

Piling rig with fixed leader system

LRH 600

EN

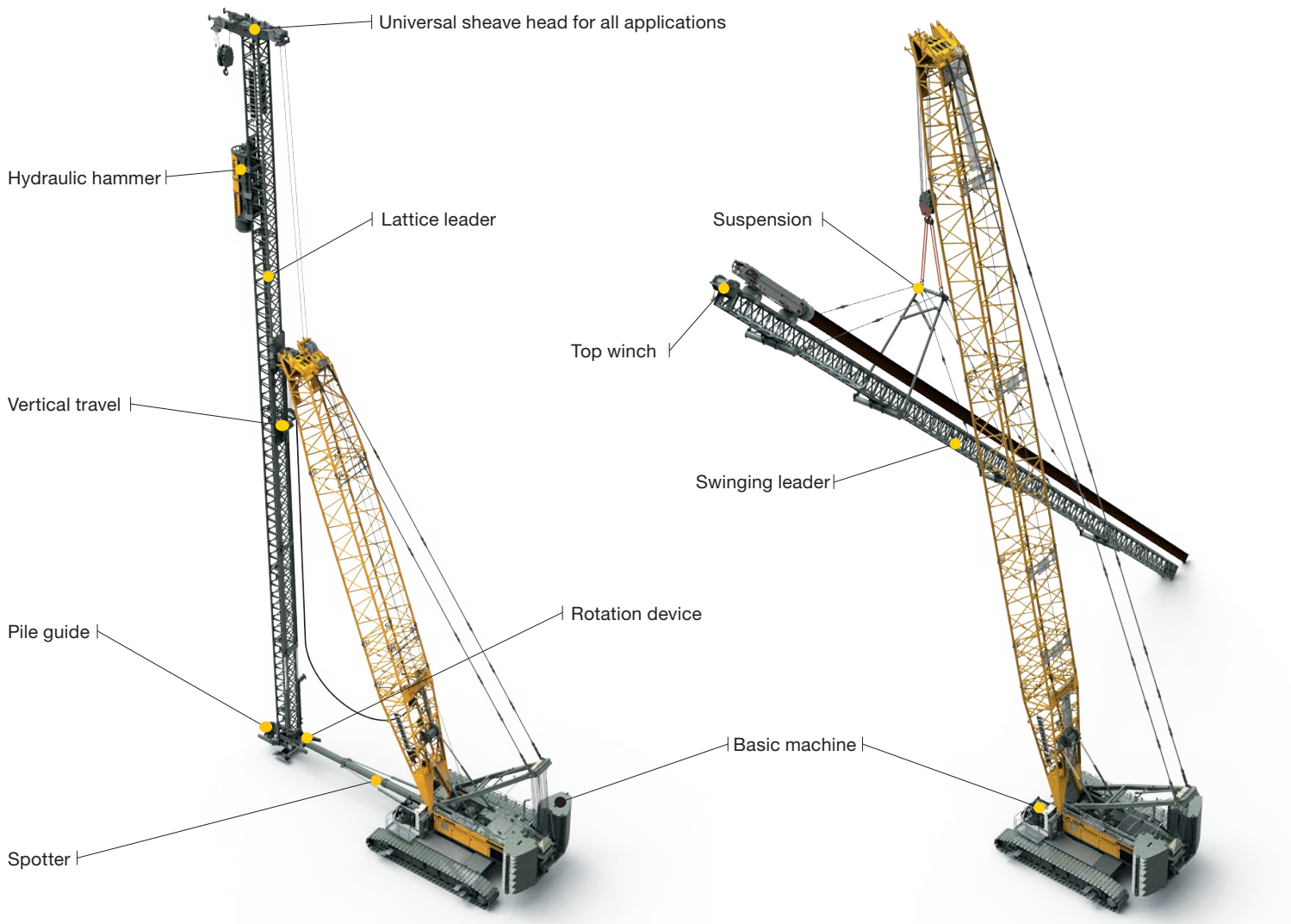
LRH 0108.03



LIEBHERR

Concept and characteristics

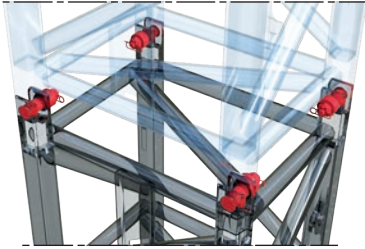
LRH 600



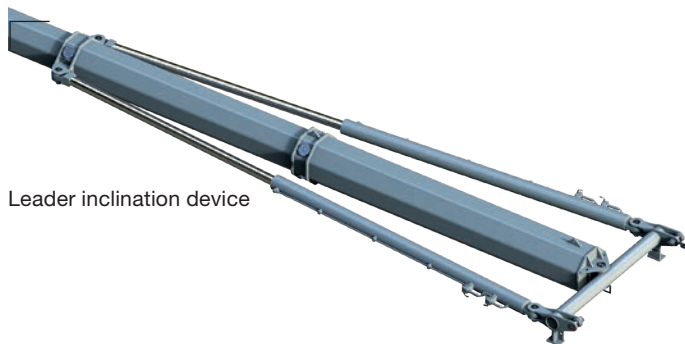
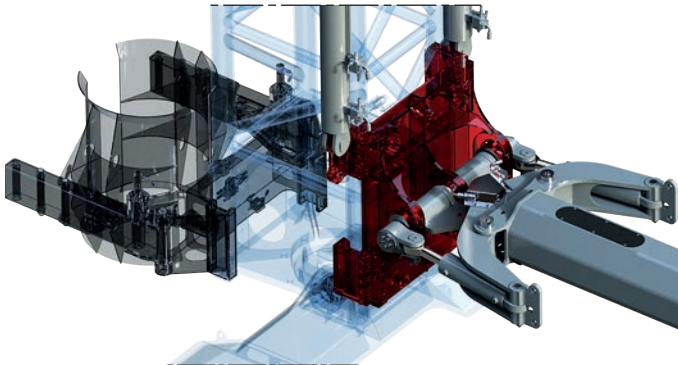
- Depending on the requirements basic machines of the crawler crane series (LR 1300.1 SX) or duty cycle crawler crane series (HS 8200) are used. Combined with solid leaders this high-performance construction machinery convinces with its high level of efficiency and flexibility.
- Thanks to the special leader kinematics a radius of max. 15 m (fixed leader) as well as a continuous inclination adjustment are achieved.
- Hydraulic supply through carrier machine
- All adjustment functions and their control completely integrated in the carrier machine
- Equipment design according to latest European regulations and standards
- High stability through lattice structure

