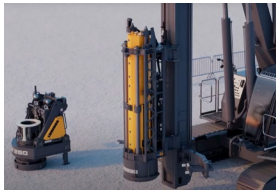
## Remote-controlled assembly and disassembly

The remote control facilitates the safe assembly and disassembly of the machine. The operator can change position and thus has a better view of collision points.



## Ground pressure visualisation

Changes in the leader position or swinging the uppercarriage lead to a shift in the centre of gravity. Centres of gravity, load moments and ground pressure distribution under the crawler are calculated in real time.



## Attachment recognition

The basic machine's control system detects attachments, records their operating hours and optimises oil quantities and pressures. Operating parameters and faults are recorded and can be recalled via LiDAT.



## Automatic leader adjustment

The operator can save the leader inclination. At the touch of a button, the leader can be set to the desired inclination at the piling or drilling point for each new working step. This saves time and ensures precise results.



## Drilling assistant for single pass method

The rope crowd system, rotary drive and the amount of flowing concrete are optimally matched during drilling and subsequent extraction.

# Technical description



## Diesel engine

<b>Power rating according to ISO 9249</b>	250 kW (335 hp) at 1700 rpm
Option	320 kW (429 hp) at 1700 rpm
<b>Engine type</b>	Liebherr D 936 A7-04
<b>Fuel tank capacity</b>	700 l with continuous level indicator and reserve warning
<b>Exhaust certification</b>	EU 2016/1628 Stage V; EPA/CARB Tier 4f ECE-R.96 Power Band H non-certified emission standard



## Hydraulic system

<b>Pump for working tools</b>	2x 272 l/min
<b>Separate pump for kinematics</b>	130 l/min
<b>Hydraulic oil tank capacity</b>	600 l
<b>Max. working pressure</b>	350 bar
<b>Hydraulic oil</b>	electronic monitoring of all filters use of synthetic environmentally friendly oil possible



## Crawlers

<b>Drive system</b>	with fixed axial piston hydraulic motors
<b>Crawler side frames</b>	maintenance-free, with hydraulic chain tensioning device
<b>Brake</b>	hydraulically released, spring-loaded multi-disc holding brake
<b>Drive speed</b>	0-1.3 km/h
<b>Track force</b>	665 kN
<b>Grousers</b>	Width 900 mm (option 700 and 800 mm)



## Swing gear

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

## 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.



## Hammer winch with free fall

<b>Line pull (effective)</b>	200 kN
<b>Line pull in pile driving operation</b>	180 kN
<b>Rope diameter</b>	24 mm
<b>Rope speed</b>	0-56 m/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

<b>Line pull (effective)</b>	200 kN
<b>Line pull in pile driving operation</b>	160 kN
<b>Rope diameter</b>	24 mm
<b>Rope speed</b>	0-56 m/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.

