

Piling rig with fixed leader system

LRH 600

EN-US

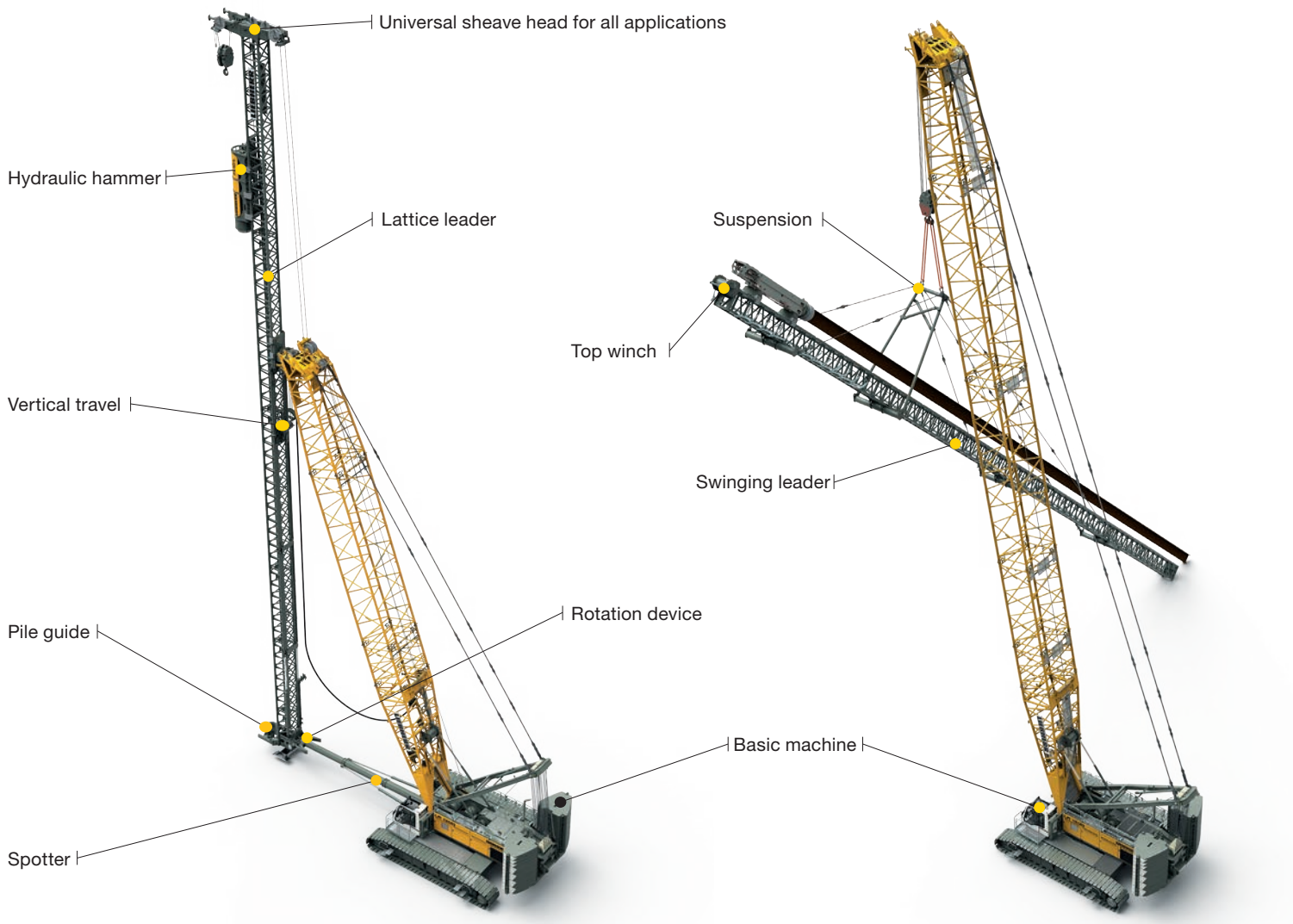
LRH 0108.03



LIEBHERR

Concept and characteristics

LRH 600

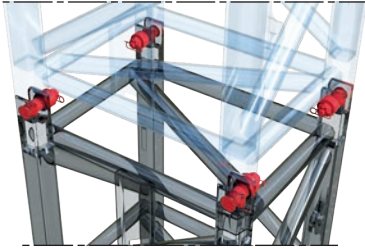


- Depending on the requirements basic machines of the crawler crane series (LR 1300.1 SX) or duty cycle crawler crane series (HS 8200) are used. Combined with solid leaders this high-performance construction machinery convinces with its high level of efficiency and flexibility.
- Thanks to the special leader kinematics a radius of max. 49.2 ft (fixed leader) as well as a continuous inclination adjustment are achieved.