Special features

Connection of leader sections

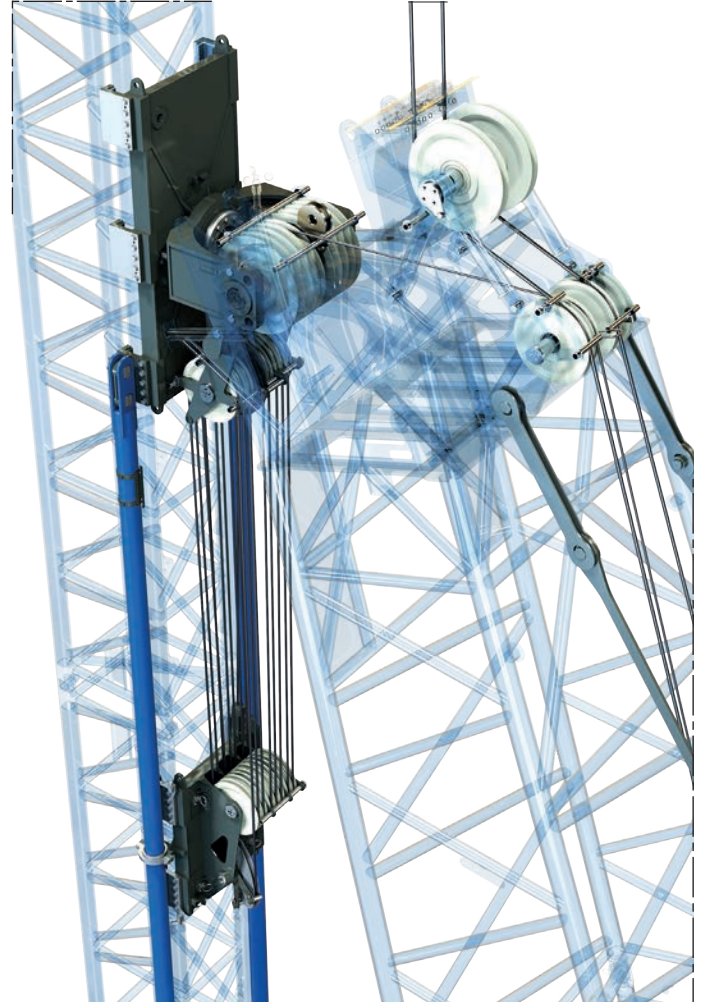


Automatic rotation device



Leader inclination device

Vertical travel

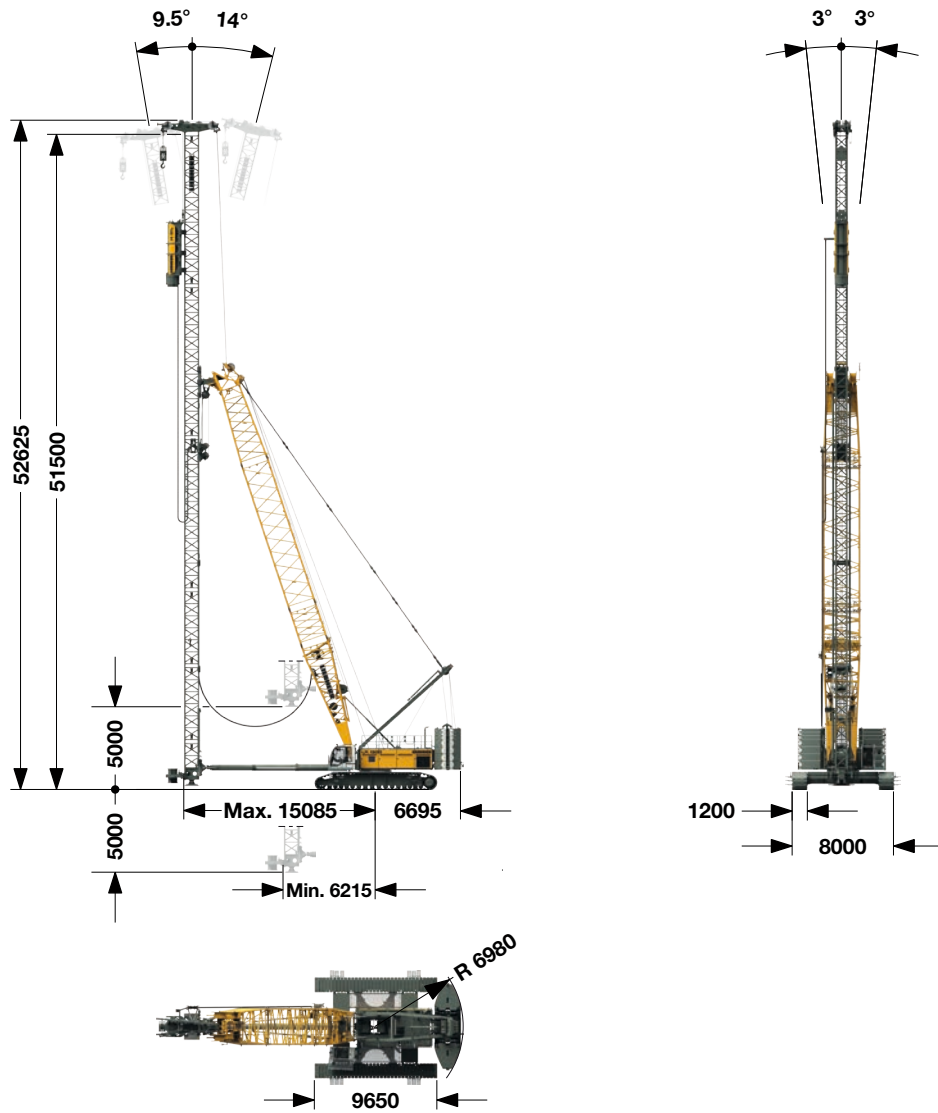


- Structure and connection of leader sections:
Easy and quick assembly thanks to pin connection, high stability through lattice structure.
- Vertical travel:
In order to provide maximum stability, the kicker is connected to the boom head via supporting tubes. This allows to change the leader height without influencing the leader inclination.

- Spotter:
Two compensation cylinders always keep the leader parallel to the uppercarriage. This allows for maximum torque transmission. Radius and inclination are adjusted using only one pair of cylinders.

