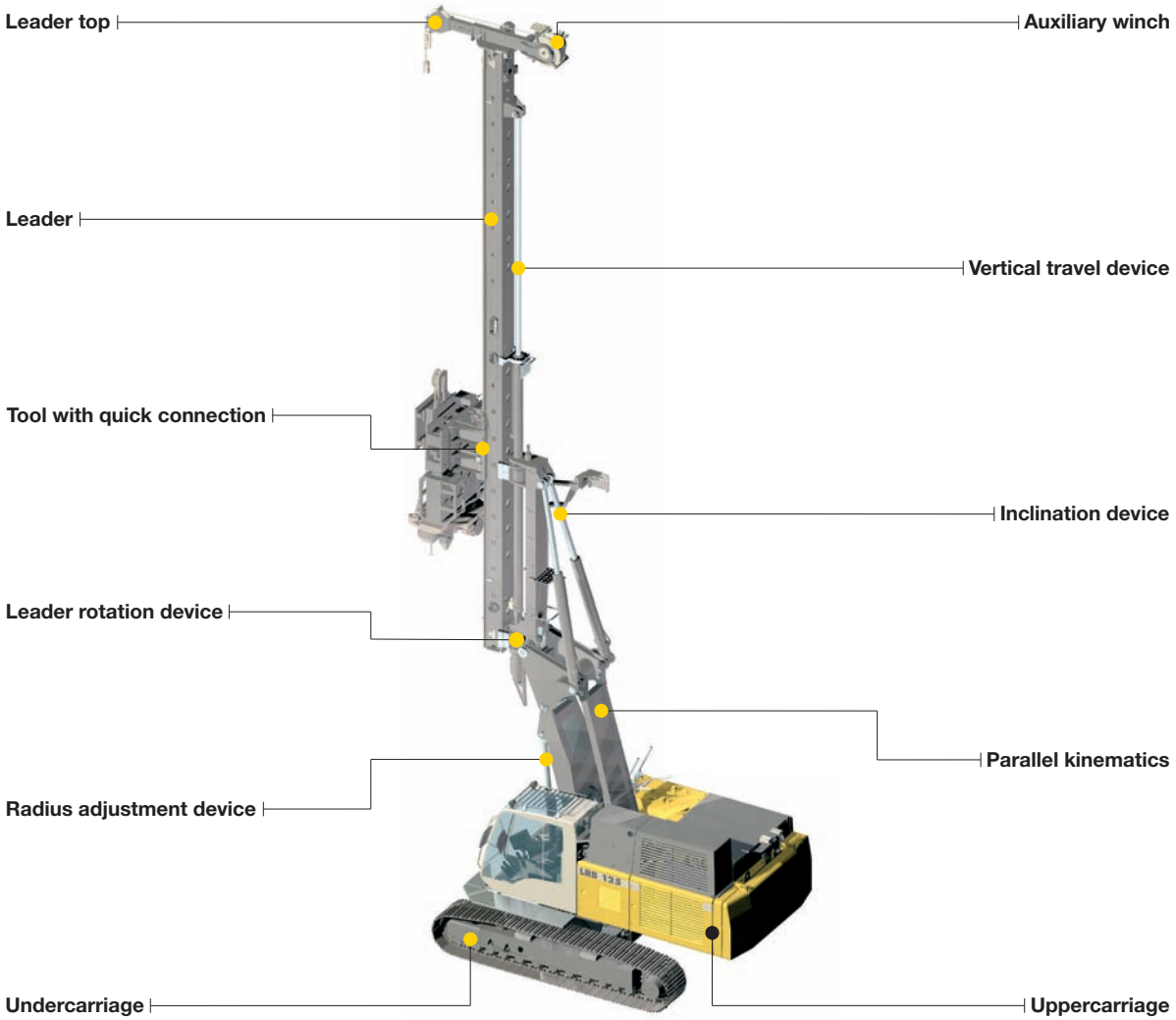
Technical data
Piling and drilling rig

LRB 125
Litronic®

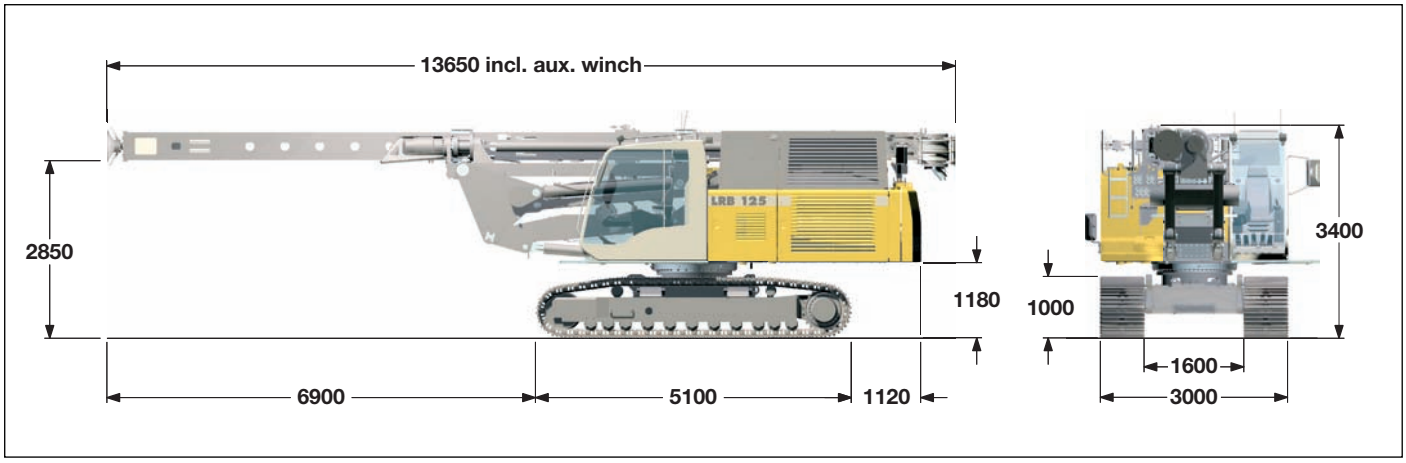
LIEBHERR

Concept and characteristics



- High engine output with automatic engine speed control
- Controlled entirely from cab
- Sturdy and solid rig design
- Wide longitudinal and lateral supporting system on the basic machine through triangles
- High push and pull forces
- High torque
- Completely self–rigging (no auxiliary machines required)
- Large range of working tools (all piling and drilling works can be performed)
- Stepless leader inclination 1:6 forward – 1:3 backward depending on type of equipment
- Leader swing range ± 90°
- Increase of effective leader length (5 m) via vertical travel device
- Automatic vertical alignment
- High alignment forces
- Simultaneous control of several movements via Load–sensing multi–circuit hydraulics
- Quick change of equipment possible through quick connection
- Equipment design according to latest European regulations and standards
- High manufacturing quality through quality control by PDE–system

