
L 507 E

Product information

LIEBHERR

Battery-electric wheel loader

Generation

8

Battery

32.2 / 64.4 kWh

Tipping load

3,750 kg

An high-energy concept for success



Tipping load, articulated
3,750 kg

Bucket capacity
0.9 m³

Operating weight
5,910 kg

Battery
32.2 / 64.4 kWh

The battery-electric wheel loader powered by innovation



Full loading power

The lithium-ion technology integrated into the L 507 E with its mean voltage of 322 V provides optimal performance. Depending on the on-board charger and power rating, the battery can be completely recharged in one and a half to three hours. The on-board charging system guarantees fast charging without additional external equipment, while making easy intermediate charging possible and increasing the machine's versatility. With just one flap to open in the cab access area of the wheel loader, the charging process is as simple as can be.



Individual power output thanks to the modular battery concept

Whether at 32.2 kWh or the optional 64.4 kWh, this battery-electric wheel loader from Liebherr is ready for any job. The modular battery concept makes it possible to individually adapt the machine's power.

Simply safe

Permanent, system-controlled monitoring of the high-voltage plug contacts and electric wiring means that circuitry is automatically switched off in the event of a defect. This mechanism significantly increases safety while the machine is in operation.





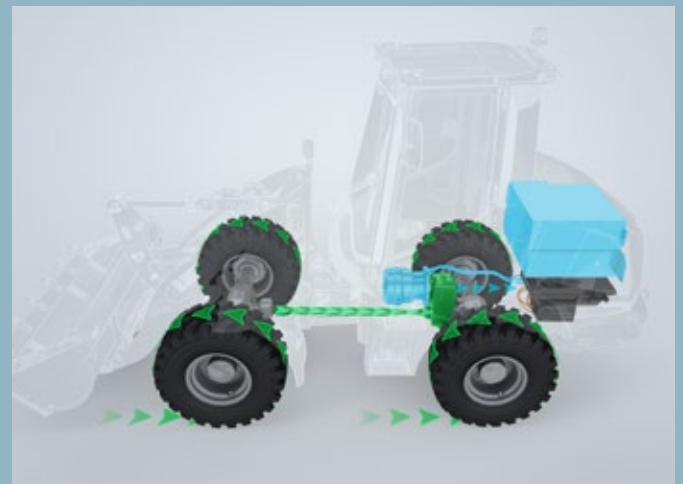
The quiet drive speaks for itself

The significantly reduced noise emissions of this battery-electric wheel loader by Liebherr provide huge advantages, especially in noise-sensitive areas like city centres. The fact that its drive is electric and emissions-free makes the L 507 E ideal for use in enclosed spaces such as recycling facility buildings.



Control units that are easy to use

The height adjustable touch function display allows work-related data to be collected quickly. Control elements that are easy and intuitive to use and an improved layout provide an ideal working environment inside the operator's cab. The progress of the charging process is shown as a percentage on the wheel loader's display along with a charge time prediction as well as multiple settings options. Using this data, there is nothing standing in the way of well-planned and efficient operation.



Intelligent energy recuperation

Regenerated energy – recuperated during braking or driving downhill – back to the battery increases its mileage. This process makes this battery-operated wheel loader from Liebherr particularly economical and resource-efficient. Lively handling and quick work sequences are easy to achieve with an electric drive that can provide full power output in a second.

Technical data

Battery

		L 507 E	
High-voltage system			
Battery type		Lithium ion	
Battery voltage	V	322	
Battery capacity	kWh	32.2	64.4*
Reference value for running time**	h	up to 8	up to 16
Emission stage		emission-free	
Charging infrastructure / charging times for internal charger, 10-90%			
Charging socket		Typ 2 / CCS2***	
230V / 12 A (3.5 kW)	h	7.1	14.2
400V / 16 A (11 kW)	h	2.1	4.2
400V / 32 A (22 kW)	h	1.1	2.1
DC rapid charging (up to 45 kW)***	h	-	1.1
Low-voltage system			
Operating voltage	V	12	
Capacity	Ah	100	

* optional, operating mass + 220 kg

** depending on use, machine configuration and ambient conditions

*** optional

Brakes

		L 507 E
Wear-free service brake		Electric travel drive with regenerative brakes, wear-free, applied to all four wheels and additional dual-circuit brake system, drum brake and wet multi-disc brake located in the front axle
Parking brake		Negative brake system in the front axle acting on the wet multi-disc brakes

The braking system meets the requirements of the ISO 3450.