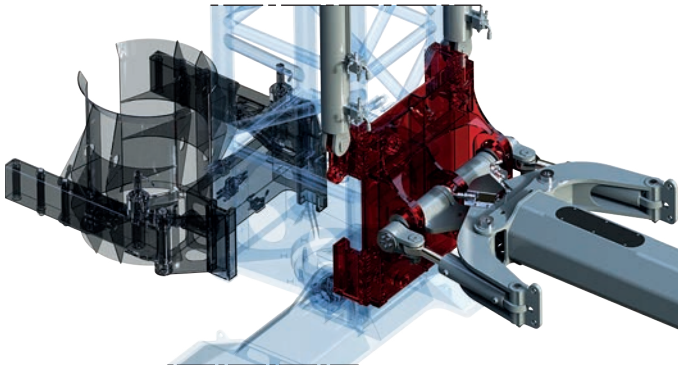
- Hydraulic supply through carrier machine
- All adjustment functions and their control completely integrated in the carrier machine
- Equipment design according to latest European regulations and standards
- High stability through lattice structure

Special features

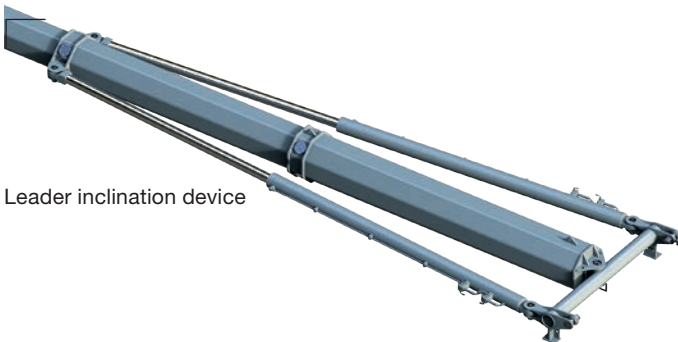
Connection of leader sections



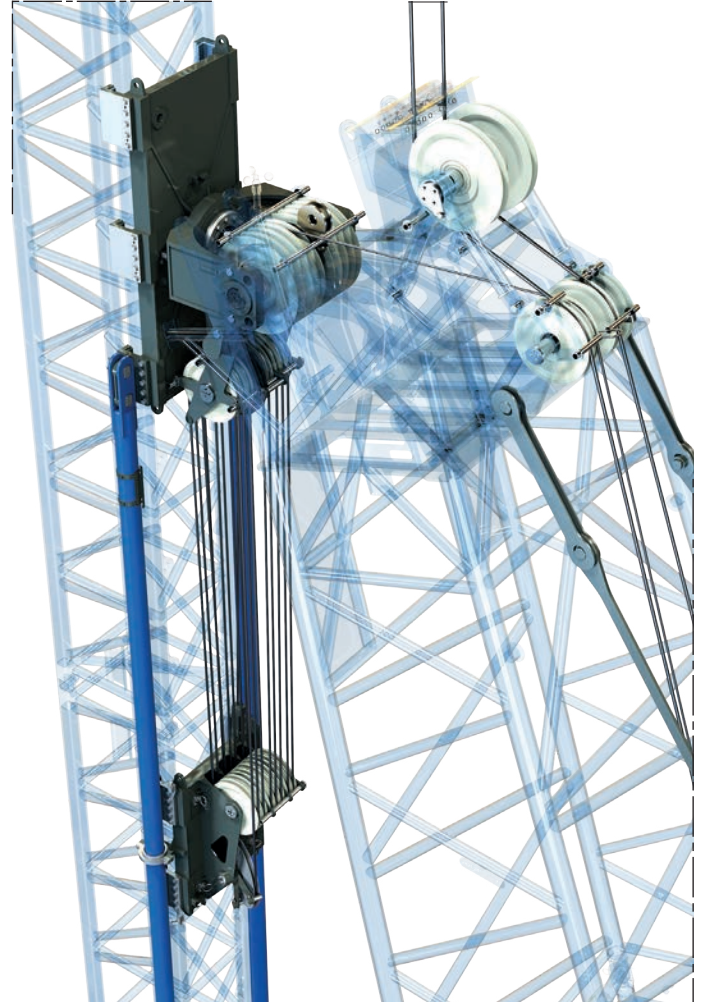
Automatic rotation device



