

Log Loader

LH 50 M Timber

Litronic®

Operating Weight:
37,300 kg

Engine:
170 kW / 231 HP

Stage IV
Stage IIIA



LIEBHERR

Technical Data



Diesel Engine

Rating per ISO 9249	170 kW (231 HP) at 1,800 RPM
Model	Liebherr D934
Type	4 cylinder in-line
Bore/Stroke	122/150 mm
Displacement	7.0 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	460 l
Urea tank	65 l
Stage IIIA	
Harmful emissions values	in accordance with 97/68/EG stage IIIA
Fuel tank	460 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
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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 electro-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 237 l/min.
Max. pressure	350 bar
for swing drive	reversible axial piston variable displacement pump, closed-loop circuit
Max. flow	144 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	285 l
Hydraulic system	585 l
Hydraulic oil filter	1 main return filter 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 – 7.5 RPM stepless
Swing torque	84 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 arm-rests, 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	oversized two speed power shift transmission with additional creeper speed, Liebherr axial piston motor with functional brake valve on both sides
Travel speed	
Joystick and wheel steering	0 – 3.0 km/h stepless (creeper speed + transmission stage 1) 0 – 5.0 km/h stepless (transmission stage 1) 0 – 10.0 km/h stepless (creeper speed + transmission stage 2) 0 – 20.0 km/h stepless (transmission stage 2)
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; wet and backlash-free disc brake
Holding brake	wet multi-disc (spring applied, pressure released)
Stabilization	stabilizer blade rear
Option	stabilizer blade rear and front



Attachment

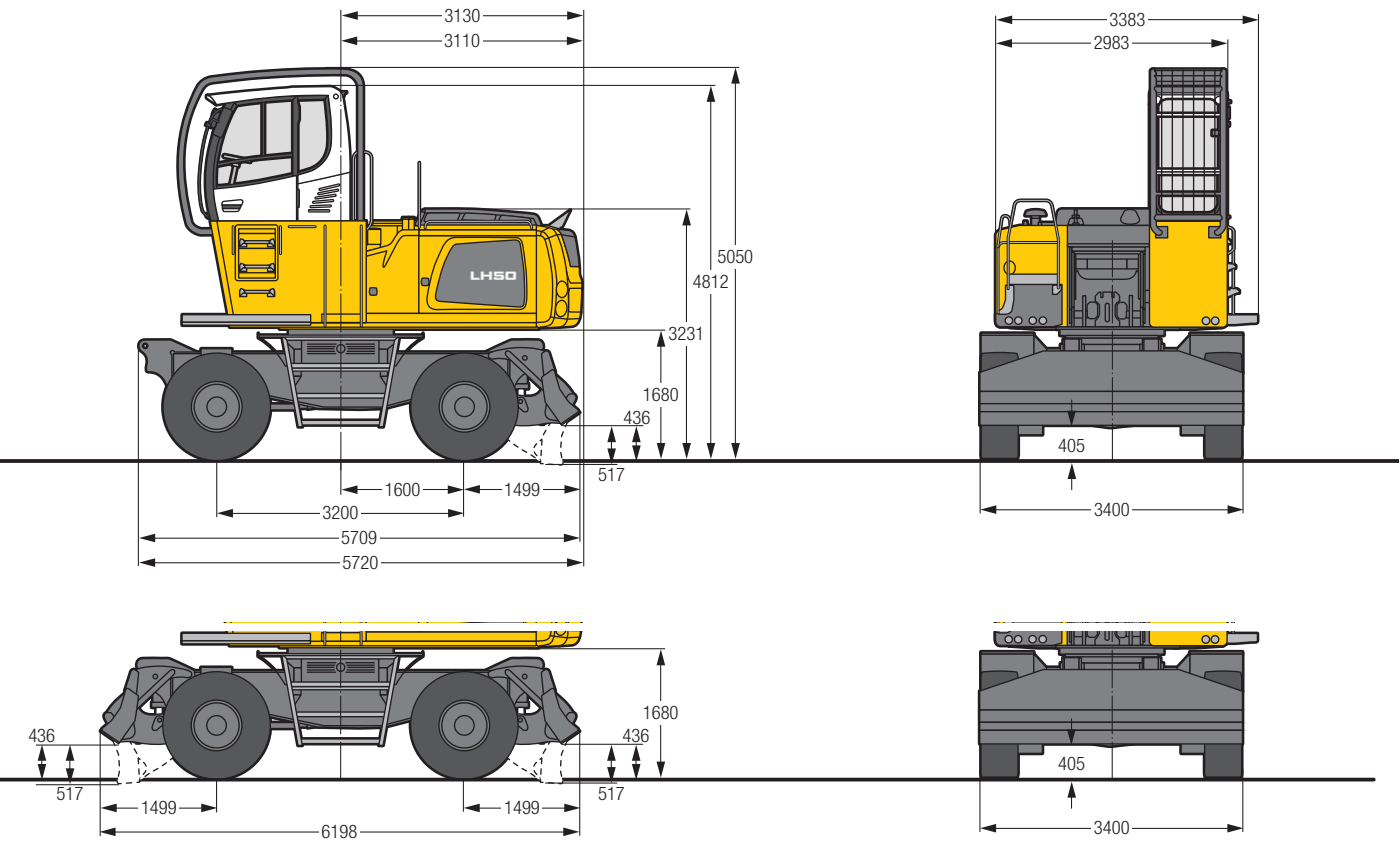
Type	high-strength steel plates at highllystressed points for the toughest requirements. Complex and stable mountings of attachment and cylinders
Hydraulic cylinders	Liebherr cylinders with special seal system as well as shock absorption
Bearings	sealed, low maintenance