Dimensions and weights

LRH 600 fixed leader

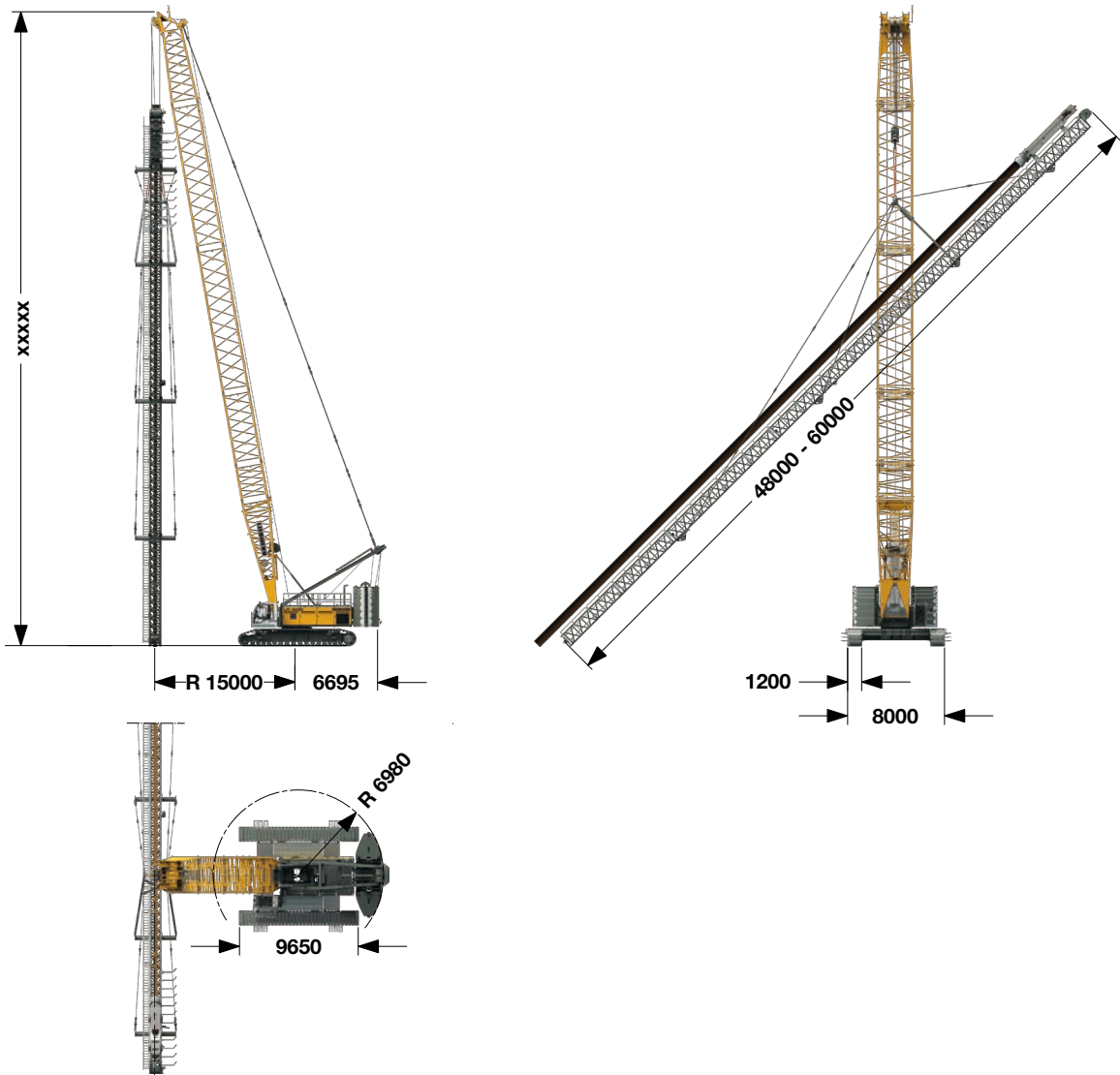


Technical data – fixed leader

Leader length	39/45/51 m
Weight without carrier machine	30/32.5/35 t
Min. radius	6.215 m
Max. radius	15.085 m
Leader inclination continuously variable*	
Lateral inclination	± 3.0°
Forward inclination	1:4 — 14.0°
Backward inclination	1:4 — 14.0°
Max. pile weight	40 t
Max. hammer weight	35 t
Pull force	max. 1200 kN
Max. torque (effective over complete leader length)	320 kNm
Vertical travel	± 5 m