Leader inclination device



Vertical travel

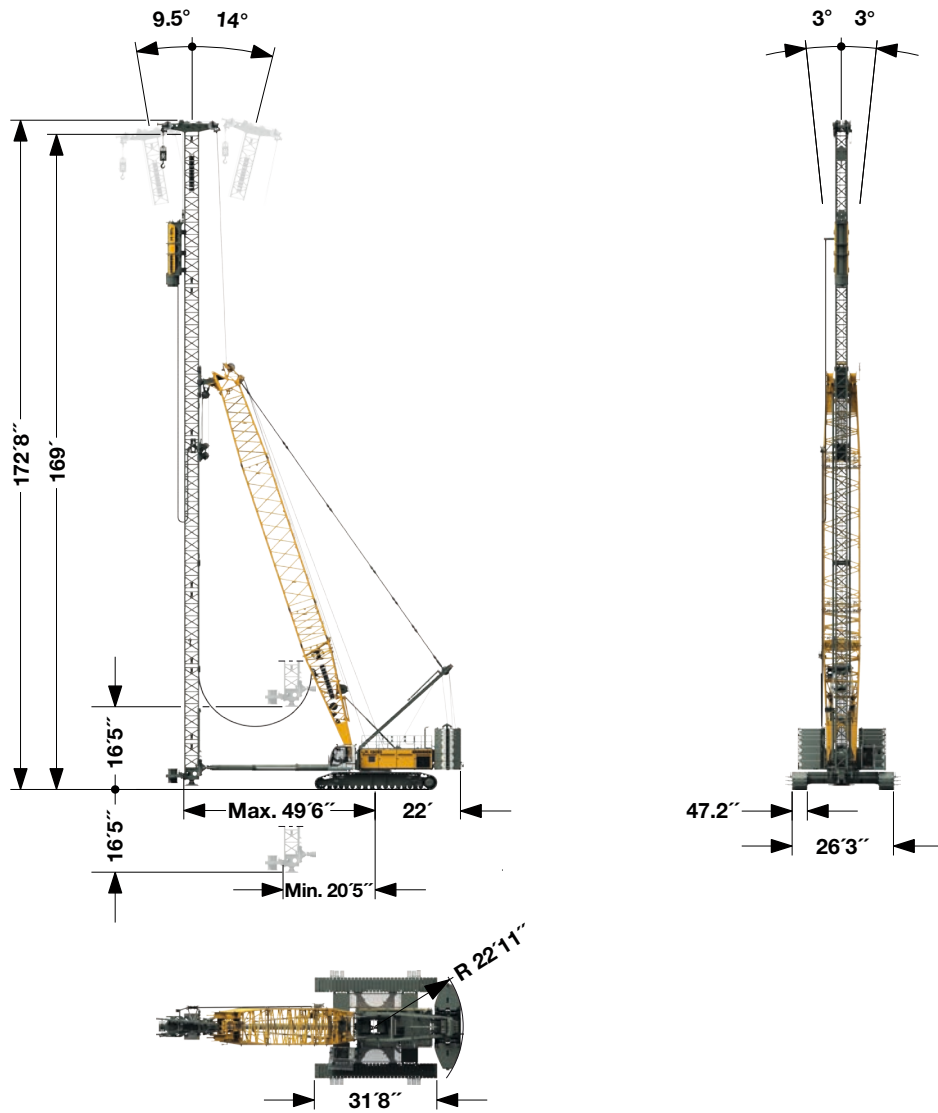


- Structure and connection of leader sections:
Easy and quick assembly thanks to pin connection, high stability through lattice structure.
- Vertical travel:
In order to provide maximum stability, the kicker is connected to the boom head via supporting tubes. This allows to change the leader height without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

