Product Information

Log Loader

LH 60 M Timber

Litronic®

Operating weight:
44,800 kg

Engine:
200 kW / 272 HP

Stage IV
Stage IIIA

LIEBHERR

Performance

Power plus speed –
Redefined performance

Economy
Good investment –
Savings for long-term

Reliability
Durability and sustainability –
Quality down to the last detail

Comfort
Perfection at a glance –
When technology is comfortable

Maintainability
Efficiency bonus – Even with
maintenance and service

Well Thought Out to the last Detail

Twin Engine Travel Drive

- Higher driving performance thanks to greater pulling power at max. speed
- More efficient driving without gear shifting for fluid working operation
- Powerful, robust, reliable and quiet

Rigid Cab Elevation LFC 120

- New, clever, space-saving access system with integrated treads and 10° inclination for easy access and more safety

Mudguards

- Robust construction of hot-dip galvanised steel for a long service life in tough timber applications
- Integrated rubber flaps provide maximum splash protection when driving forward or in reverse

Convincing in Operation

Performance

Enhanced Driving Performance
With an engine output of 200 kW, the system has maximum torque for high speeds at its disposal. The stepless drive train also maintains the speed at a constant level in the optimum range for maximum acceleration with consistently high pulling power. In this way, a high level of driving performance can be consistently drawn upon even on gradients.

Convincing Dynamics
The combination of 200 kW engine output and a high pump delivery rate guarantees maximum acceleration and the highest speed of the working movements.

4-Wheel Steering
The standard 4-wheel steering provides for great agility and manoeuvrability of the log loader, even in the tight space of a timberyard. Furthermore, the 4-wheel steering increases driving stability and improves true running.

Economy

LUDV Hydraulic System
The cleverly engineered machine control system assures optimum adaptation of the hydraulics to the respective deployment scenario. Here, the new 2-circuit LUDV hydraulic system (load pressure independent flow distribution) provides optimum distribution of the pump delivery rate with superimposed movements a less fuel consumption compared with the previous model. Speed and strength are there where they are needed.

Liebherr-Power Efficiency (LPE)
LPE optimises the interaction of the drive components in terms of efficiency and enables machine operation in the area of the lowest specific fuel use for less consumption and greater efficiency with the same performance.

Reliability

Quality and Competence
Our experience, understanding of customer needs and the technical implementation of these findings guarantee the success of the product. For decades, Liebherr has been inspirational with its depth of production and system solutions. Key components such as the diesel engine, electronic components, slewing ring, swivelling drive and hydraulic cylinders are developed and produced by Liebherr itself. The great depth of in-house manufacturing guarantees maximum quality and ensures that components are optimally configured to each other.

Protective Devices
Especially in tough timber application the material handlers are strained heavily. The optional available protective devices extend the component service life and guarantee high machine availability with maximum safety for people and machine.

Intelligent Self Diagnostics
The clever control electronics permanently monitor the vital functions of the machine to guarantee a high level of machine availability. Components which are critical for safety are designed with redundancy to guarantee maximum safety.

Comfort

Proportional Control
In timberyards, where space is tight, precision and fine control are especially important. The 4-way mini-joystick with its proportional control make efficient use of the machine easier. Moreover, functions such as support and joystick steering are controlled via the two mini-joysticks. Clearing measures can be carried out in this way with ease and precision using both hands on the joystick.

Slewing Gear Brake in Right Rocker Switch
The standard slewing gear brake can be activated with the rocker switch in the right-hand joystick, which means that reaching around during the work cycle is therefore no longer necessary. When cornering at high speeds, the operator can quickly intervene and prevent the uppercarriage from breaking away. Maximum comfort for maximum safety.

Electric Pilot Control
All work functions of the machine are controlled electrically, whereby the signals of the transmitters are only converted directly at the control block by hydraulic means. This technology enables end position damping of the attachment in order to protect the components and thus extend their service life. Simple, individual adjustment of the working speed of the boom, stick and swivel mechanism make it possible for the driver to adapt the machine ideally to each deployment scenario and fully utilise its capacity.

Maintainability

Service-based Machine Design
The service-based machine design guarantees short servicing times, thus minimising maintenance costs due to the time it saves. All the maintenance points are easily accessible from the ground and easy to reach due to the large, wide-opening service doors. The enhanced service concept places the maintenance points close to each other and reduces their number to a minimum. This means that service work can be completed even more quickly and efficiently.