*) Other leader inclinations available on request

LRH 600 swinging leader



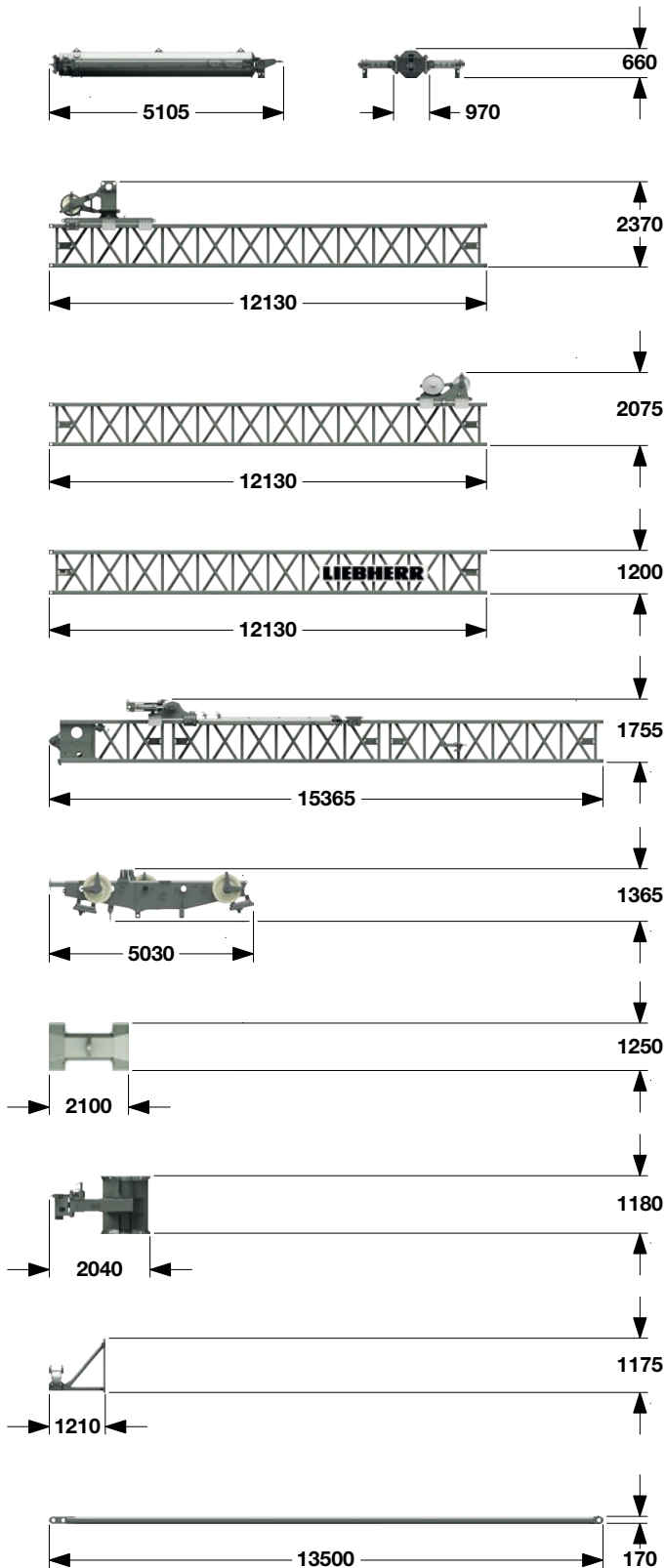
Technical data – swinging leader

Leader length	48/60 m
Weight without carrier machine	25/29 t
Leader inclination*	1:1
Max. pile weight	20 t
Max. hammer weight	20 t