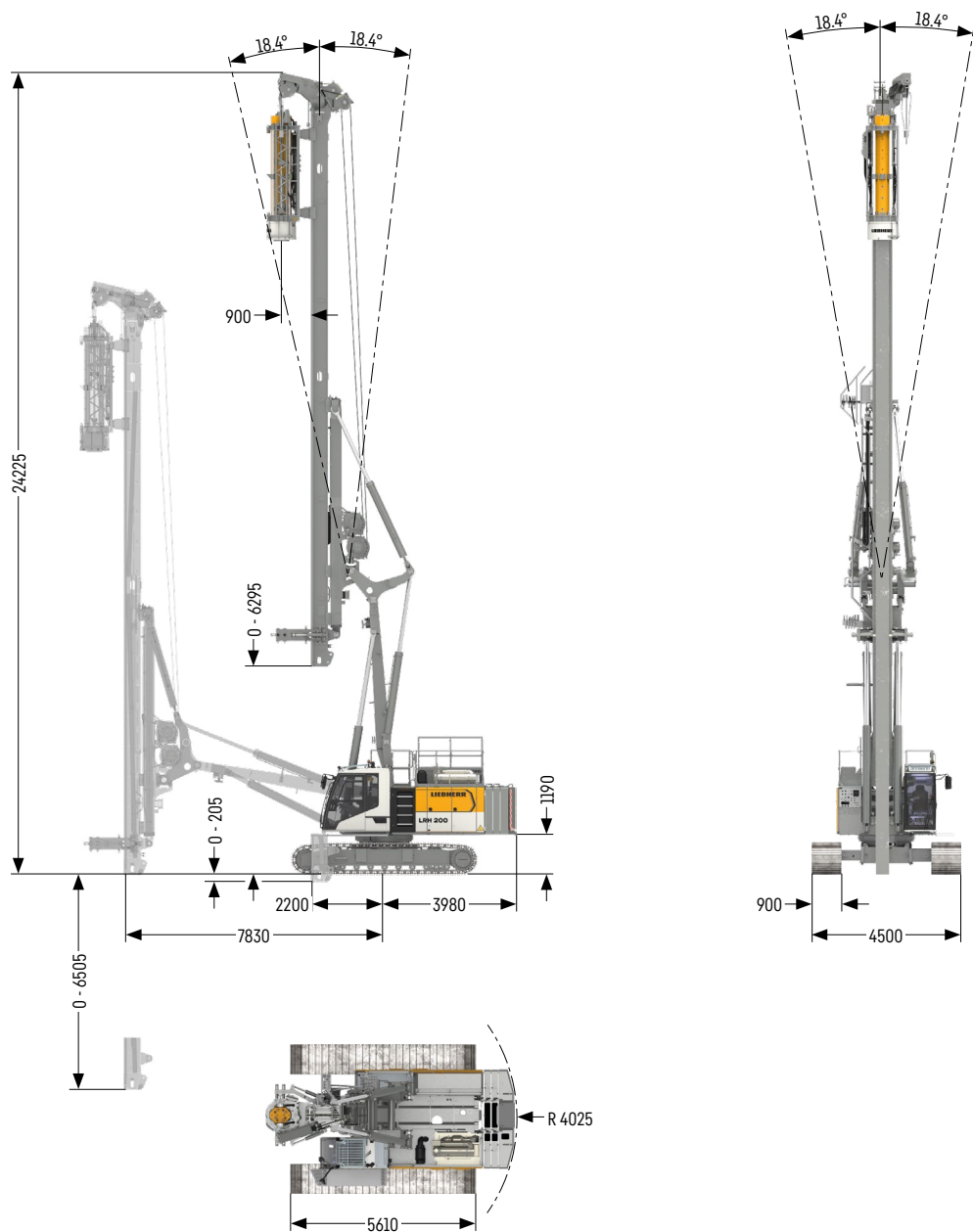


## Noise measurement data and vibration

<b>Noise emission</b>	according to 2000/14/EC directive	
<b>Emission sound pressure level <math>L_{pA}</math></b>	73.5 dB(A)	(in the cabin)
<b>Guaranteed sound power level <math>L_{WA}</math></b>	106 dB(A)	(of the machine)
<b>Vibration transmitted to the machine operator</b>	$< 2.5 \text{ m/s}^2$ (to the hand-arm system) $< 0.5 \text{ m/s}^2$ (to the whole body)	