Transport dimensions and weights

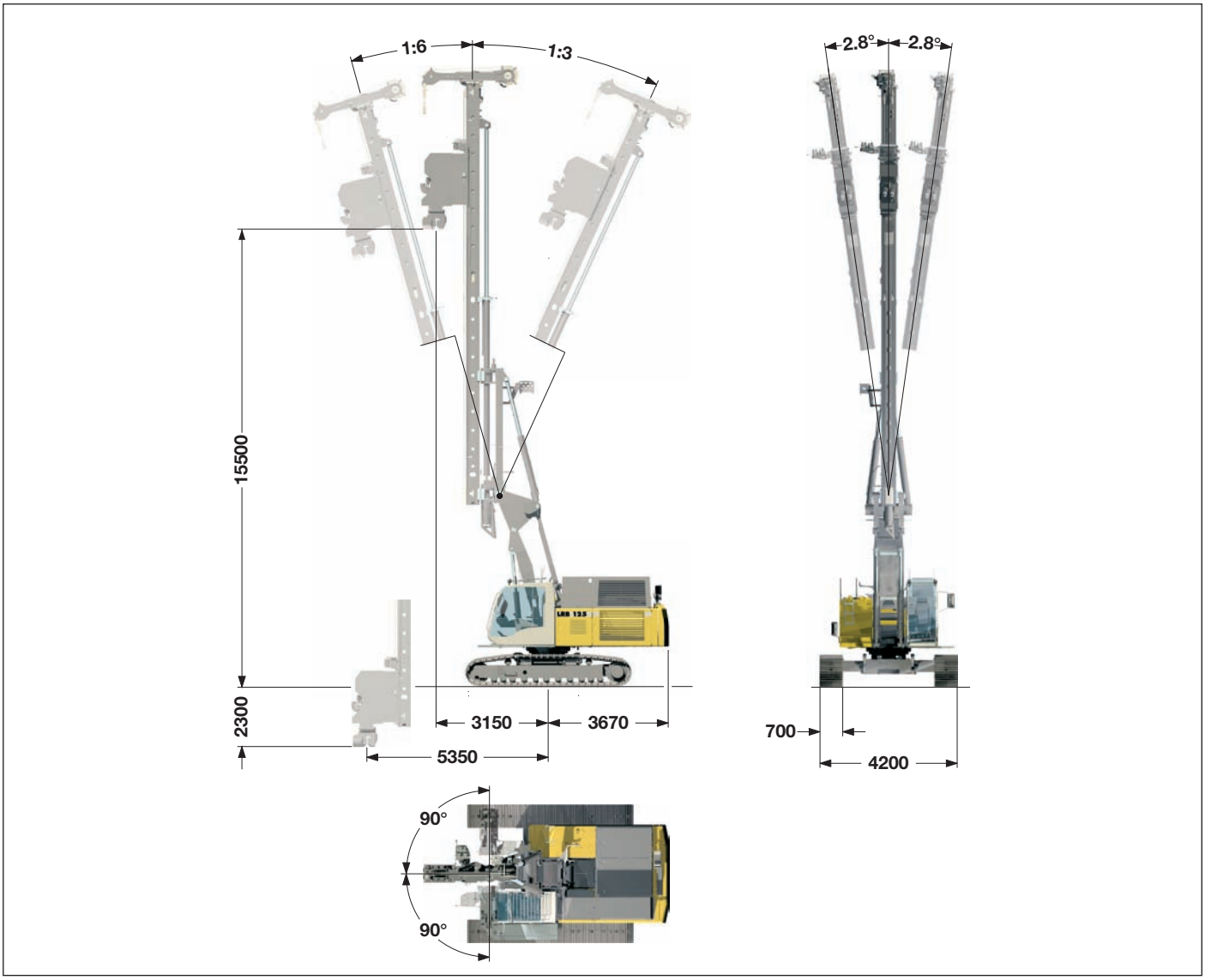


Transport weight*

Without attachment, with telescopic undercarriage and counterweight	43 t
Without attachment and counterweight, with telescopic undercarriage	39.1 t

*) Weights can vary with the final configuration of the machine.

Dimensions
Basic machine LRB 125



Technical data

Leader length	12.5 m
Capacity hammer including cap plus pile	12 t
Max. hammer weight	6 t
Max. pile weight	6 t
Max. pull	200 kN
Max. torque	120 kNm
Working radius machine Center of rotation — center pile	3.15 — 5.35 m
Stepless rig inclination adjustment Lateral inclination	± 1:20
Forward inclination	1:6
Backward inclination	1:3
Vertical leader adjustment above ground level (depending on radius)	5 m
Leader swing range	± 90°

Operating weight and ground pressure

Telescopic undercarriage with 700 mm 3–web shoes	49 t – 0.83 cm^2

The operating weight includes the basic machine LRB 125 (leader length 12.5 m, with attachment). Weights can vary depending on the final configuration of the machine.