*) Other leader inclinations available on request

Transport dimensions and weights

LRH 600 fixed leader



Spotter

Width	2400 mm
Weight	4580 kg

Leader extension incl. guiding sledge

12 m

Width	1450 mm
Weight	5920 kg

Leader extension incl. vertical travel sledge

12 m

Width	1585 mm
Weight	4975 kg

Leader extension

12 m

Width	1000 mm
Weight	3530 kg

Leader extension incl. sledge

3 m + 6 m + 6 m

Width	2185 mm
Weight	6890 kg

Leader top with pulley kit hammer

Width	1480 mm
Weight	3185 kg

Support plate

Width	485 mm
Weight	620 kg

Pile guide

Width	1680 mm
Weight	720 kg

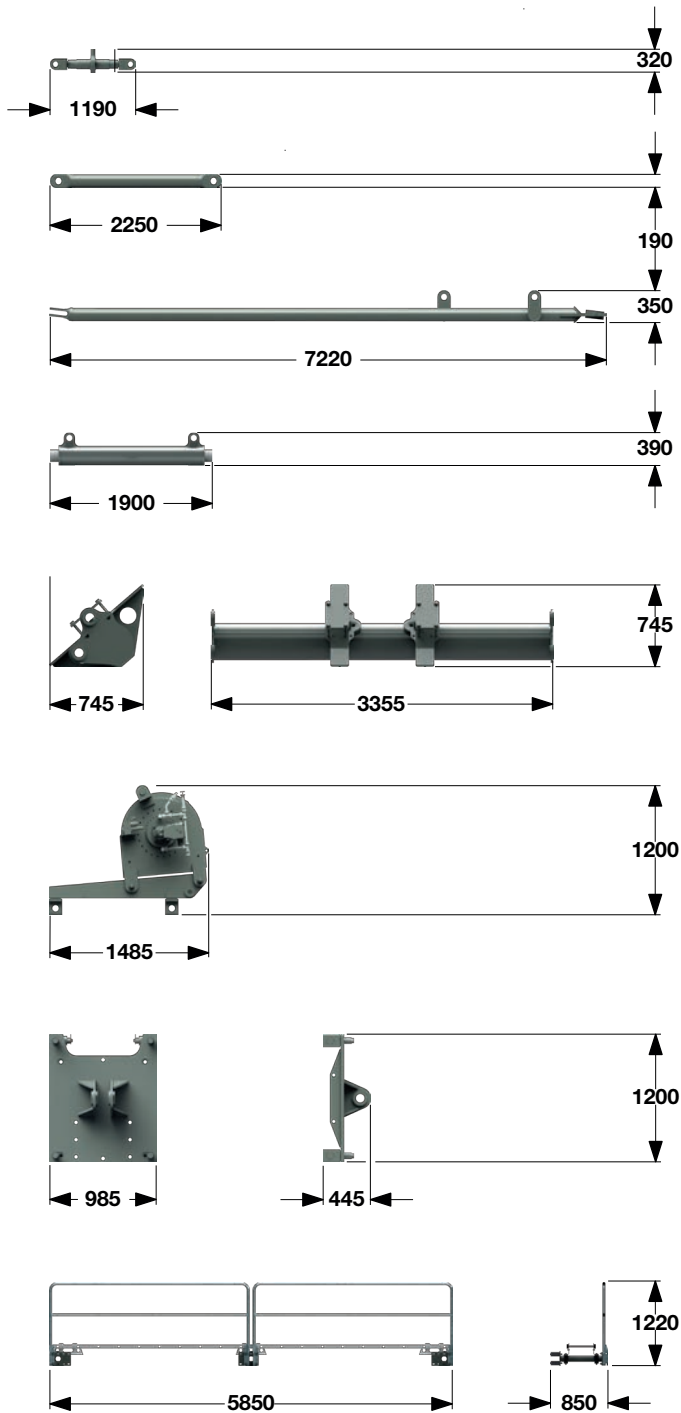
Hose guide

Width	1070 mm
Weight	170 kg

Supporting tubes

Supporting tubes 51 m	2 x 340 kg
Supporting tubes 45 m	2 x 160 kg
Supporting tubes 39 m	2 x 85 kg

Additional equipment for swinging leader



Turnbuckle 8x

Width	230 mm
Weight	130 kg

Brace 2x

Width	190 mm
Weight	95 kg

A-frame bar 2x

Width	590 mm
Weight	400 kg

A-frame spacer

Width	240 mm
Weight	300 kg

Traverse 4x

Width	745 mm
Weight	620 kg

Top winch

Width	1340 mm
Weight	1140 kg

Leader foot

Width	445 mm
Weight	400 kg

Walkway 10x

Width	1680 mm
Weight	330 kg

Suspension rope 14x

Weight	1700 kg
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Hydraulic hammer

H 15 L



Technical data H 15 L

Hammer typ	H 15-10	H 15-12	H 15-15
Drop weight	10000 kg	12500 kg	15000 kg
Max. rated energy	150 kNm	188 kNm	225 kNm
Blow rate - blows/min	30 – 80	30 – 80	30 – 80
Hammer weight incl. pile helmet and dolly	18800 kg	21300 kg	23800 kg

Various pile helmet sizes available on request.

Key features

- Drop weight 10 t + 2.5 t + 2.5 t
- Total weight incl. pile helmet and 15 t drop weight: 23.8 t
- Length incl. pile helmet: 6465 mm (LRH)
- Length incl. pile helmet: 5465 mm (LRB)
- Max. impact energy: 225 kNm
- Drop height: 1.5 m

Process data recording (PDE)

- Constant recording of relevant process data during the piling process

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, a working 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, which is an enormous time-saver.