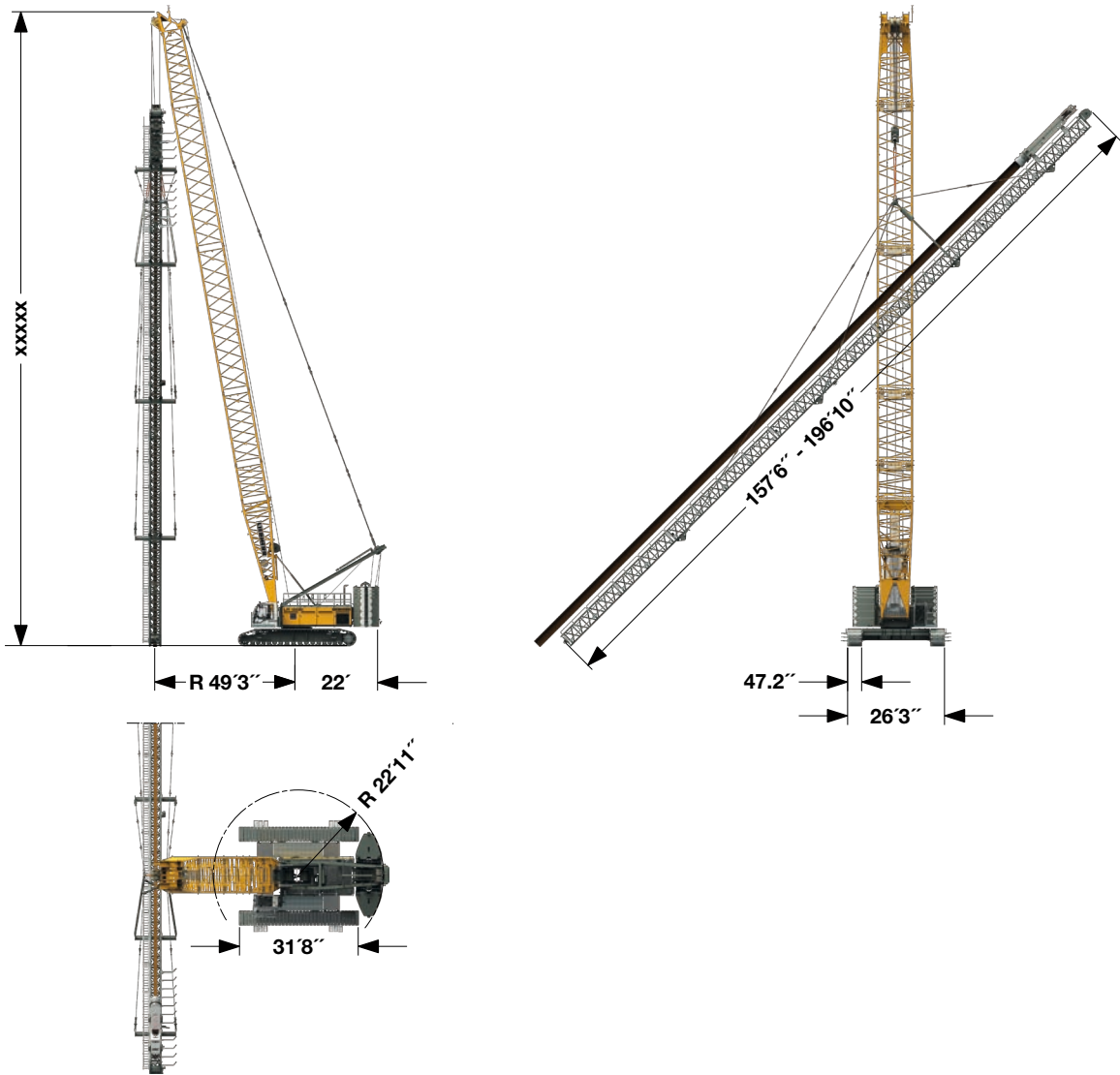


Technical data – fixed leader

Leader length	128/147.7/167.3 ft
Weight without carrier machine	66,139/71,650/77,162 lbs
Min. radius	20.4 ft
Max. radius	49.5 ft
Leader inclination continuously variable*	
Lateral inclination	± 3.0°
Forward inclination	1:4 — 14.0°
Backward inclination	1:4 — 14.0°
Max. pile weight	88,185 lbs
Max. hammer weight	77,162 lbs
Pull force	max. 269,771 lbf
Max. torque (effective over complete leader length)	236,020 lbf-ft
Vertical travel	± 16.4 ft