# Dimensions

## Standard



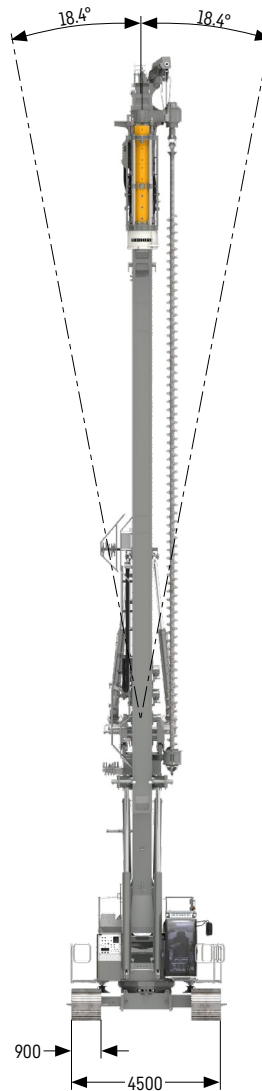
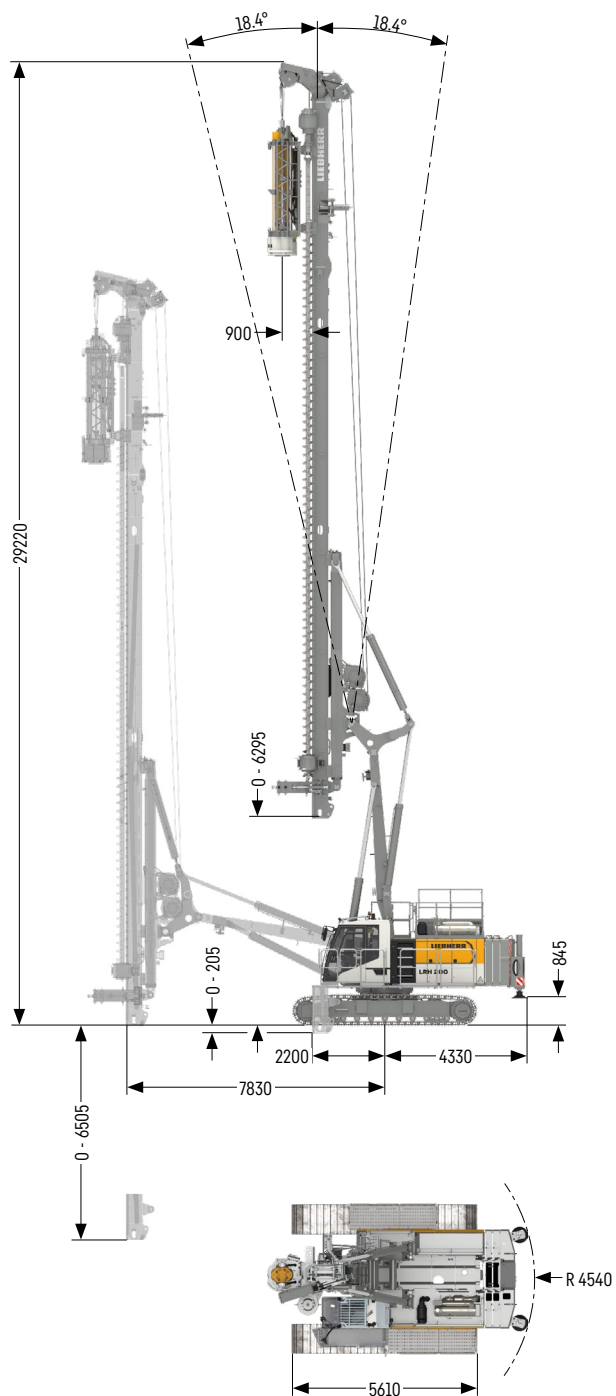
### Operating weights

Total weight with hammer H 6-6	t 81.0
Total weight with hammer H 10-100	t 87.5

The operating weight includes the basic machine LRH 200 and 18 t counterweight.

\* Hammer H 10-100

## Folding leader

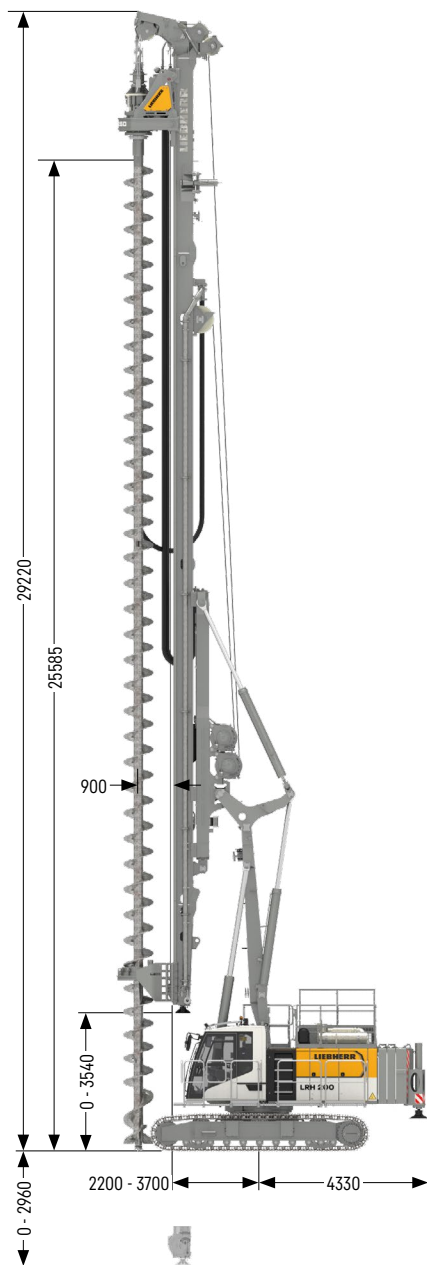


### Operating weights

Total weight with hammer H 6-6	t 84.4
Total weight with hammer H 10-100	t 90.9

The operating weight includes the basic machine LRH 200, rotary BA 35 and 18t counterweight.  
 \* Hammer H 10-100