Technical description

Engine

Power rating according to ISO 9249, 450 kW (603 hp) at 1900 rpm
Engine type — Liebherr D 9508 A7
Fuel tank — 870 l capacity with continuous level indicator and reserve warning
Engine complies with NRMM exhaust certification EPA/CARB Tier 3 and 97/68 EC Stage III.

Hydraulic system

The main pumps are operated by a distributor gearbox. Axial piston displacement pumps work in open circuits supplying oil only when needed (flow control on demand).
The hydraulic pressure peaks are absorbed by the integrated automatic pressure compensation, which relieves the pump and saves fuel.

Pumps for working tools — 2x 350 l/min
Separate pumps for kinematics — 2x 190 l/min
Hydraulic oil tank — 825 l
Max. working pressure — 350 bar

No auxiliary power packs are required as application specific hydraulics supply power to all components.
The cleaning of the hydraulic oils occurs via an electronically monitored pressure and return filter.
Any clogging is shown on the display in the cab.
The use of synthetic environmentally friendly oil is also possible.

Crawlers

Propulsion through axial piston motor, hydraulically released spring loaded multi–disc brake, maintenance free crawler tracks, hydraulic chain tensioning device.

Drive speed — 0 – 2.3 km/h
Track force — 437 kN
Width of 3-web track shoes — 700 mm

Noise emission

Noise emissions correspond with 2000/14/EC directive on noise emission by equipment used outdoors.

Swing

Consists of single row ballbearing, fixed axial piston hydraulic motor, spring loaded and hydraulically released multi–disc holding brake, planetary gearbox and pinion.
Swing speed from 0 – 3.3 rpm is continuously variable.

Control

The control system – developed and manufactured by Liebherr – is designed to withstand extreme temperatures and the many heavy–duty construction tasks for which this machine has been designed.
Complete machine operating data are displayed on a high resolution monitor screen.
To ensure clarity of the information on display, different levels of data are shown in enlarged lettering and symbols. Control and monitoring of the sensors are also handled by this high technology system.
Error indications are automatically displayed on the monitor in clear text.
The machine is equipped with proportional control for all movements, which can be carried out simultaneously.
Two joysticks are required for operation. Pedal control can be changed to hand control.
Options :
PDE : Process data recording
GSM modem

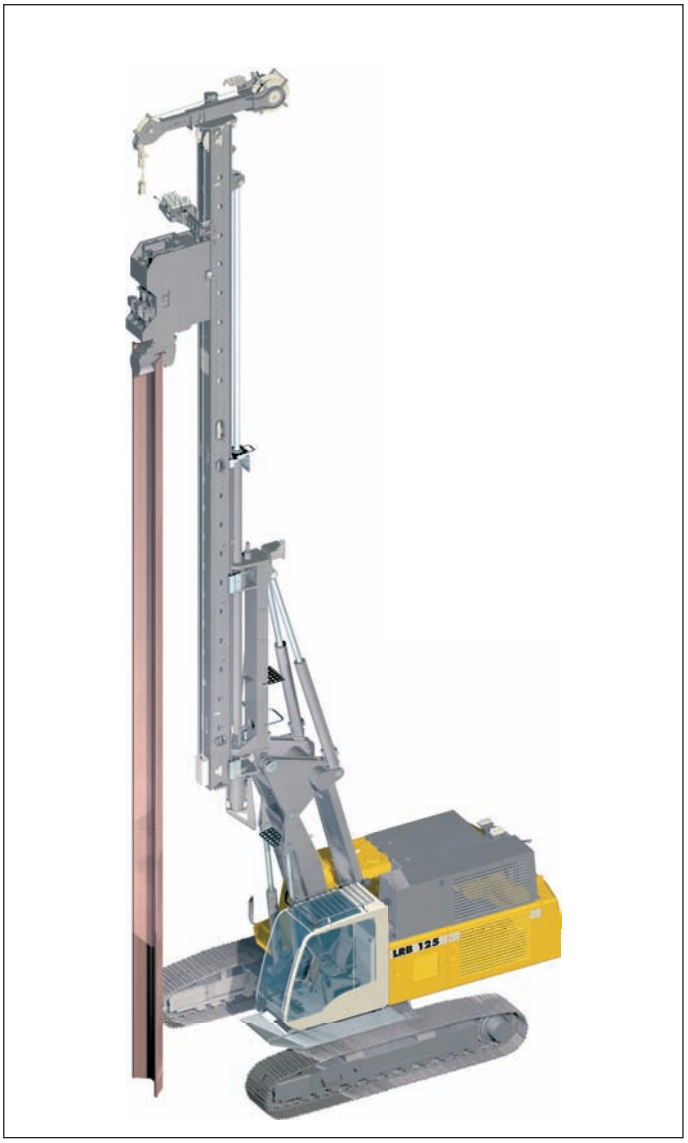
Auxiliary winch

Line pull (effective) — 50 kN
Rope diameter — 17 mm
Drum diameter — 420 mm
The winch is noted for compact, easily mounted design.
Propulsion is via a maintenance-free planetary gearbox in oil bath.
Load support by the hydraulic system; additional safety factor by a spring–loaded, multi–disc holding brake.