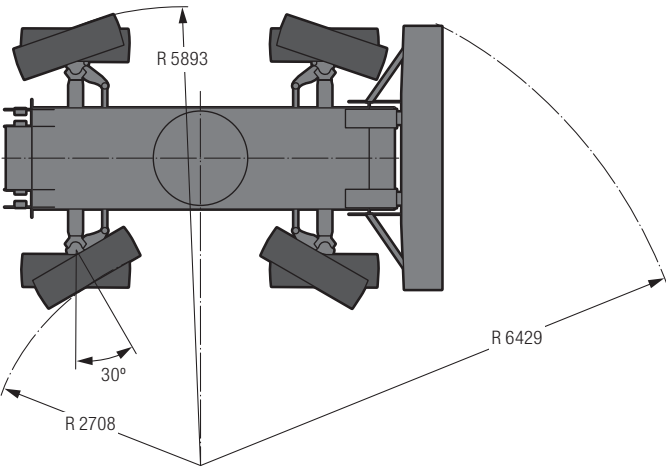
Complete Machine

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



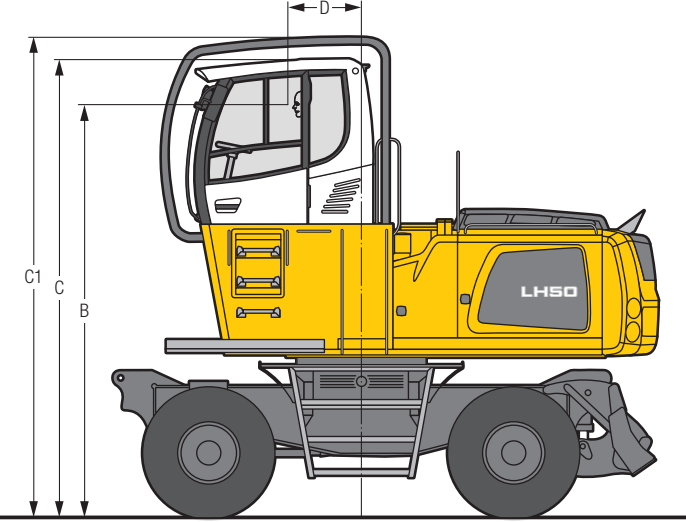
Turn Radius



Tyres 17.50-25

Choice of Cab Elevation

Cab Elevation LFC (Rigid Elevation)