## Drilling version

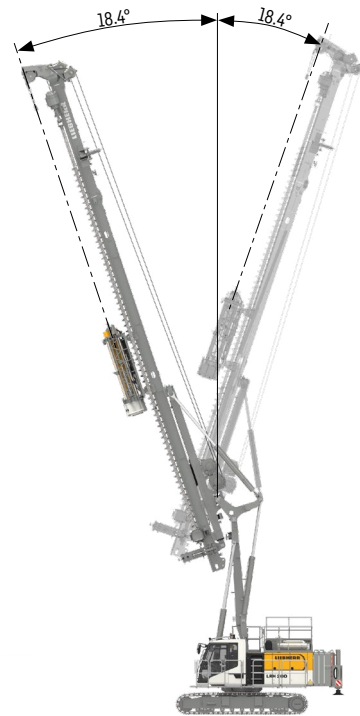


### Operating weight

Total weight with 900 mm 3-web grousers	t 90.4
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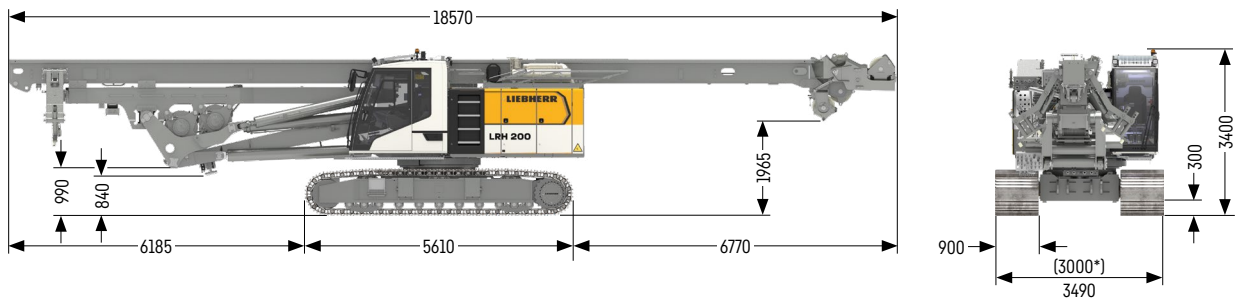
The operating weight includes the basic machine LRH 200 incl. rotary BAT 250, auger, auger cleaner and 18t counterweight.

## Inclinations for pile driving operation and down-the-hole drilling



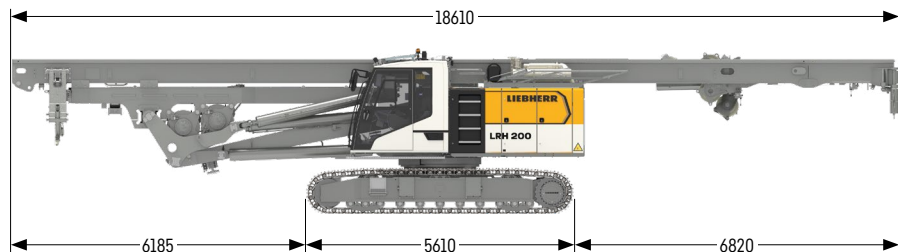


# Transport dimensions and weights



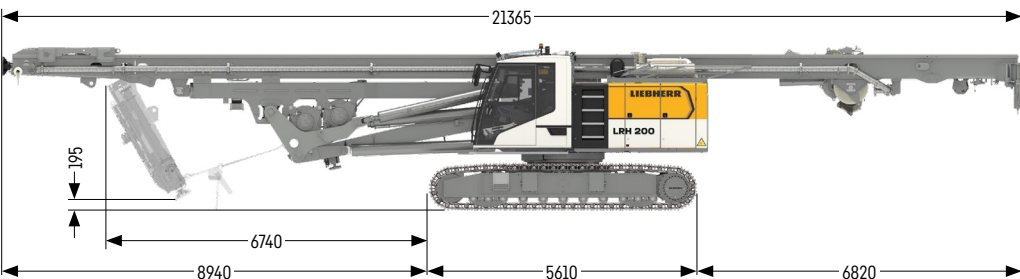
## Transport standard

includes the basic machine (fully tanked and ready for operation) with leader, without counterweight	t 53.3
* with 700 mm grousers, without all round platform and without railings	