*) Other leader inclinations available on request

LRH 600 swinging leader



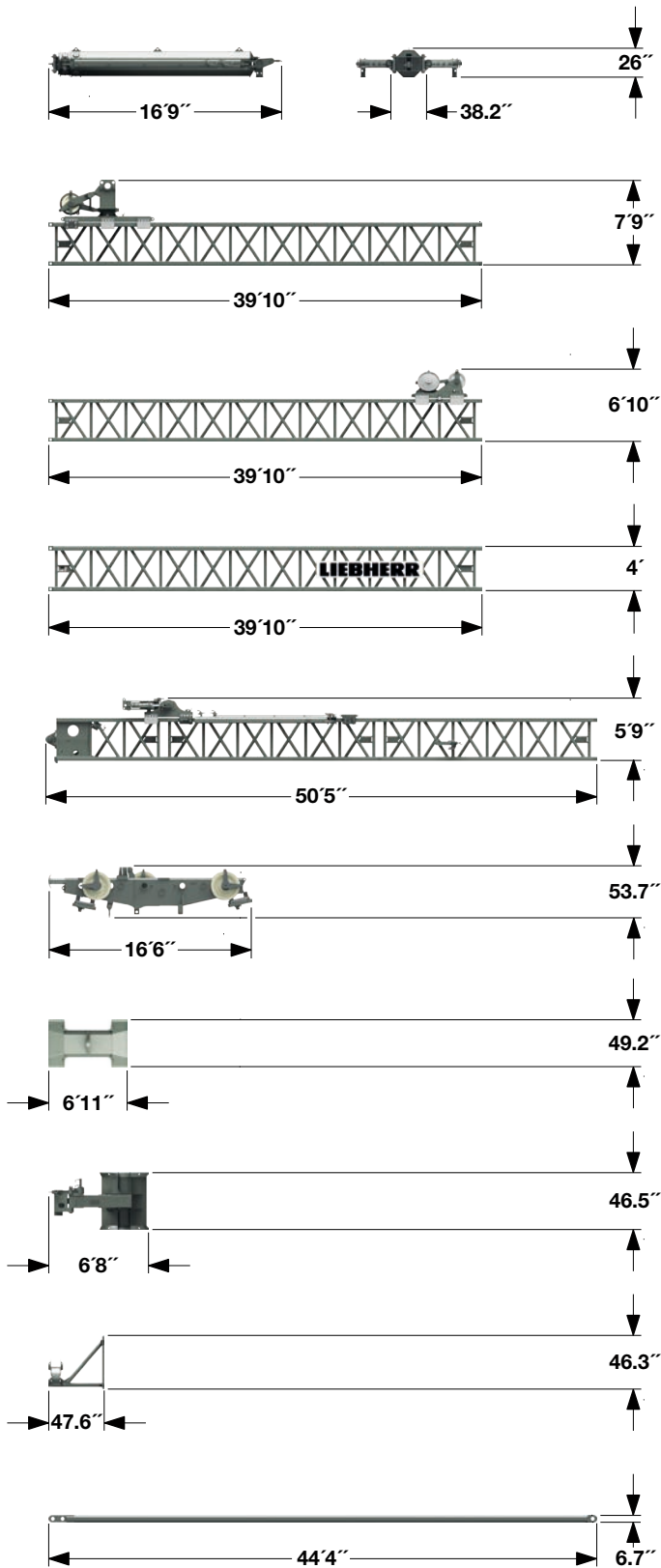
Technical data – swinging leader

Leader length	157.5/196.9 ft
Weight without carrier machine	55,116/63,934 lbs
Leader inclination*	1:1
Max. pile weight	44,093 lbs
Max. hammer weight	44,093 lbs