Integral Maintenance Benefits
Completing maintenance work helps keep the machine fully functional. Maintenance work does, however, mean machine down times which must be minimised. Automatic central lubrication systems for attachment and the uppercarriage as well as optional systems for the undercarriage, quick coupling system and working tools not only make it easier to observe the recommended lubrication intervals and ensure a long service life for the components, but also increase the productivity of the Liebherr log loader LH 35 M Timber.

Technical Data

Diesel Engine

Rating per ISO 9249	200 kW (272 HP) at 1,800 RPM
Model	Liebherr D944
Type	4 cylinder in-line
Bore / Stroke	130 / 150 mm
Displacement	8.0 l
Engine operation	4-stroke diesel Common-Rail turbo-charged and after-cooled reduced emissions
Air cleaner	dry-type air cleaner with pre-cleaner, primary and safety elements
Engine idling	sensor controlled
Electrical system	
Voltage	24 V
Batteries	2 x 180 Ah / 12 V
Alternator	three-phase current 28 V / 140 A
Stage IV	
Harmful emissions values	in accordance with 97/68/EG stage IV
Emission control	Liebherr-SCR technology
Fuel tank	518 l
Urea tank	65 l
Stage IIIA	
Harmful emissions values	in accordance with 97/68/EG stage IIIA
Fuel tank	518 l

Cooling System

Diesel engine	water-cooled compact cooling system consisting cooling unit for water, hydraulic oil and charge air with stepless thermostatically controlled fan

Hydraulic Controls

Power distribution	via control valves with integrated safety valves, simultaneous actuation of chassis and attachment. Swing drive in separate closed circuit
Servo circuit	
Attachment and swing	with hydraulic pilot control and proportional joystick levers
Chassis	electroproportional via foot pedal
Additional functions	via switch or electroproportional foot pedals
Proportional control	proportionally acting transmitters on the joysticks for additional hydraulic functions

Hydraulic System

Hydraulic pump	
for attachment and travel drive	2 Liebherr axial piston variable displacement pumps (double construction)
Max. flow	2 x 302 l/min.
Max. pressure	350 bar
for swing drive	reversible axial piston variable displacement pump, closed-loop circuit
Max. flow	199 l/min.
Max. pressure	370 bar
Hydraulic pump regulation and control	2 circuit Liebherr-Synchron-Comfort-system (LSC) with electronic engine speed sensing regulation, pressure and flow compensation, automatic oil flow optimizer
Hydraulic tank	265 l
Hydraulic system	890 l
Hydraulic oil filter	2 main return filters with integrated partial micro filtration (5 µm)
MODE selection	adjustment of engine and hydraulic performance via a mode pre-selector to match application, e.g. for especially economical and environmentally friendly operation or for maximum material handling and heavy-duty jobs
S (Sensitive)	mode for precision work and lifting through very sensitive movements
E (Eco)	mode for especially economical and environmentally friendly operation
P (Power)	mode for high performance with low fuel consumption
P+ (Power-Plus)	mode for highest performance and for very heavy duty applications, suitable for continuous operation
Engine speed and performance setting	stepless alignment of engine output and hydraulic power via engine speed
Option	Tool Control: ten preadjustable pump flows and pressures for add on tools

Swing Drive

Drive	Liebherr axial piston motor in a closed system, Liebherr planetary reduction gear
Swing ring	Liebherr, sealed race ball bearing swing ring, internal teeth
Swing speed	0 – 8.0 RPM stepless
Swing torque	118 kNm
Holding brake	wet multi-disc (spring applied, pressure released)
Option	pedal controlled positioning swing brake