## Transport folding leader

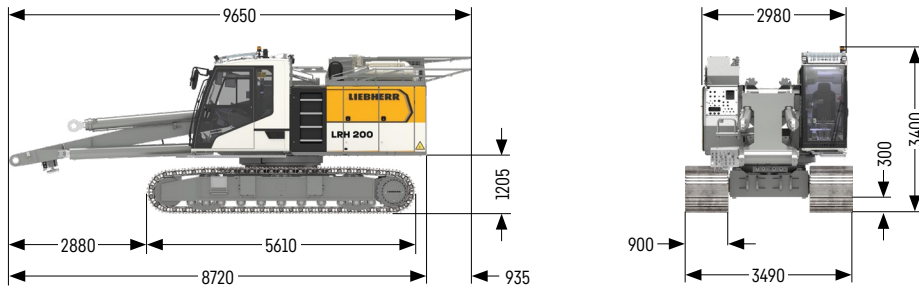
includes the basic machine (fully tanked and ready for operation) with leader, without counterweight	t 54.9
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## Transport drilling version

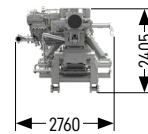
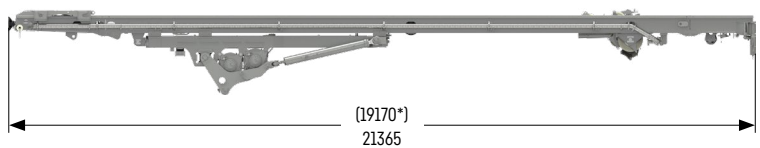
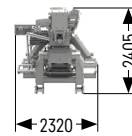
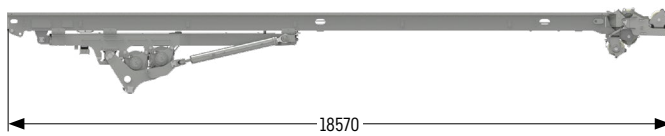
includes the basic machine (fully tanked and ready for operation) with leader, concrete supply line and multi-sledge, without counterweight	t 57.0
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### Basic machine

with crawler side frames, without counterweight	t 35.7
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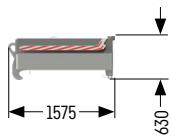
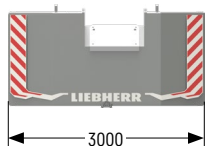
### Leader

Weight standard leader	t 16.9
Weight folding leader	t 18.6
Weight drilling version	t 21.3

\* leader lower part folded

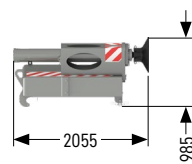
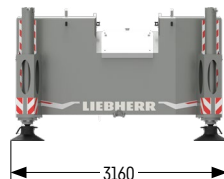
### Options

Concrete supply line	t 0.6
All round platform with railings	t 0.4



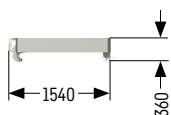
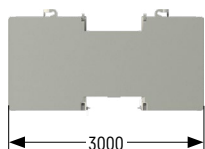
### Counterweight

Weight t 8.0



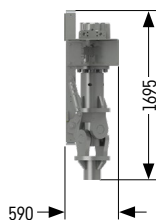
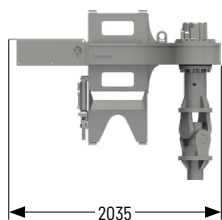
### Counterweight with rear support unit

Weight t 8.0



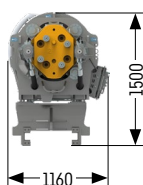
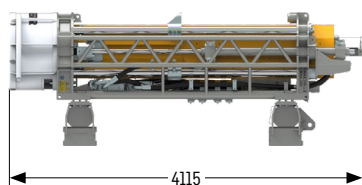
### Intermediate slab

Weight t 5.0



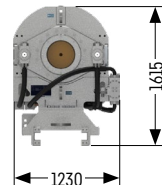
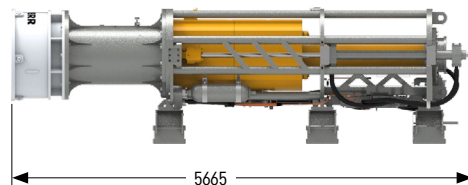
### BA 35

Weight t 1.4



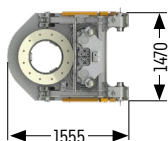
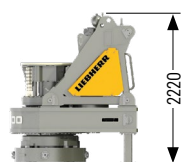
### Hammer H 6-6