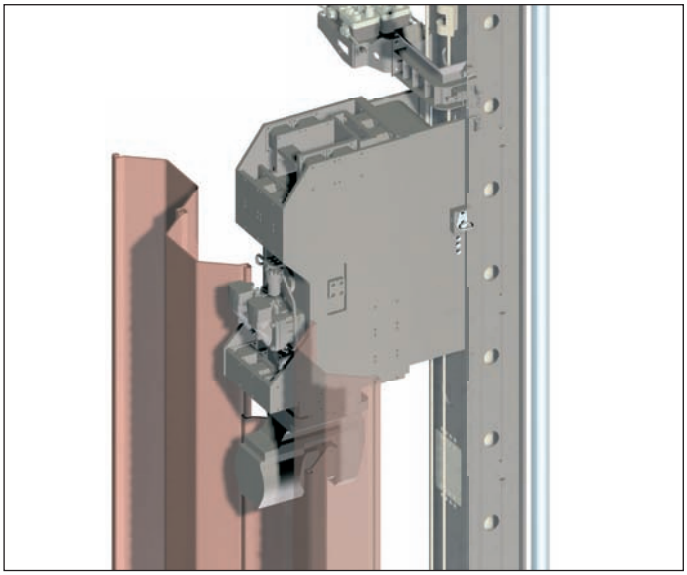
Rope crowd system

Crowd force push/pull — 150/200 kN
Line pull (nominal load) — 100 kN
Rope diameter — 18/20 mm
The ropes are actuated by a powerful hydraulic cylinder.

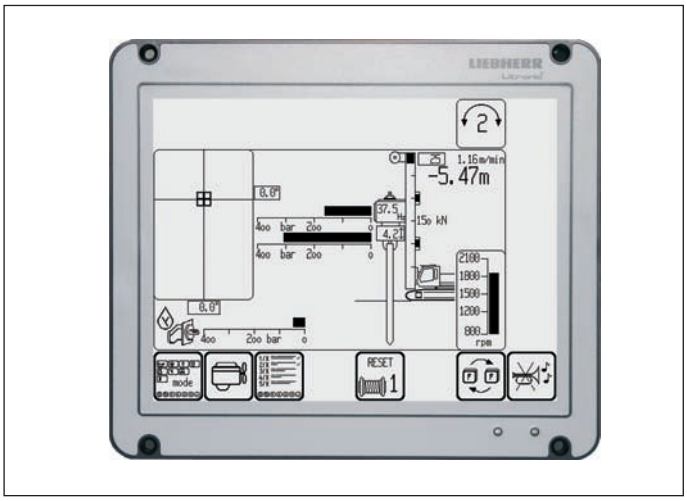
High frequency vibrator slim design
Model 1100 H



Effective length – 15.5 m



Vibrating of single pile between two other piles



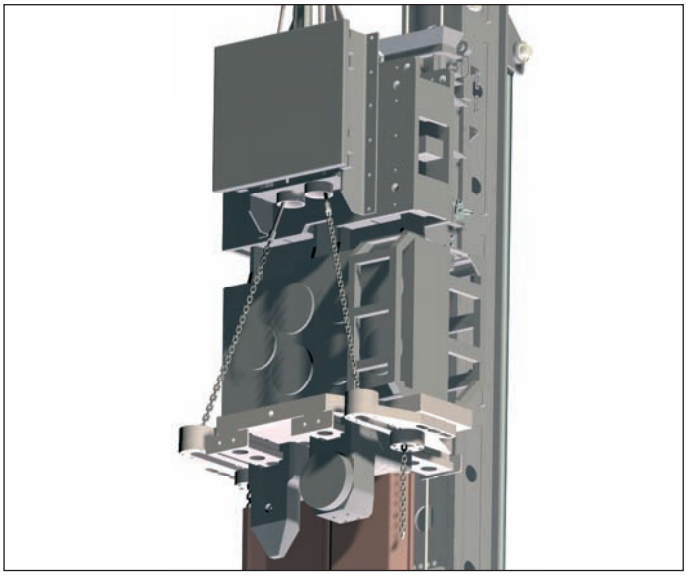
Display for vibrating

Technical data

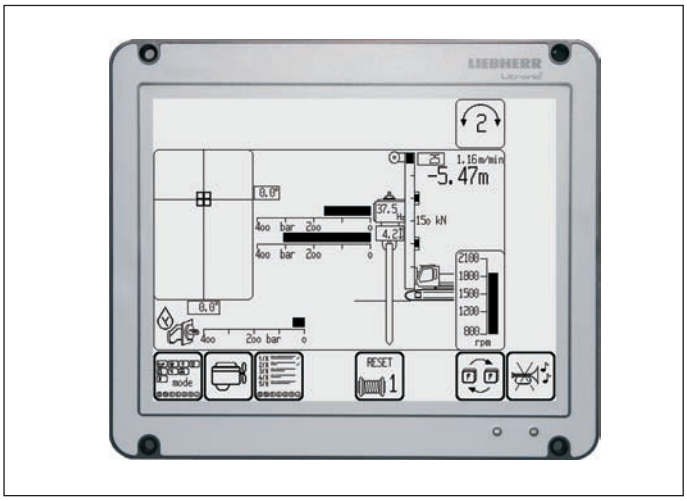
Static moment	0 – 20 kgm
Max. frequency	2300 rpm
Max. centrifugal force	1160 kN
Max. amplitude	19 mm
Total weight without clamp	3250 kg
Total weight with single clamp	4200 kg
Dynamic weight with clamp	2980 kg