Operator's Cab

Cab	TOPS safety cab structure (tip-over protection) with individual windscreens or featuring a slide-in subpart under the ceiling, work headlights integrated in the ceiling, a door with a sliding window (can be opened on both sides), large stowing and depositing possibilities, shock-absorbing suspension, sounddamping insulating, tinted laminated safety glass, separate shades for the sunroof window and windscreen
Operator's seat	
Comfort	air cushioned operator's seat with 3D-adjustable armrests, headrest, lap belt, seat heater, adjustable seat cushion inclination and length, lockable horizontal suspension, automatic weight adjustment, adjustable suspension stiffness, pneumatic lumbar vertebrae support and passive seat climatisation with active coal
Option	
Premium	in addition to operator's seat comfort: active electronic weight adjustment (automatic readjustment), pneumatic low frequency suspension and active seat climatisation with active coal and ventilator
Control system	joysticks with arm consoles and swivel seat, folding left arm console
Operation and displays	large high-resolution operating unit, selfexplanatory, colour display with touchscreen, video-compatible, numerous setting, control and monitoring options, e.g. air conditioning control, fuel consumption, machine and tool parameters
Air-conditioning	automatic air-conditioning, recirculated air function, fast de-icing and demisting at the press of a button, air vents can be operated via a menu; recirculated air and fresh air filters can be easily replaced and are accessible from the outside; heating-cooling unit, designed for extreme out-side temperatures, sensors for solar radiation, inside and outside temperatures

Undercarriage

Drive	transfer gearbox with 2 Liebherr axial piston motor and functional brake valve on both sides
Travel speed	
Joystick and wheel steering	0 – 10.0 km/h stepless (creeper speed) 0 – 20.0 km/h stepless
Driving operation	automotive driving using accelerator pedal, cruise control function: storage of variable accelerator pedal positions
Axles	70 t drive axles; manual or automatic hydraulically controlled front axle oscillation lock
Four wheel steering	standard
Steering reversal control	standard
Service brake	two circuit travel brake system with accumulator; disc brake
Holding brake	disc brake
Stabilization	stabilizer blade rear
Option	stabilizer blade rear and front