Weight incl. 6 t drop weight t 9.7



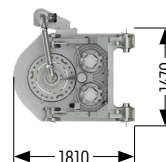
### Hammer H 10-100

Weight incl. 10 t drop weight t 16.2



### BAT 250

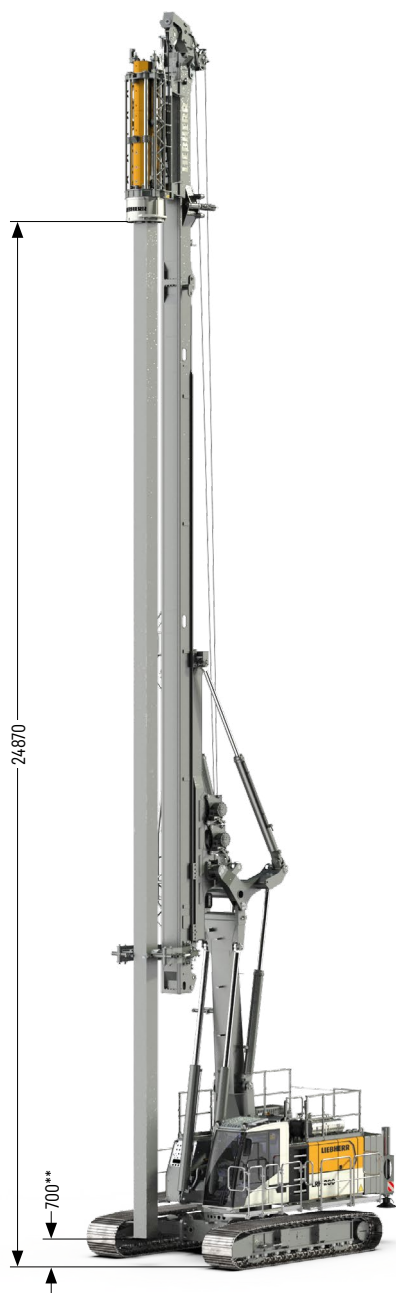
Weight t 6.5



### MA 180

Weight t 5.7

# 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	kg	3000	4000	5000	6000	7500	10000
Max. rated energy	kNm	36	48	60	72	90	120
Blow rate	Blows/min	50-150	50-150	50-150	40-150	50-150	50-150
Max. recommended pile length*	m	24.4	24.4	24.4	24.4	22.4	22.4
Hammer weight incl. pile helmet and dolly	kg	6700	7700	8700	9700	13700	16200

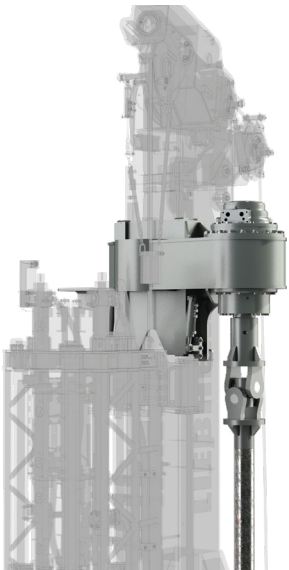
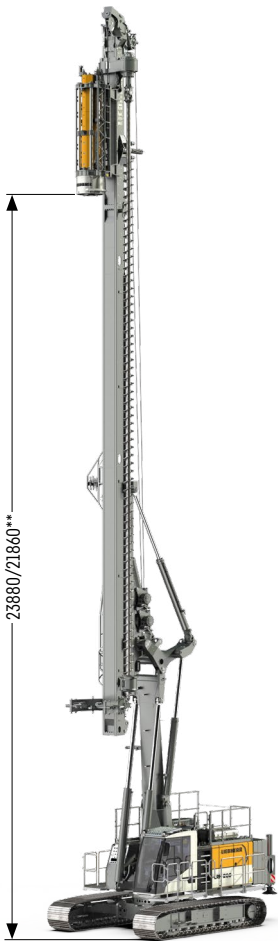
Various pile helmet sizes up to diameters of 630 mm for the hammer H 6, up to 785 mm for the hammer H 10 or in square design available as standard.

Other pile helmet sizes available on request

\* For the version without leader upper part the max. pile length is reduced by 5 m.

\*\* X dimension with pile mounted in the pile helmet.