*) Other leader inclinations available on request

Transport dimensions and weights

LRH 600 fixed leader



Kicker

Width	7.9 ft
Weight	10,098 lbs

Leader extension incl. guiding sledge

40 ft

Width	57.1 inch
Weight	13,052 lbs

Leader extension incl. vertical travel sledge

40 ft

Width	62.4 inch
Weight	10,968 lbs

Leader extension

40 ft

Width	39.4 inch
Weight	7,783 lbs

Leader extension incl. sledge

10 ft + 20 ft + 20 ft

Width	7.2 ft
Weight	15,190 lbs

Leader top with pulley kit hammer

Width	58.3 inch
Weight	7,022 lbs

Support plate

Width	19.1 inch
Weight	1,367 lbs

Pile guide

Width	66.1 inch
Weight	1,588 lbs

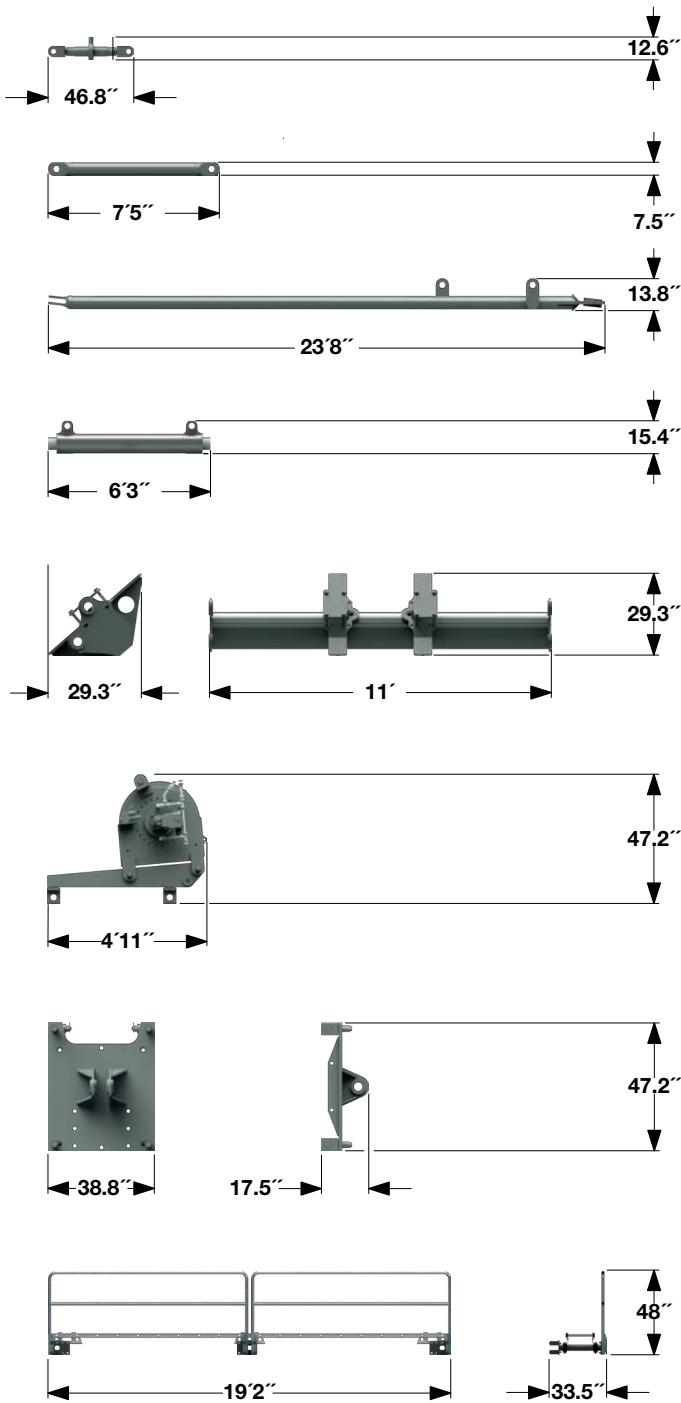
Hose guide

Width	42.1 inch
Weight	375 lbs

Supporting tubes

Supporting tubes 167.3 ft	2 x 750 lbs
Supporting tubes 147.7 ft	2 x 353 lbs
Supporting tubes 128 ft	2 x 188 lbs

Additional equipment for swinging leader



Turnbuckle 8x

Width	9.1 inch
Weight	287 lbs

Brace 2x

Width	7.5 inch
Weight	210 lbs

A-frame bar 2x

Width	23.2 inch
Weight	885 lbs

A-frame spacer

Width	9.5 inch
Weight	665 lbs

Traverse 4x

Width	29.3 inch
Weight	1370 lbs

Top winch

Width	52.7 inch
Weight	2515 lbs

Leader foot

Width	17.5 inch
Weight	885 lbs

Walkway 10x

Width	5'6"
Weight	730 lbs

Suspension rope 14x

Weight	3750 lbs
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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	22,046 lbs	27,558 lbs	33,069 lbs
Max. rated energy	110,634 lbf-ft	138,662 lbf-ft	165,951 lbf-ft
Blow rate - blows/min	30 – 80	30 – 80	30 – 80
Hammer weight incl. pile helmet and dolly	41,447 lbs	46,958 lbs	52,470 lbs

Various pile helmet sizes available on request.