Short design H 15 L: allows for very long piles

Modular weights: easy adaptation of the hammer to the piling requirements

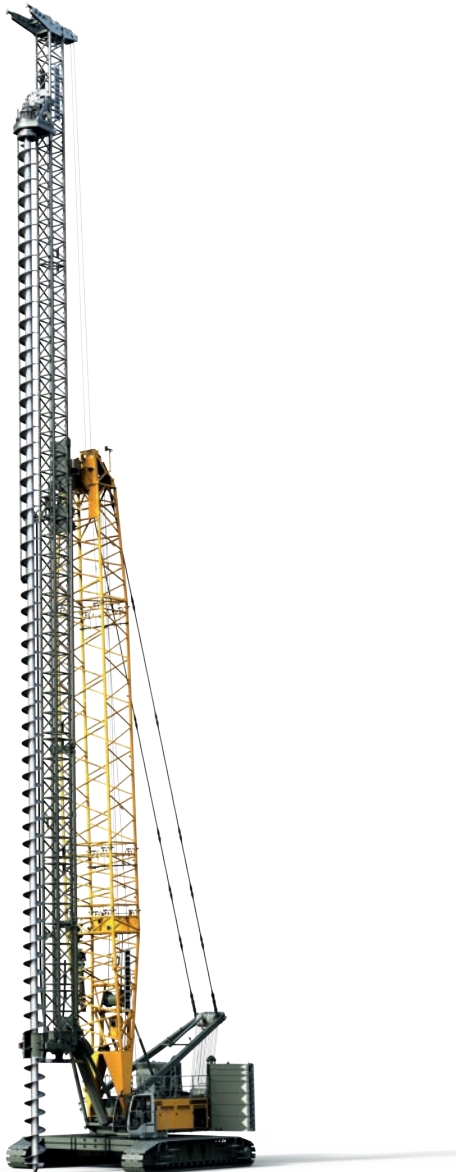
Hammer control: independent control of impact energy and blows/minute

Lightweight design: results in higher load capacity

Soundproofing is standard: pile helmet is soundproofed as a standard

Continuous flight auger drilling, full displacement drilling and down-the-hole drilling

BAT 320



Technical data

Rotary drive - torque	0 – 320 kNm
Rotary drive - speed	0 – 47 rpm
Max. pull force**	800 kN
Max. crowd force**	150 kN