# Pre-drill BA 35



## Performance data

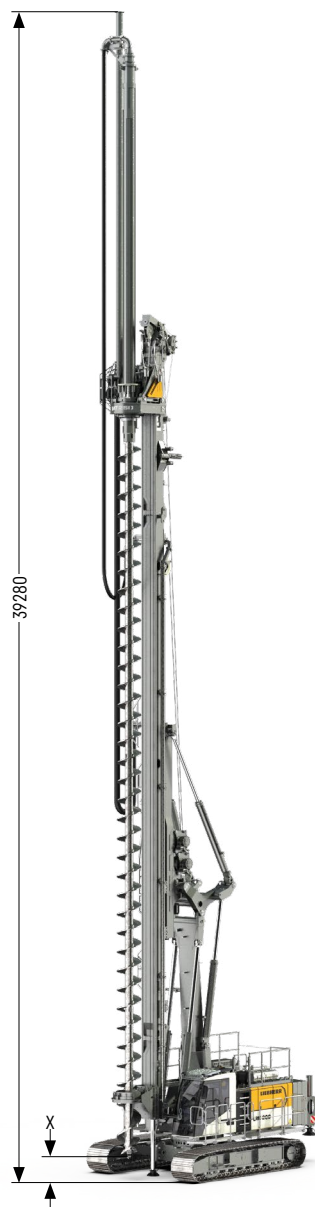
Rotary drive - torque	kNm	0-35
Rotary drive - speed	rpm	0-20
Max. drilling diameter	mm	350
Max. recommended pile length* H 6/H 10	m	23.4/21.4
Max. drilling depth* H 6/H 10	m	15.0/13.3
Additional crowd force	Hammer weight	

Other drilling diameters available on request

\* For the version without leader upper part the max. drilling depth and the max. pile length are reduced by 5 m.

\*\* Dimension H 10

# Continuous flight auger drilling



## Performance data

Rotary drive - torque	kNm	0- 230
Rotary drive - speed	rpm	0-58
Max. drilling diameter*	mm	1000
Drilling depth without Kelly extension**	m	24.5
Drilling depth with 10m Kelly extension**	m	34.5
Max. pull force/max. crowd force (standard)	kN	400/200
Max. pull force/max. crowd force (option)	kN	600/0

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 dimension of 395 mm (see above illustration).

\* Other drilling diameters available on request

\*\* For the version without leader upper part the drilling depth is reduced by 5m.

# Full displacement drilling



## Performance data

Rotary drive - torque	kNm	0-230
Rotary drive - speed	rpm	0-58
Max. drilling diameter*	mm	500
Drilling depth without Kelly extension**	m	25.2
Drilling depth with 10 m Kelly extension**	m	35.2
Max. pull force/max. crowd force (standard)	kN	400/200
Max. pull force/max. crowd force (option)	kN	600/0

Above drilling depths are valid for the use of standard tools and for an X dimension of 185 mm (see above illustration).

\* Other drilling diameters available on request

\*\* For the version without leader upper part the drilling depth is reduced by 5 m.

# Soil mixing



Performance data BAT 250

Rotary drive - torque	kNm	0-230
Rotary drive - speed	rpm	0-58
Max. mixing diameter*	mm	1500
Mixing depth**	m	24.3
Mixing depth with 10m Kelly extension**	m	34.3
Max. pull force/max. crowd force (standard)	kN	400/200
Max. pull force/max. crowd force (option)	kN	600/0

Above mixing depths are valid for the use of standard tools and for an X dimension of 1120 mm for MA 180, and 570 mm 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 5m.

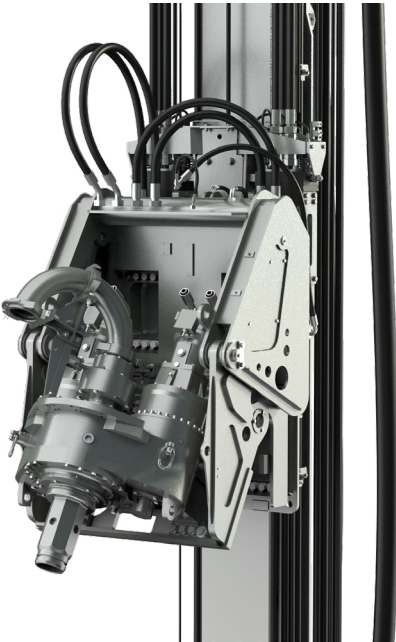


Performance data MA 180

Rotary drive - torque	kNm	0-165
Rotary drive - speed	rpm	0-80
Max. mixing diameter*	mm	1000
Mixing depth**	m	24.3
Max. pull force/max. crowd force (standard)	kN	400/200
Max. pull force/max. crowd force (option)	kN	600/0



# Down-the-hole drilling



### Performance data DHR 110

Rotary drive - torque	kNm	0-106
Rotary drive - speed	rpm	0-41
Max. drilling depth*	m	25.2
Max. pull force/max. crowd force (standard)	kN	400/200
Max. pull force/max. crowd force (option)	kN	600**/0

\* For the version without leader upper part the drilling depth is reduced by 5 m.