Key features

- Drop weight 22,046 lbs + 5,512 lbs + 5,512 lbs
- Total weight incl. pile helmet and 33,069 lbs drop weight: 52,470 lbs
- Length incl. pile helmet: 21.2 ft (LRH)
- Length incl. pile helmet: 17.9 ft (LRB)
- Max. impact energy: 165,951 lbf-ft
- Drop height: 4.9 ft

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

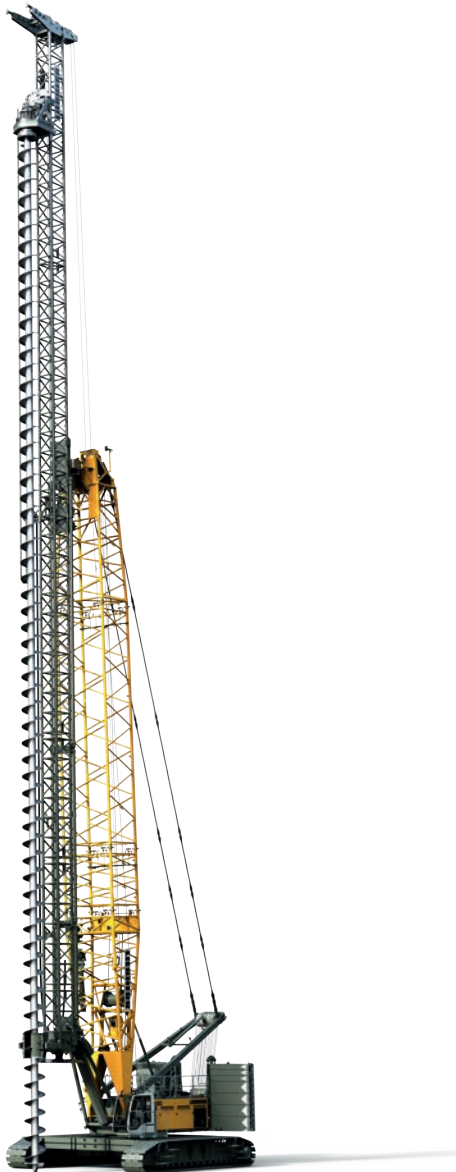
Hammer control: independent control of impact energy and blows/minute

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 – 236,020 lbf-ft
Rotary drive - speed	0 – 47 rpm
Max. pull force**	179,847 lbf
Max. crowd force**	33,721 lbf