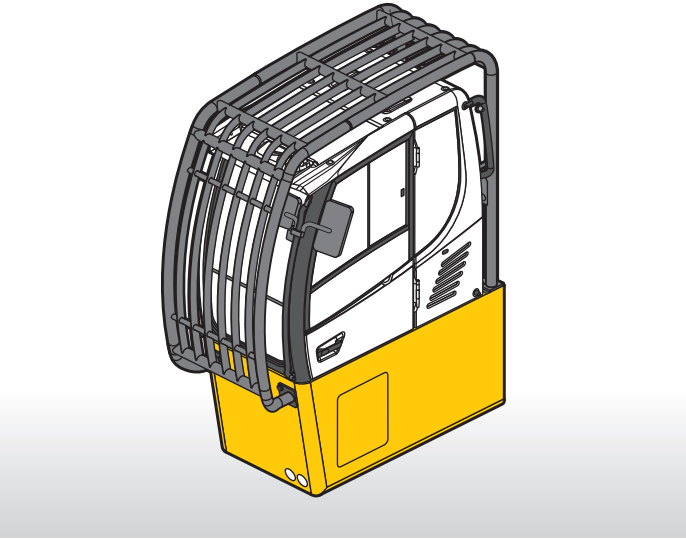


Increase type	LFC 120
Height	1,200 mm
B	4,340 mm
C	4,812 mm
C1	5,050 mm
D	770 mm

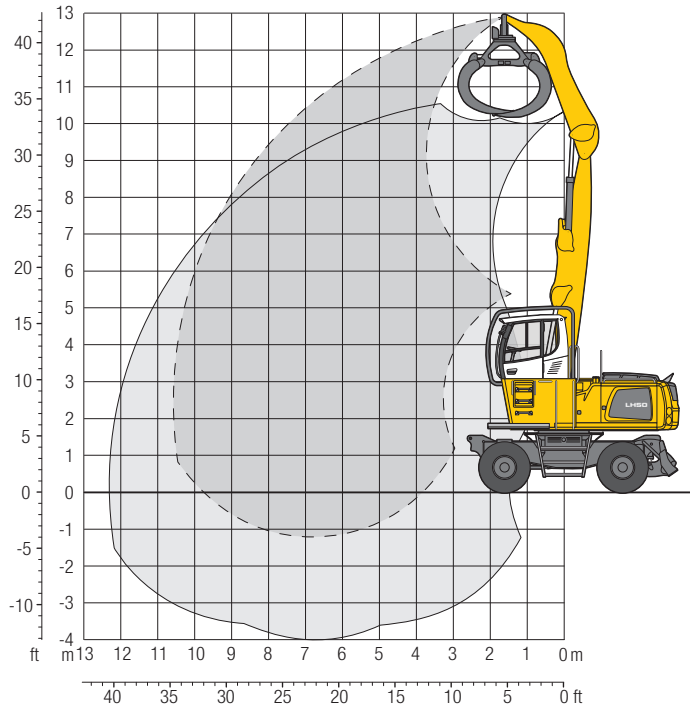
A rigid cab elevation has a fixed eye level height. For a lower transport height, the shell of the cab can be removed and replaced by a transport device. On this machine dimension C is 3,916 mm.

Cab Protection

Integral Guard



Attachment GA11

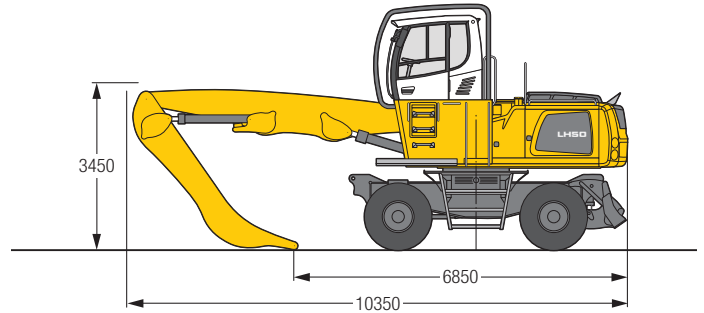


















Operating Weight

The operating weight includes the basic machine with stabilizer blade, rigid cab elevation, 4 pneumatic tyres, straight boom 6.70 m, angled stick 4.30 m and wood grab model GMH 50/2.50 m².