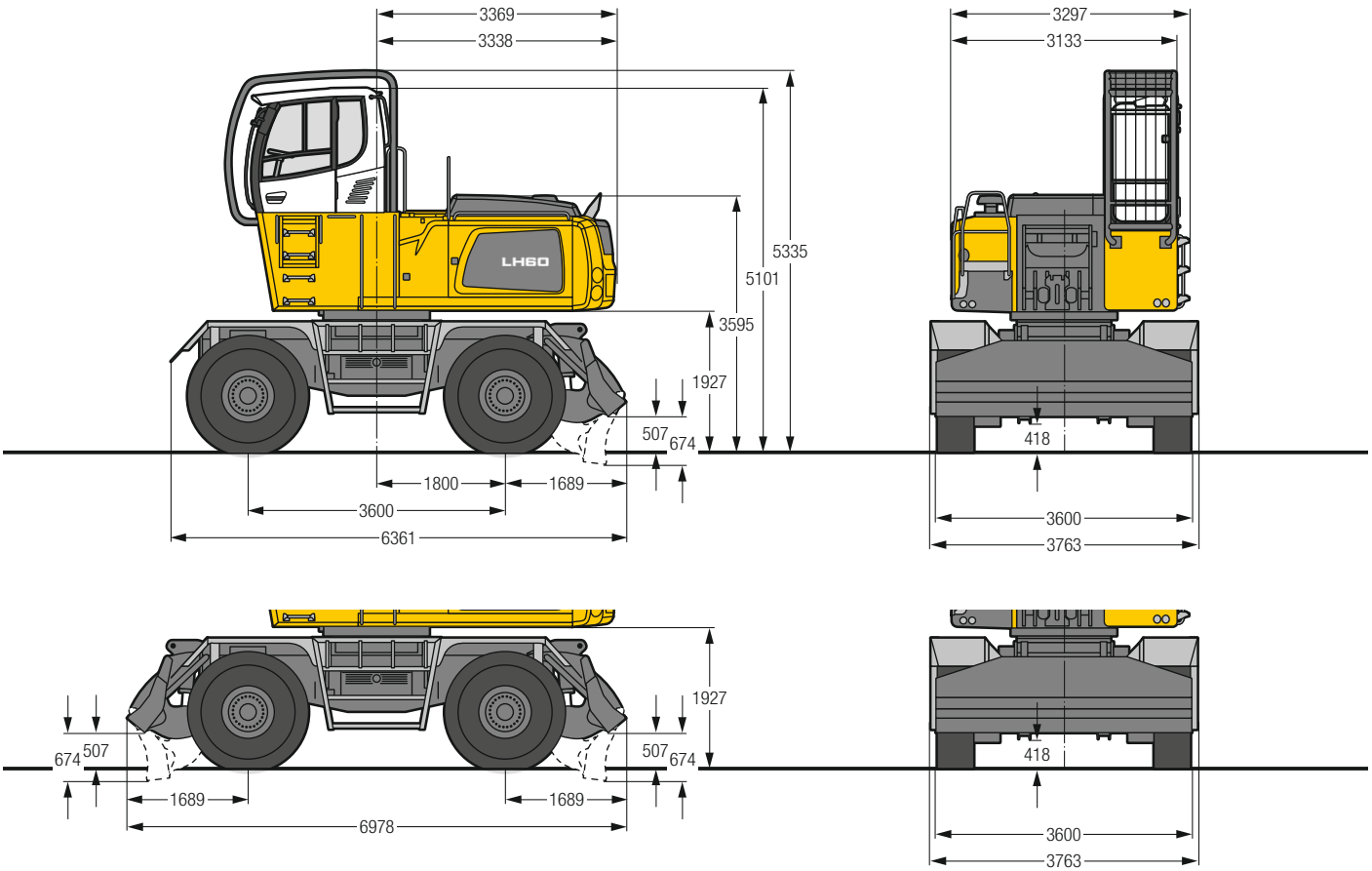
Attachment

Type	high-strength steel plates at highlystressed points for the toughest requirements. Complex and stable mountings of attachment and cylinders
Hydraulic cylinders	Liebherr cylinders with special seal system as well as shock absorption
Bearings	sealed, low maintenance

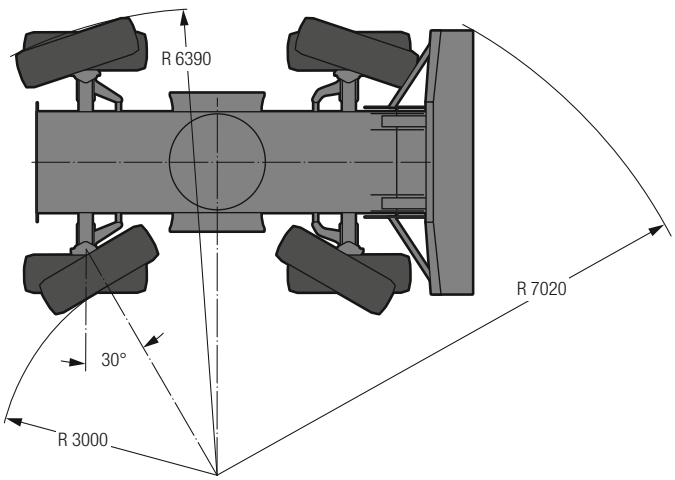
Complete Machine

Lubrication	Liebherr central lubrication system for uppercarriage and attachment, automatically
Option	Liebherr central lubrication system for undercarriage, automatically
Steps system	parts hot-dip galvanised, nonskid surface
Noise emission	
ISO 6396	L_{pA} (inside cab) = 71 dB(A)
2000/14/EC	L_{WA} (surround noise) = 104 dB(A)

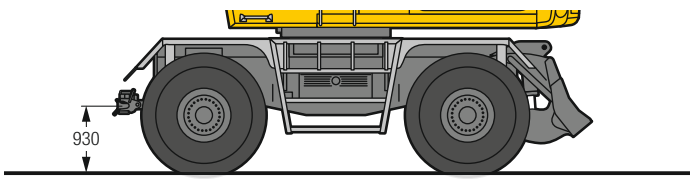
Dimensions



Turn Radius



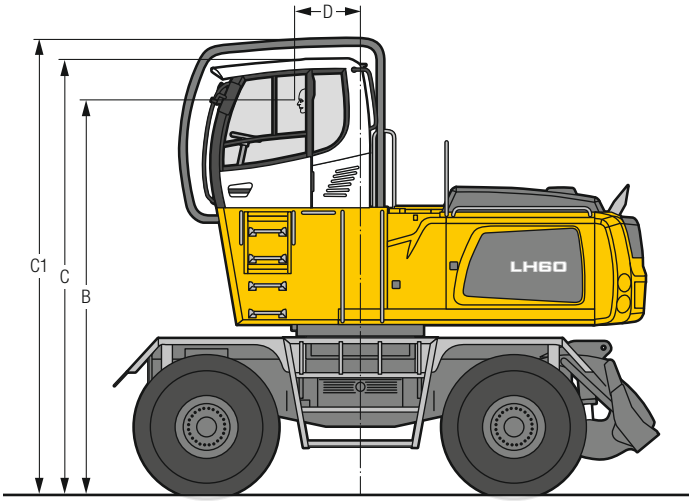
Trailer coupling



Tyres 18.00-25

Choice of Cab Elevation

Cab Elevation LFC (Rigid Elevation)