*) Other drilling diameters available on request

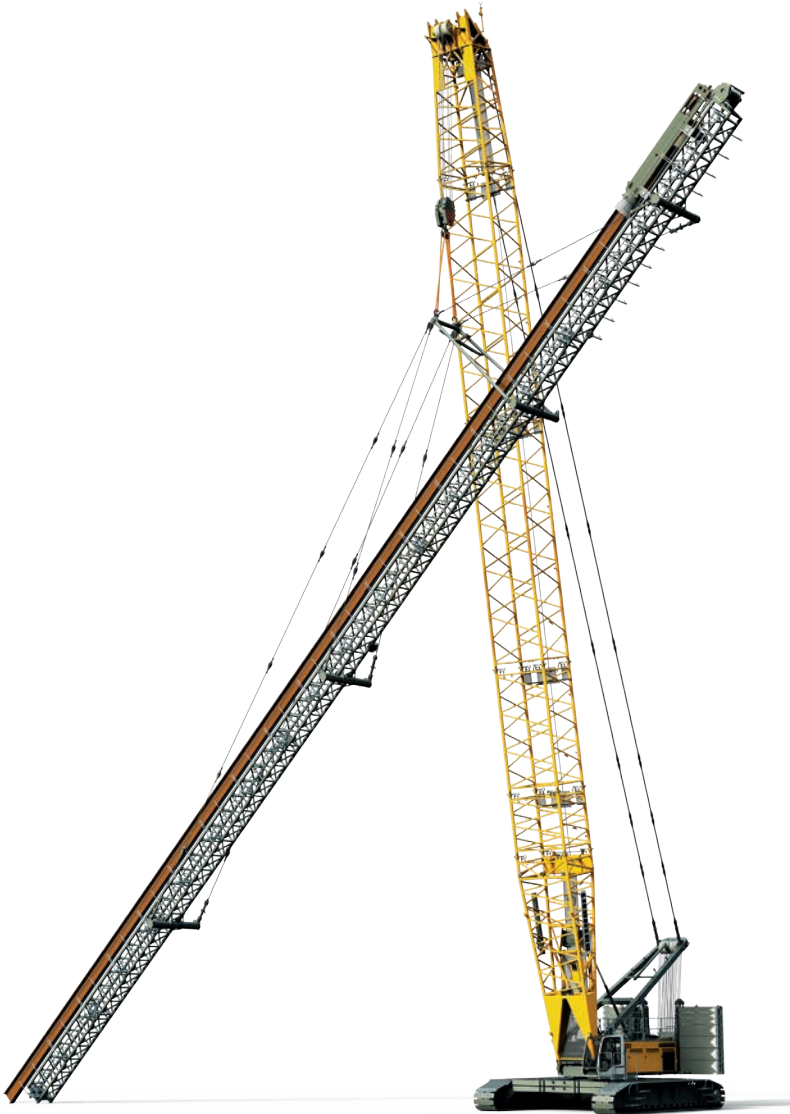
**) Determined by the rotary drive

Performance data for 167.3 ft leader and auger cleaner

Drilling depth	167.3 ft
Max. drilling diameter*	47.2 inch

Hydraulic hammer

Swinging leader



Technical data – swinging leader

Leader length ————— 157.5/196.9 ft

Weight without carrier machine ————— 55,116/63,934 lbs

Leader inclination* ————— 1:1

Max. pile weight ————— 44,093 lbs

Max. hammer weight ————— 44,093 lbs

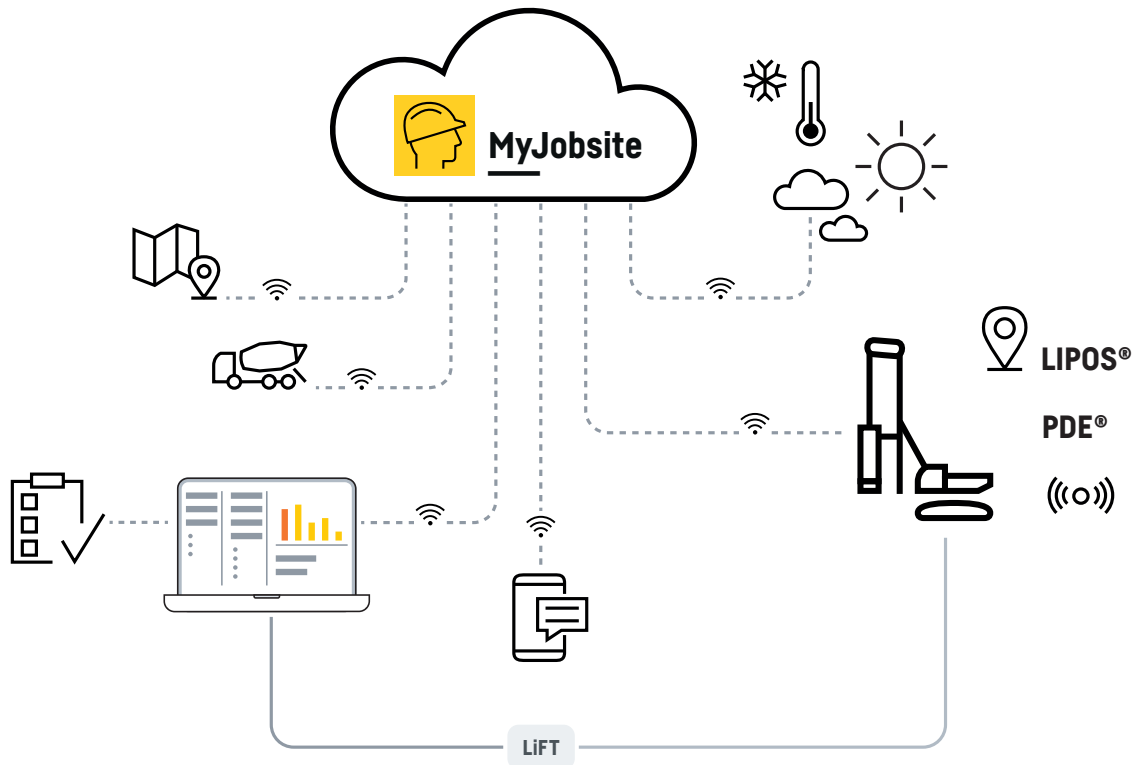
Top winch without free fall

Max. pull force (1st layer) ————— 48,334 lbf

*) 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 Litrionic 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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