High frequency vibrator
Model 23 VML with hydraulic sheet pile feeder

Effective length – 15.5 m



Double clamp and hydraulic sheet pile feeder



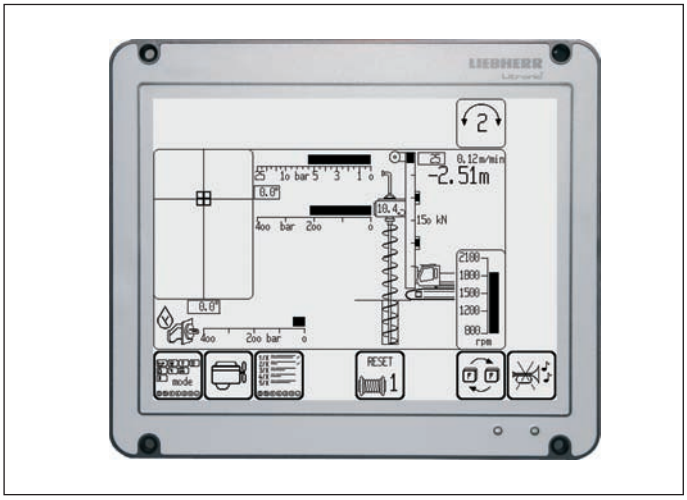
Display for vibrating

Technical data

Static moment	0 – 23	kgm
Max. frequency	2300	rpm
Max. centrifugal force	1350	kN
Max. amplitude	17	mm
Total weight without clamp	4000	kg
Dynamic weight incl. clamp	5250	kg

Pre-drill
Model BA 45

Effective length – 15.5 m



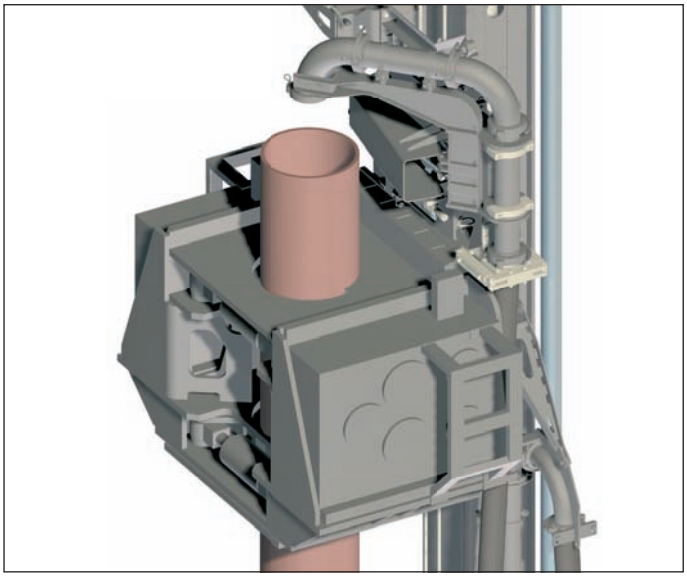
Display for continuous flight auger drilling

Technical data

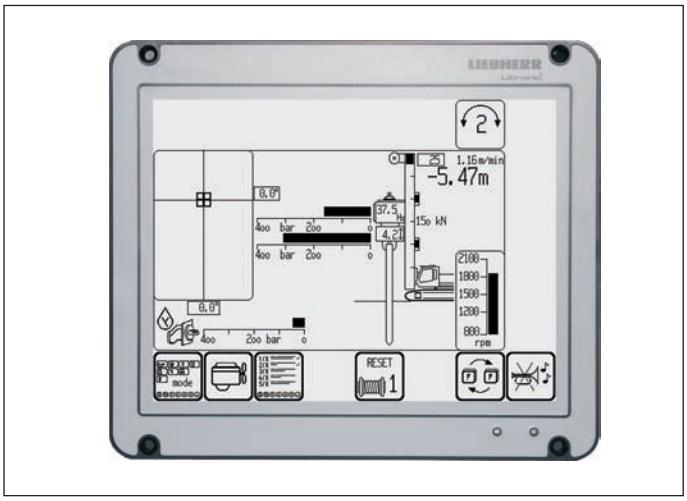
Drilling drive – torque	45 kNm
Drilling drive – speed	95 rpm
Max. drilling diameter	800 mm

High frequency ring vibrator
Model 20 VMR

Effective length – 27 m



Concrete supply system



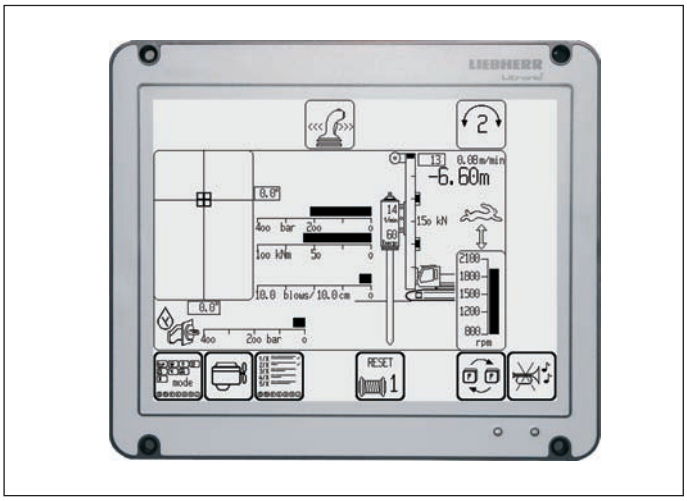
Display for vibrating

Technical data

Static moment	0 – 20 kgm
Max. frequency	2300 rpm
Max. centrifugal force	1160 kN
Diameter	355 – 510 mm
Total weight	6200 kg