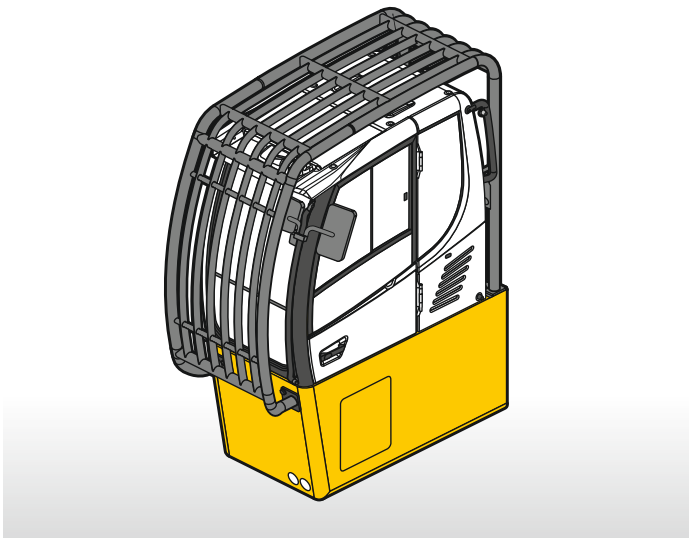


Increase type	LFC 120
Height	1,200 mm
B	4,627 mm
C	5,101 mm
C1	5,335 mm
D	770 mm

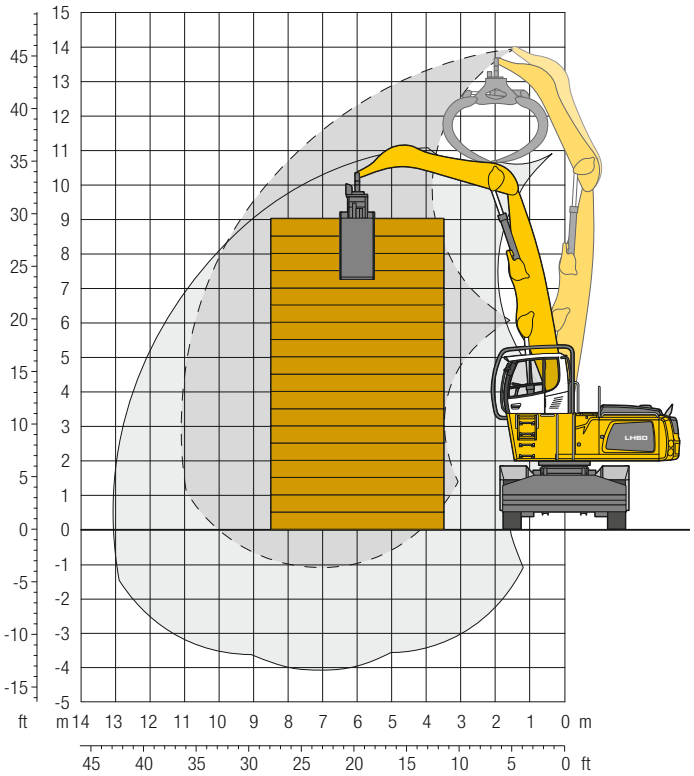
A rigid cab elevation has a fixed eye level height. For a lower transport height, the shell of the cab can be removed and replaced by a transport device. On this machine dimension C is 4,205 mm.

Cab Protection

Integral Guard



Attachment GA11

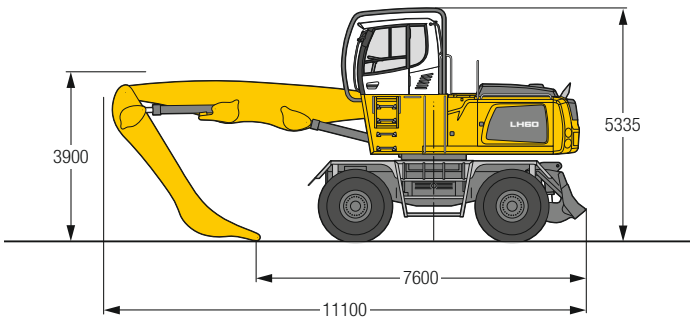


Operating Weight

The operating weight includes the basic machine with stabilizer blade, rigid cab elevation, 4 pneumatic tyres, straight boom 7.00 m, angled stick 4.50 m and wood grab model GMH 50/3.20 m².