Weight 37,300 kg

Dimensions



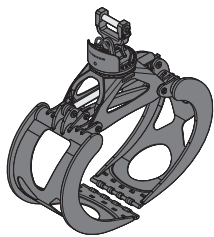
		3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m				
m	Undercarriage															m
12.0	Stabilizers raised (drive operation)	11.4*	11.4*	9.1*	9.1*									9.1*	9.1*	4.5
	Stabilizers raised	11.4*	11.4*	9.1*	9.1*									9.1*	9.1*	
	Stabilizer blade down	11.4*	11.4*	9.1*	9.1*									9.1*	9.1*	
10.5	Stabilizers raised (drive operation)			10.7*	10.7*	9.1	9.1*							7.3	7.4*	6.9
	Stabilizers raised			10.7*	10.7*	9.1*	9.1*							7.4*	7.4*	
	Stabilizer blade down			10.7*	10.7*	9.1*	9.1*							7.4*	7.4*	
9.0	Stabilizers raised (drive operation)			11.2*	11.2*	9.2	10.3*	6.4	7.5					5.4	6.3	8.3
	Stabilizers raised			11.2*	11.2*	10.3*	10.3*	8.0	8.8*					6.7	6.8*	
	Stabilizer blade down			11.2*	11.2*	10.3*	10.3*	8.3	8.8*					6.8*	6.8*	
7.5	Stabilizers raised (drive operation)			11.9*	11.9*	9.1	10.4*	6.4	7.4	4.7	5.5			4.5	5.2	9.3
	Stabilizers raised			11.9*	11.9*	10.4*	10.4*	8.0	8.9*	5.9	6.9			5.6	6.5	
	Stabilizer blade down			11.9*	11.9*	10.4*	10.4*	8.3	8.9*	6.2	7.6*			5.8	6.5*	
6.0	Stabilizers raised (drive operation)	11.6*	11.6*	13.6*	13.6*	8.8	10.3	6.2	7.3	4.7	5.5			4.0	4.6	10.0
	Stabilizers raised	11.6*	11.6*	13.6*	13.6*	10.9*	10.9*	7.8	9.1	5.9	6.8			4.9	5.8	
	Stabilizer blade down	11.6*	11.6*	13.6*	13.6*	10.9*	10.9*	8.1	9.1*	6.1	7.8*			5.1	6.5*	
4.5	Stabilizers raised (drive operation)	22.4*	22.4*	13.0	15.0*	8.4	9.8	6.0	7.0	4.6	5.4			3.7	4.3	10.4
	Stabilizers raised	22.4*	22.4*	15.0*	15.0*	10.5	11.5*	7.5	8.8	5.7	6.7			4.6	5.4	
	Stabilizer blade down	22.4*	22.4*	15.0*	15.0*	10.9	11.5*	7.8	9.4*	6.0	7.8*			4.8	6.5*	
3.0	Stabilizers raised (drive operation)			12.0	14.4	7.9	9.3	5.8	6.8	4.4	5.2	3.5	4.2	3.5	4.1	10.6
	Stabilizers raised			15.0	16.1*	9.9	11.7	7.2	8.5	5.5	6.5	4.4	5.2	4.4	5.2	
	Stabilizer blade down			15.7	16.1*	10.3	11.9*	7.5	9.5*	5.8	7.1*	4.6	6.2*	4.6	6.1*	
1.5	Stabilizers raised (drive operation)			11.2	12.1*	7.5	8.9	5.5	6.5	4.3	5.1	3.5	4.1	3.5	4.1	10.5
	Stabilizers raised			12.1*	12.1*	9.4	11.2	6.9	8.2	5.4	6.4	4.4	5.2	4.4	5.1	
	Stabilizer blade down			12.1*	12.1*	9.8	11.8*	7.2	9.3*	5.6	7.4*	4.6	5.6*	4.5	5.6*	
0	Stabilizers raised (drive operation)			10.1*	10.1*	7.3	8.7	5.4	6.4	4.2	5.0			3.8	4.5	9.8
	Stabilizers raised			10.1*	10.1*	9.1	10.8	6.7	8.0	5.3	6.3			4.7	5.6	
	Stabilizer blade down			10.1*	10.1*	9.5	10.9*	7.0	8.6*	5.5	6.7*			5.0	5.7*	

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.

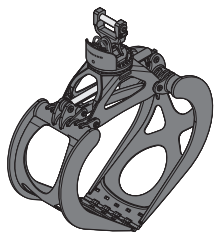
Working Tools



Wood Grab

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

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



Wood Grab

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

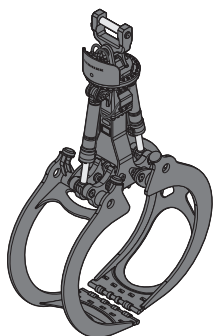
Size	m ²	2.20	2.50	2.80	3.20
Cutting width	mm	1,000	1,000	1,000	1,000
Height of grab, closed	mm	2,615	2,745	2,862	2,996
Weight	kg	2,265	2,320	2,380	2,450



Wood Grab

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

Size	m ²	3.20	3.20		
Cutting width	mm	870	1,000		
Height of grab, closed	mm	2,775	2,775		
Weight	kg	2,325	2,395		



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	•
Tyres, variants	+
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.

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