Hydraulic hammer
Model H 50

Effective length – 13.5 m



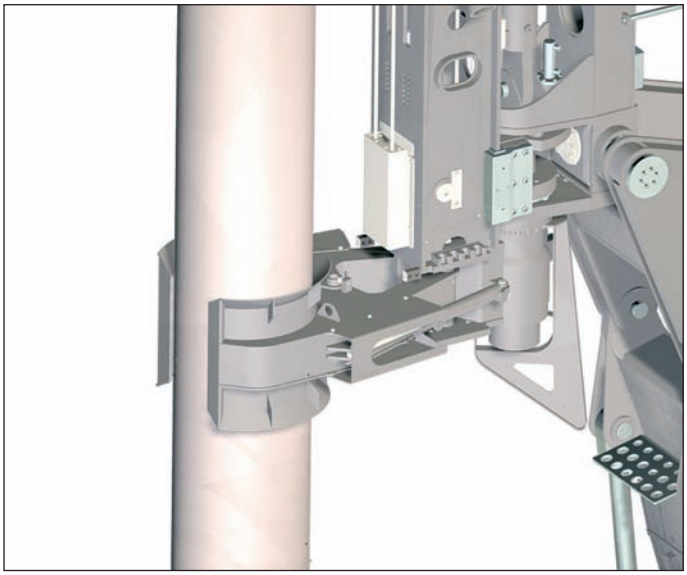
Display for impact driving

Technical data

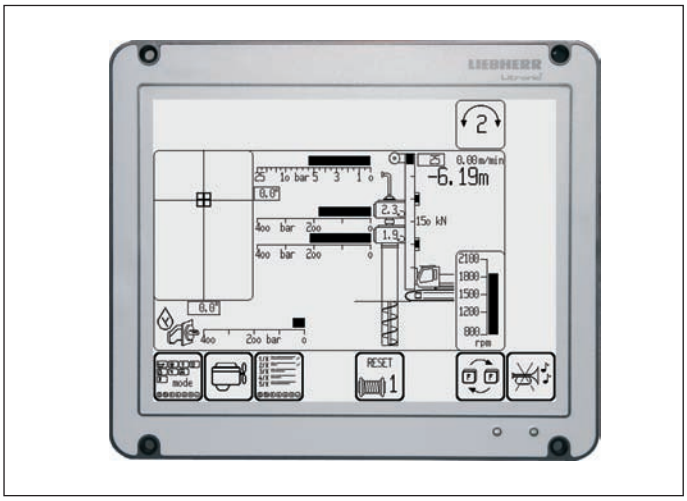
Ram mass	4000 kg
Max. rated energy	51 kNm
Blow rate max. energy	50 blows/min
Max. blow rate	100 blows/min
Basic hammer weight	8000 kg

Double rotary drilling
Model DBA 80

Effective length – 12.8 m



Hydraulic casing guide

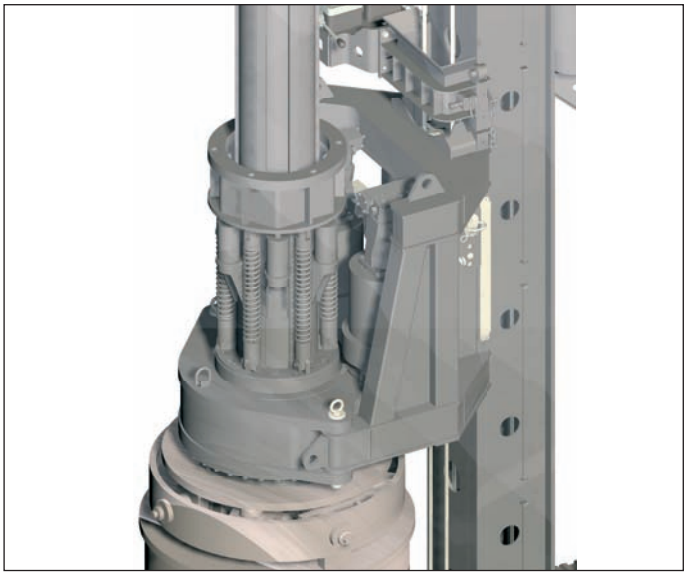


Display for double rotary drilling

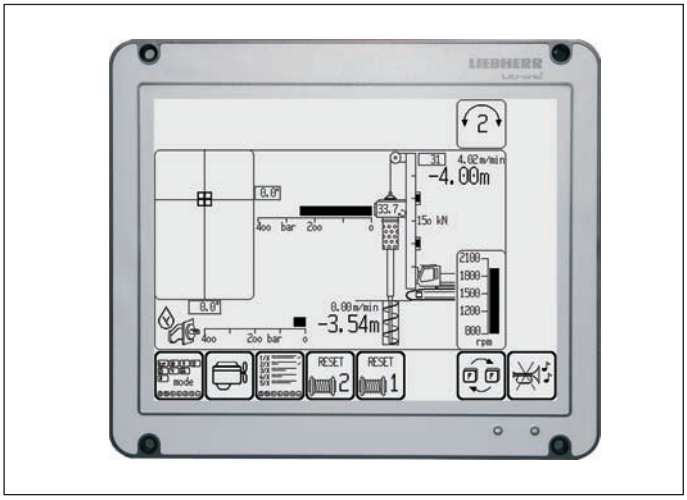
Technical data

Drilling drive I – torque	1st gear	80 kNm
Drilling drive I – speed	1st gear	18 rpm
Drilling drive I – torque	2nd gear	40 kNm
Drilling drive I – speed	2nd gear	36 rpm
Drilling drive II – torque	1st gear	60 kNm
Drilling drive II – speed	1st gear	24 rpm
Drilling drive II – torque	2nd gear	30 kNm
Drilling drive II – speed	2nd gear	48 rpm
Max. drilling diameter		620 mm

Kelly drilling
Model BA 150 and Kelly bar 12/3/20



Shock absorber for Kelly bar



Display for Kelly drilling

Technical data

Drilling drive – torque	1st gear	120 kNm
Drilling drive – speed	1st gear	32 rpm
Drilling drive – torque	2nd gear	60 kNm
Drilling drive – speed	2nd gear	60 rpm

Technical data Kelly bar

Diameter	305 mm
Number of sections	3
Extended length	20.5 m
Retracted length	8.5 m
Drive stub	200 mm
Weight	3200 kg