Weight	44,800 kg

Dimensions



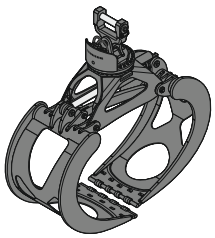
m	Undercarriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m				m
13.5	Stabilizers raised (drive operation)	12.9*	12.9*											12.3*	12.3*	3.3
	Stabilizers raised	12.9*	12.9*											12.3*	12.3*	
	Stabilizer blade down	12.9*	12.9*											12.3*	12.3*	
12.0	Stabilizers raised (drive operation)			12.3*	12.3*	10.0*	10.0*							9.0*	9.0*	6.4
	Stabilizers raised			12.3*	12.3*	10.0*	10.0*							9.0*	9.0*	
	Stabilizer blade down			12.3*	12.3*	10.0*	10.0*							9.0*	9.0*	
10.5	Stabilizers raised (drive operation)			12.9*	12.9*	11.8	12.0*	8.2	9.7*					7.1	8.0*	8.1
	Stabilizers raised			12.9*	12.9*	12.0*	12.0*	9.7*	9.7*					8.0*	8.0*	
	Stabilizer blade down			12.9*	12.9*	12.0*	12.0*	9.7*	9.7*					8.0*	8.0*	
9.0	Stabilizers raised (drive operation)			13.4*	13.4*	11.7	13.2*	8.2	10.2	6.1	7.6			5.7	7.2	9.3
	Stabilizers raised			13.4*	13.4*	13.2*	13.2*	10.2	11.9*	7.6	8.6*			7.2	7.5*	
	Stabilizer blade down			13.4*	13.4*	13.2*	13.2*	10.7	11.9*	7.9	8.6*			7.5	7.5*	
7.5	Stabilizers raised (drive operation)			14.4*	14.4*	11.5	14.2*	8.1	10.1	6.0	7.6			5.0	6.2	10.1
	Stabilizers raised			14.4*	14.4*	14.2*	14.2*	10.1	12.2*	7.6	9.5			6.2	7.3*	
	Stabilizer blade down			14.4*	14.4*	14.2*	14.2*	10.6	12.2*	7.9	10.7*			6.5	7.3*	
6.0	Stabilizers raised (drive operation)	15.2*	15.2*	17.4	18.6*	11.0	14.0	7.8	9.8	5.9	7.4	4.6	5.9	4.5	5.7	10.7
	Stabilizers raised	15.2*	15.2*	18.6*	18.6*	13.8	15.1*	9.8	12.3	7.4	9.3	5.8	7.3	5.6	7.1	
	Stabilizer blade down	15.2*	15.2*	18.6*	18.6*	14.4	15.1*	10.3	12.6*	7.8	10.8*	6.1	8.3*	5.9	7.3*	
4.5	Stabilizers raised (drive operation)			16.1	21.2*	10.4	13.3	7.5	9.5	5.8	7.3	4.6	5.8	4.3	5.4	11.0
	Stabilizers raised			20.2	21.2*	13.0	16.0*	9.4	11.9	7.2	9.1	5.7	7.2	5.3	6.7	
	Stabilizer blade down			21.2*	21.2*	13.7	16.0*	9.9	13.0*	7.5	10.9*	6.0	9.2*	5.6	7.5*	
3.0	Stabilizers raised (drive operation)			14.9	19.9	9.8	12.7	7.2	9.2	5.6	7.1	4.5	5.7	4.1	5.3	11.1
	Stabilizers raised			18.6	21.9*	12.3	15.9	9.0	11.5	7.0	8.9	5.6	7.1	5.2	6.6	
	Stabilizer blade down			19.8	21.9*	13.0	16.6*	9.5	13.2*	7.3	10.9*	5.9	8.9*	5.4	7.8*	
1.5	Stabilizers raised (drive operation)			11.2*	11.2*	9.4	12.2	6.9	8.9	5.4	6.9	4.4	5.6	4.1	5.3	11.0
	Stabilizers raised			11.2*	11.2*	11.8	15.3	8.7	11.1	6.8	8.7	5.5	7.0	5.2	6.6	
	Stabilizer blade down			11.2*	11.2*	12.4	16.4*	9.1	13.0*	7.1	10.5*	5.8	8.3*	5.5	7.4*	
0	Stabilizers raised (drive operation)			11.1*	11.1*	9.2	12.0	6.8	8.8	5.3	6.8			4.6	5.9	10.1
	Stabilizers raised			11.1*	11.1*	11.5	15.0	8.5	10.9	6.7	8.6			5.8	7.4	
	Stabilizer blade down			11.1*	11.1*	12.1	15.1*	8.9	12.0*	7.0	9.6*			6.1	7.9*	