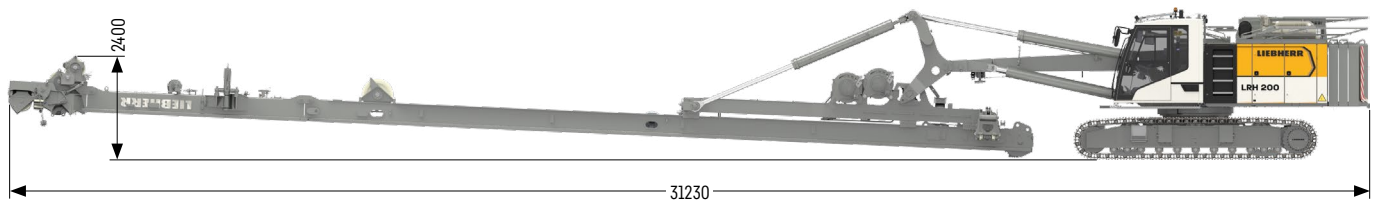
\*\* In recovery mode, drilling operation max. 400 kN

# 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.

# Digital solutions

Liebherr-Werk Nenzing GmbH has set itself the goal of using digital solutions to network and optimise processes on the jobsite.

In the progression from an experienced machine manufacturer to a full-service provider Liebherr already has a number of digital solutions, which provide substantial support for all those involved in the construction site.



## MyLiebherr

One portal, all services



## PDE

Process data recording



## MyJobsite

Your jobsite at a glance



## LIPOS

Positioning system



## XpertAssist

Remote support in real time



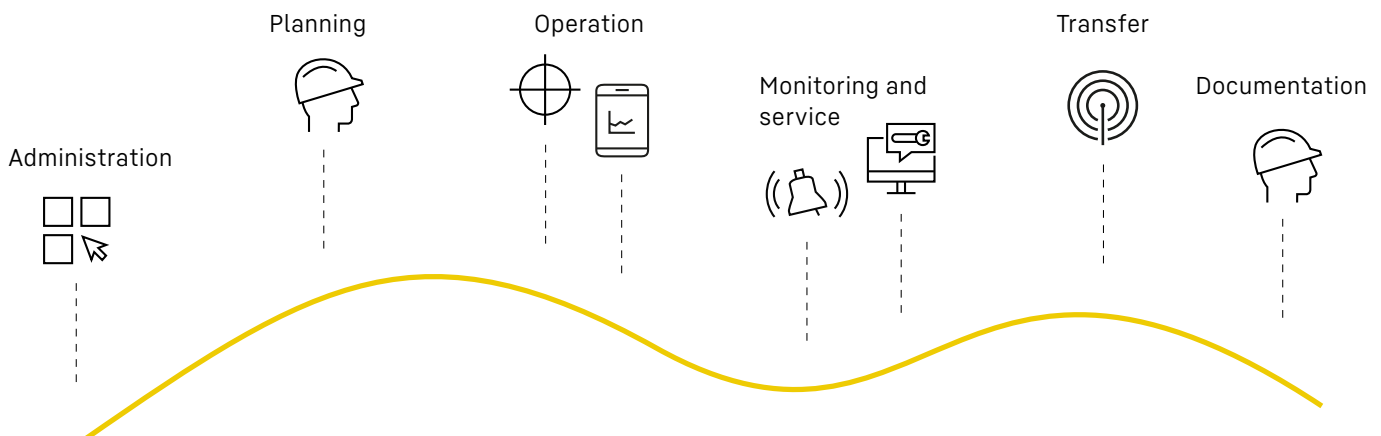
## LiDAT

Data transfer and positioning system



## MyNotifier

Monitoring tool for wind conditions and battery status







**Download datasheet**



**Please contact us.**

Liebherr-Werk Nenzing GmbH · Dr. Hans Liebherr Str. 1 · 6710 Nenzing, Austria  
Phone +43 50809 41-473 · [foundation.equipment@liebherr.com](mailto:foundation.equipment@liebherr.com) · [www.liebherr.com](http://www.liebherr.com)  
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