Technical data Kelly winch

Line pull (effective)	110 kN
Winch speed	0 – 100 m/min

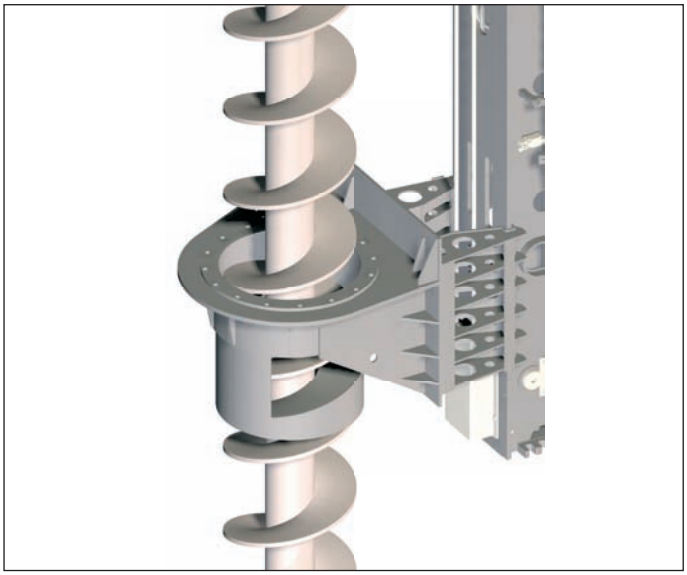
Performance data

Max. drilling diameter	1200 mm
Max. drilling depth*	18 m
Max. clearance below drilling tool	7 m

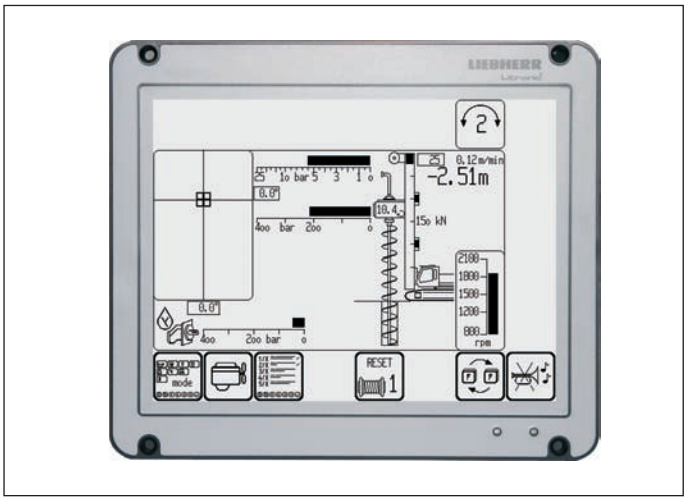
*) other Kelly bars on request

Continuous flight auger drilling
Model BA 150

Effective length – 14.6 m



Auger with hydraulic auger cleaner



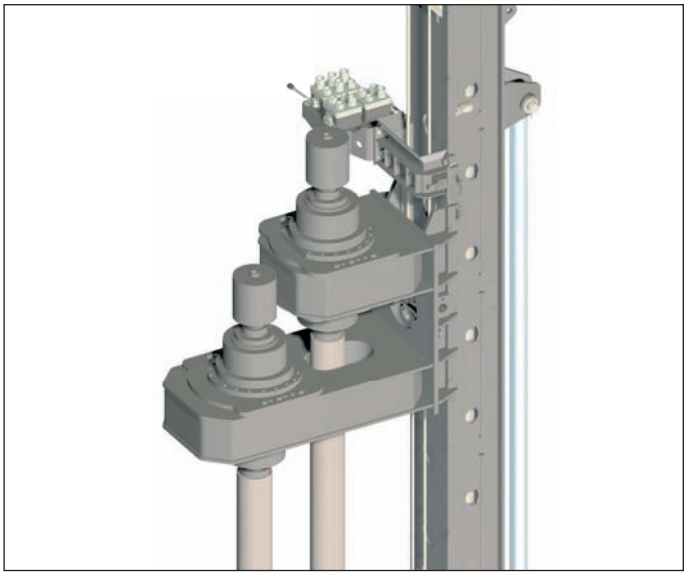
Display for continuous flight auger drilling

Technical data

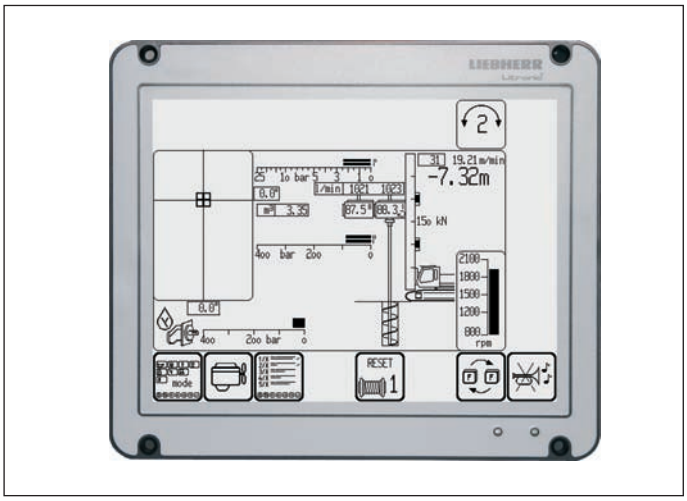
Drilling drive – torque	1st gear	120 kNm
Drilling drive – speed	1st gear	32 rpm
Drilling drive – torque	2nd gear	60 kNm
Drilling drive – speed	2nd gear	60 rpm
Max. drilling diameter		800 mm