Height **Can be slewed through 360°** **In longitudinal position of undercarriage** **Max. reach** *** Limited by hydr. capacity**

The lift capacities on the stick end without attachment are stated in metric tons (t) and are valid on a firm, level supporting surface with blocked oscillating axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (+/– 15°) are specified over the steering axle with the stabilizers raised and over the rigid axle with the stabilizers down. Indicated loads based on the ISO 10567 standard and do not exceed 75 % (according to EN 474-5 in drive operation only 60 %) of tipping or 87 % of hydraulic capacity. The lift capacity of the unit is limited by its stability, the lifting capability of the hydraulic elements, or the maximum permissible lifting capacity of the load hook.

In accordance with the harmonised European Standard EN 474-5, hydraulic excavators used for lifting operations must be equipped with pipe fracture safety valves, an overload warning device, a load hook and a lift capacity chart.

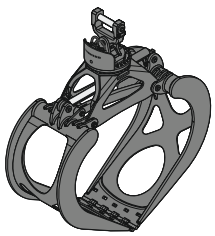
Working Tools



Wood Grab

Grab model GMH 50 round-shaped (overlapping, horizontal cylinders)

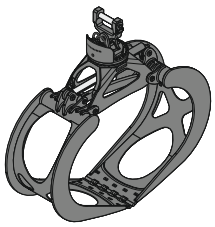
Size	m^2	2.50	2.50	2.80	3.20	3.60
Cutting width	mm	870	1,000	1,000	1,000	1,000
Height of grab, closed	mm	2,412	2,412	2,519	2,646	2,813
Weight	kg	2,115	2,190	2,270	2,330	2,390



Wood Grab

Grab model GMH 50 heart-shaped (tip-to-tip closing, straight design, horizontal cylinders)

Size	m^2	2.20	2.50	2.80	3.20	3.60
Cutting width	mm	1,000	1,000	1,000	1,000	870
Height of grab, closed	mm	2,615	2,745	2,862	2,996	3,114
Weight	kg	2,265	2,320	2,380	2,450	2,520



Wood Grab

Grab model GMH 50 combi-shaped (tip-to-tip closing, horizontal cylinders)

Size	m^2	3.20	3.20	3.60	3.80
Cutting width	mm	870	1,000	1,000	870
Height of grab, closed	mm	2,775	2,775	2,879	2,965
Weight	kg	2,325	2,395	2,420	2,410

Wood Grab

Grab model GMH 80 round-shaped (complete overlapping, vertical cylinders)

Size	m^2	1.60	1.90	2.20	2.50
Cutting width	mm	870	870	870	870
Height of grab, closed	mm	2,908	2,984	3,062	3,140
Weight	kg	2,195	2,240	2,255	2,315

Equipment

Undercarriage

Stabilizer and dozer blade, rear	•
Stabilizer and dozer blade, rear and front	+
4-wheel steering	•
Trailer coupling	+
Mudguards (rear and front)	•
Shuttle axle lock, automatic	•
Protection for oscillating axle cylinders	+
Two lockable storage boxes	•

Uppercarriage

Railing on uppercarriage	+
Main battery switch for electrical system	•
Warning beacon on uppercarriage, LED	+
Protection for counterweight (both sides)	+
Protection for headlights	+
Protection for uppercarriage (both sides)	+
Protection for rear lights	+
Tool equipment, extended	+