*) Other drilling diameters available on request

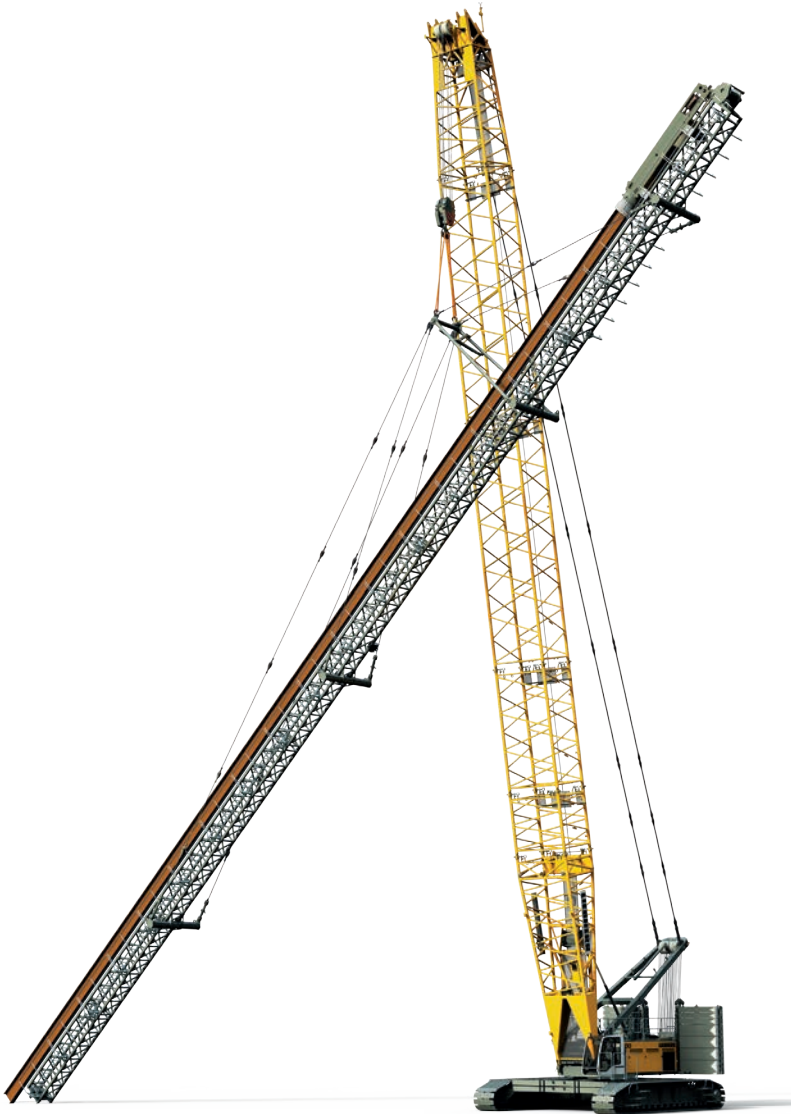
**) Determined by the rotary drive

Performance data for 51 m leader and auger cleaner

Drilling depth	51 m
Max. drilling diameter*	1200 mm

Hydraulic hammer

Swinging leader



Technical data – swinging leader

Leader length ————— 48/60 m

Weight without carrier machine ————— 25/29 t

Leader inclination* ————— 1:1

Max. pile weight ————— 20 t

Max. hammer weight ————— 20 t

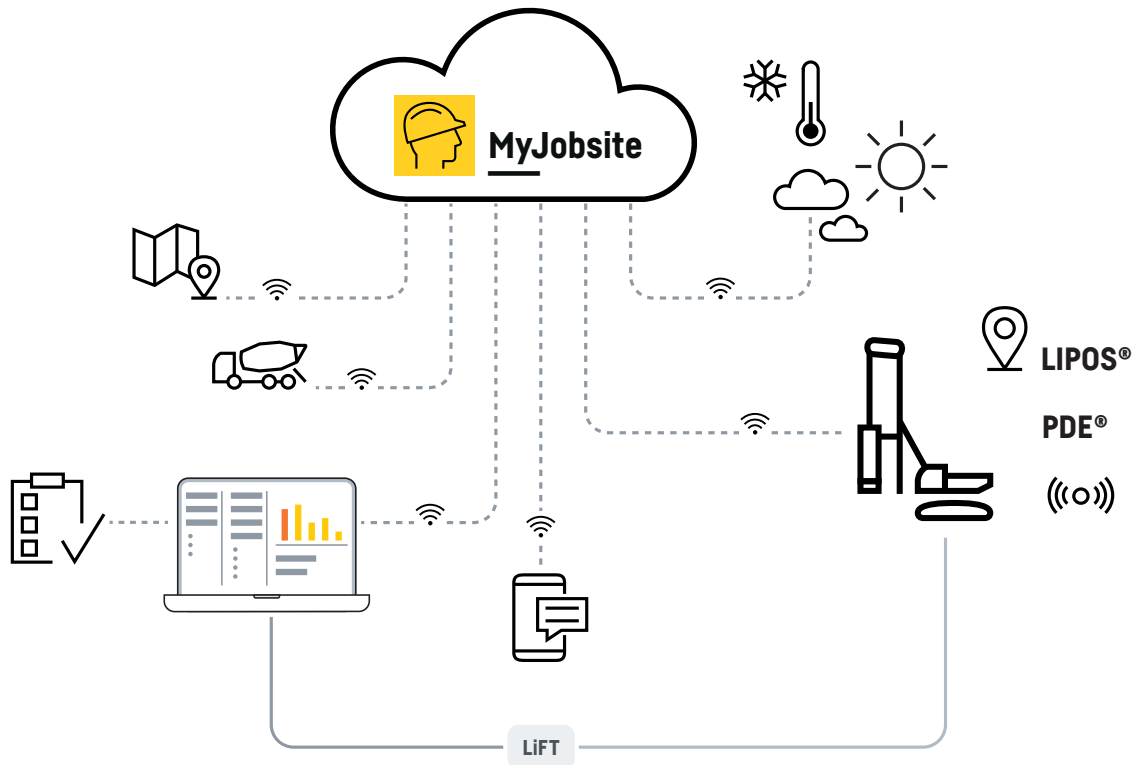
Top winch without free fall

Max. pull force (1st layer) ————— 215 kN

*) Other leader inclinations available on request

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 Li-tronic 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 is 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.

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