Twin mix equipment
Model DMA 35

Effective length – 15.2 m



Set up for operation on dams



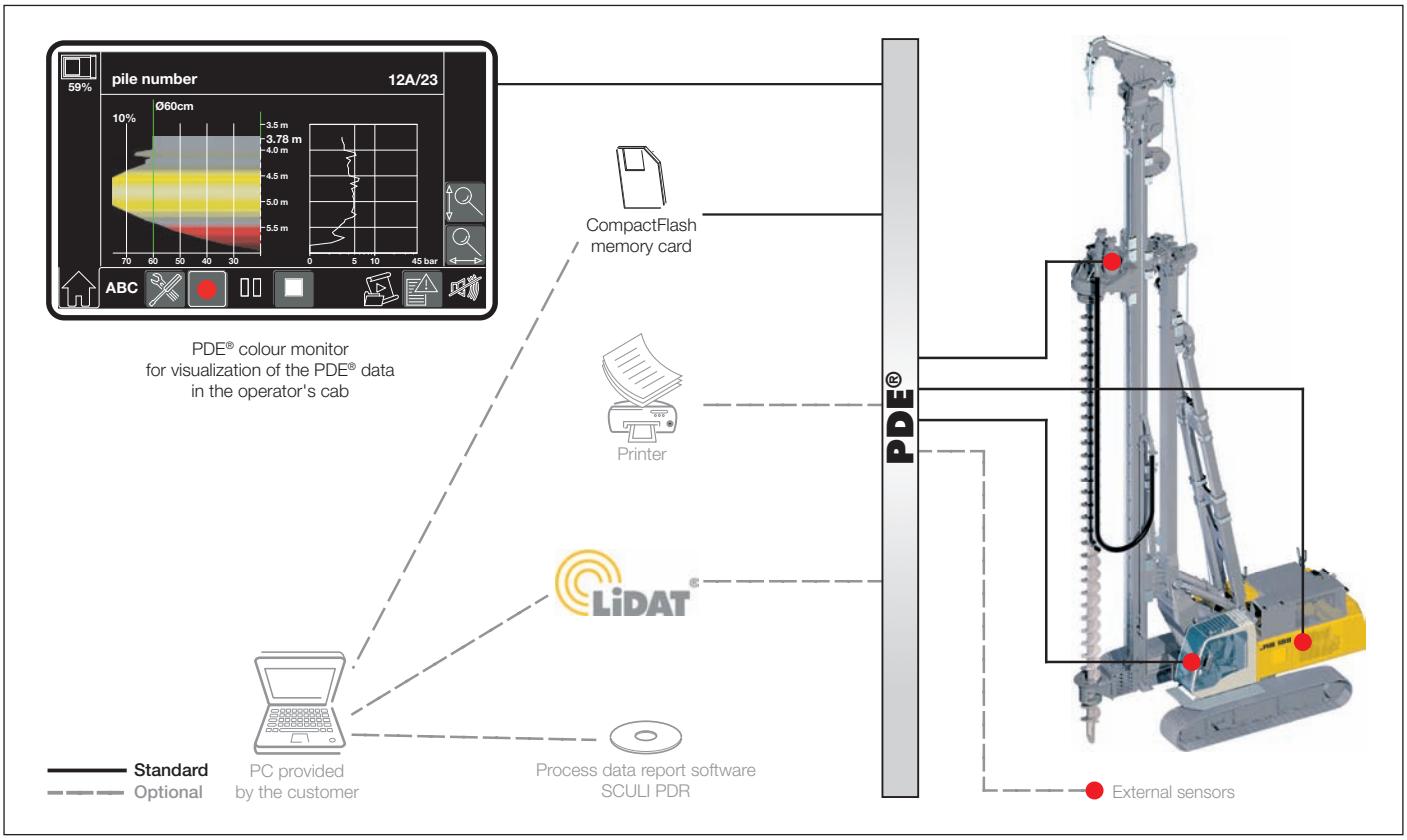
Display for soil mixing

Technical data

Drilling drive – torque	1st gear	35 kNm
Drilling drive – speed	1st gear	60 rpm
Drilling drive – torque	2nd gear	17.5 kNm
Drilling drive – speed	2nd gear	120 rpm

Process data recording system - PDE® (additional equipment)

The Liebherr process data recording system PDE® constantly records the relevant process data during the working process.



Depending on the application the recorded and processed data are displayed on the PDE® touchscreen in the operator‘s cab, e.g. in the form of an online cast-in-place pile.

At the same time the PDE® is operated using this touchscreen. The operator can enter various details (e.g. jobsite name, pile number, etc.) and start and stop recordings. A recording of every start-stop cycle carried out in the PDE® is established on a CompactFlash memory card.

The PDE® can be configured in a number of ways, e.g. for the connection of external sensors, for the generation of a simple protocol as graphic file and/or for a printout directly in the operator‘s cab.

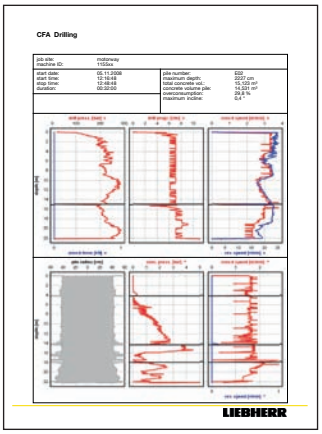
Process data reporting - PDR (additional equipment)

Comprehensive data evaluation and generation of reports on a PC is possible using the software SCULI PDR.

Recordings management - The recordings generated by the PDE® system can be imported and managed in SCULI PDR. The data can be imported directly from the CompactFlash card or via the Liebherr telematics system LiDAT. Certain recordings, e.g. for a particular day or jobsite, can be found using filter functions.

Viewing data - The data in each record is displayed tabularly. Combining several recordings provides results, for example, regarding the total concrete consumption or the average depth. Furthermore, a diagram editor is available for quick analysis.

Generating reports - A vital element of SCULI PDR is the report generator, which allows for the generation of individual reports. These can be printed out directly or stored as pdf files. In the process the size, colour, line thickness or even the desired logo can be configured. Moreover, the reports can be displayed in different languages, e.g. in English and in the national language.



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