Hydraulic System

Electronic pump regulation	•
Liebherr hydraulic oil from –20 °C to +40 °C	•
Liebherr hydraulic oil, biologically degradable	+
Magnetic rod in hydraulic tank	•
Bypass filter	+
Preheating hydraulic oil	+

Engine

Fuel anti-theft device	+
Air pre-filter with dust discharge	+
Preheating fuel	+
Preheating coolant**	+
Preheating engine oil**	+

Cooling System

Radiator, large-mesh, for dust-intensive operation	•
Reversible fan drive, fully automatic	+
Protective grid in front of cooler intake	•

Operator's Cab

Stabilizer, proportional control on left joystick	•
Front headlights integral protective grid, left side, halogen	+
Front headlights integral protective grid, left side, LED	+
Cab lights front, halogen	•
Cab lights front, LED	+
Left arm console, folding	•
Armrest adjustable	•
Slewing gear brake, rocker switch in the right joystick	•
Driver profile, personalised (max. 5 drivers)	+
Operator's seat Comfort	•
Operator's seat Premium	+
Driving alarm (acoustic signal is emitted during travel, can be switched ON/OFF)	+
Fire extinguisher	+
Horn, button on left joystick	•
Joystick and wheel steering (slim version)	•
Cab elevation, rigid (LFC)	•
Automatic air conditioning	•
LiDAT Plus (extended Liebherr data transfer system)*	•
Automatic engine shut-down (time adjustable)	+
Proportional control	•
Radio Comfort, control via display with handsfree set	+
Preparation for radio installation	•
Warning beacon on cab, LED	+
Windows made from impact-resistant laminated safety glass	+
Windscreen wiper, roof	+
Windshield wiper, entire windscreen	•
Integral guard	•
Flashing light (xenon)	+

Attachment

Boom lights, 2 pieces, LED	+
Stick lights, 2 pieces, LED	+
Equipped with electro-hydraulic end position control	•
Pressure warning mechanism hoist cylinder	•
Filter system for working tool	+
Electronic lift limitation	+
Boom cylinder cushioning	•
Pipe fracture safety valves hoist cylinders	•
Pipe fracture safety valve stick cylinder	•
Protection for piston rods, hoist cylinder	+
Protection for piston rods, stick cylinder	+
Overload warning device	+

Complete Machine

Lubrication	
Lubrication undercarriage, manually – decentralised (grease points)	•
Central lubrication system for uppercarriage and attachment, automatically	•
Central lubrication system for undercarriage, automatically	+
Central lubrication system, extension for tool attachment	+
Special coating, variants	+
Monitoring	
Rear view monitoring with camera**	•
Side view monitoring with camera**	•

• = Standard, + = Option
* = optionally extendable after one year, ** = country-dependent

Options and/or special attachments, supplied by vendors other than Liebherr, are only to be installed with the knowledge and approval of Liebherr in order to retain warranty.

The Liebherr Group of Companies

Wide Product Range
The Liebherr Group is one of the largest construction equipment manufacturers in the world. Liebherr's high-value products and services enjoy a high reputation in many other fields. The wide range includes domestic appliances, aerospace and transportation systems, machine tools and maritime cranes.

Exceptional Customer Benefit
Every product line provides a complete range of models in many different versions. With both their technical excellence and acknowledged quality, Liebherr products offer a maximum of customer benefits in practical applications.

State-of-the-art Technology
To provide consistent, top quality products, Liebherr attaches great importance to each product area, its components and core technologies. Important modules and components are developed and manufactured in-house, for instance the entire drive and control technology for construction equipment.

Worldwide and Independent
Hans Liebherr founded the Liebherr family company in 1949. Since that time, the enterprise has steadily grown to a group of more than 130 companies with over 41,000 employees located on all continents. The corporate headquarters of the Group is Liebherr-International AG in Bulle, Switzerland. The Liebherr family is the sole owner of the company.

www.liebherr.com

Printed in Germany by Eberl RG-BK LHB/VF 12206231-2-08.16_enGB

Liebherr-Hydraulikbagger GmbH
Liebherrstraße 12, D-88457 Kirchdorf/Iller
☎ +49 7354 80-0, Fax +49 7354 80-72 94
www.liebherr.com, E-Mail: info.lhb@liebherr.com
www.facebook.com/LiebherrConstruction