Axles

		L 507 E
Four-wheel drive		
Front axle		Fixed
Rear axle		Axle pivot steering, fixed
Height of obstacles which can be driven over	mm	370
with all four wheels remaining in contact with the ground		
Differentials		
Open differentials in both axles; 100% differential lock in front axle, manually engaged		
Reduction gear		Planetary final drive in wheel hubs
Track width		1.510 mm with tyres indicated as standard

Driveline

		L 507 E
Electric travel drive		
Design		Permanent magnet synchronous motor
Description of travel drive		Continuously variable electric direct drive with energy recuperation
Travel drive motor power output	kW	30
Control		By travel and inching pedal. The inching pedal makes it possible to control the tractive and thrust forces steplessly. The Liebherr control lever is used to control forward and reverse travel
Travel speed range		
Standard		Speed range: 0-20 km/h
Speeder		Speed range: 0-30 km/h*
Speeds quoted apply with the tyres indicated as standard on loader model.		

* Configuration, tyres and mounting tools can influence the maximum speed.

Steering

Design	Stereo steering system, hydraulic servo power steering. Central oscillating frame articulation with damper element in combination with rear-axle pivot steering	
Angle of articulation	30° to each side	
Angle of oscillation - centre-pivot steering	8° to each side	
Max. pressure	bar	180

Attachment hydraulics

Electric motor design	L 507 E	
Electric motor power output (max)	Permanent magnet synchronous motor	
Electric motor power output (continuous)	kW	30
Hydraulic system design	Load-sensing axial piston variable displacement pump with power regulator and flow regulator, pressure cut-off in control valve block	
Cooling	Hydraulic oil cooling using thermostatically controlled fan	
Filtration Control	Return flow in-line filter Single-lever control with electro-proportional pilot control, 1st and 2nd additional function with electro-proportional control optional	
Lifting function	Lifting, neutral, lowering Float position via latching Liebherr control lever, auto lifting and lowering via Liebherr control lever optional	
Tilt function	Tilt back, neutral, dump Automatic bucket return to dig for tipping on and off via Liebherr control lever optional	
Max. flow	l/min.	75
Max. pressure	bar	240
Hydraulic working motor power output	kW	15

Attachment

Geometry	L 507 E Powerful Z-bar linkage with tilt cylinder, hydraulic quick hitch as standard	
Bearings	Lathe-turned thick-walled bushings with lubricating grooves	
Cycle time at nominal load	ZK	
Lifting	s	4.9
Dumping	s	1.7
Lowering (empty)	s	3.5

Operator's cab

Design	Elastic mounted, noise-proof cab ROPS roll over protection per EN ISO 3471 / EN 474-1 FOPS falling objects protection per EN ISO 3449 / EN 474-1, Cat. II Operator's door with 180° opening angle with rigid window, fold-out window on right with 12° gap opener or 180° opening, single-pane safety glass ESG, heated rear window ESG, all windows are tinted. Continuously adjustable steering column optional	
Liebherr operator's seat	5 way adjustable, vibration-damped operator's seat "Standard" (mechanically sprung, adjustable to operator's weight), Liebherr control lever mounted into the operator's seat as standard	
Cab heating and ventilation	Fresh air mode, electrical heating, arrangement of the air nozzles ensures quick defrosting and defogging of the windows, electrically heated rear window	

Vibration emissions		
Vibrations in the hand/arm	m/s ²	≤ 2.5
Vibrations through the whole body	m/s ²	≤ 0.5

Sound level

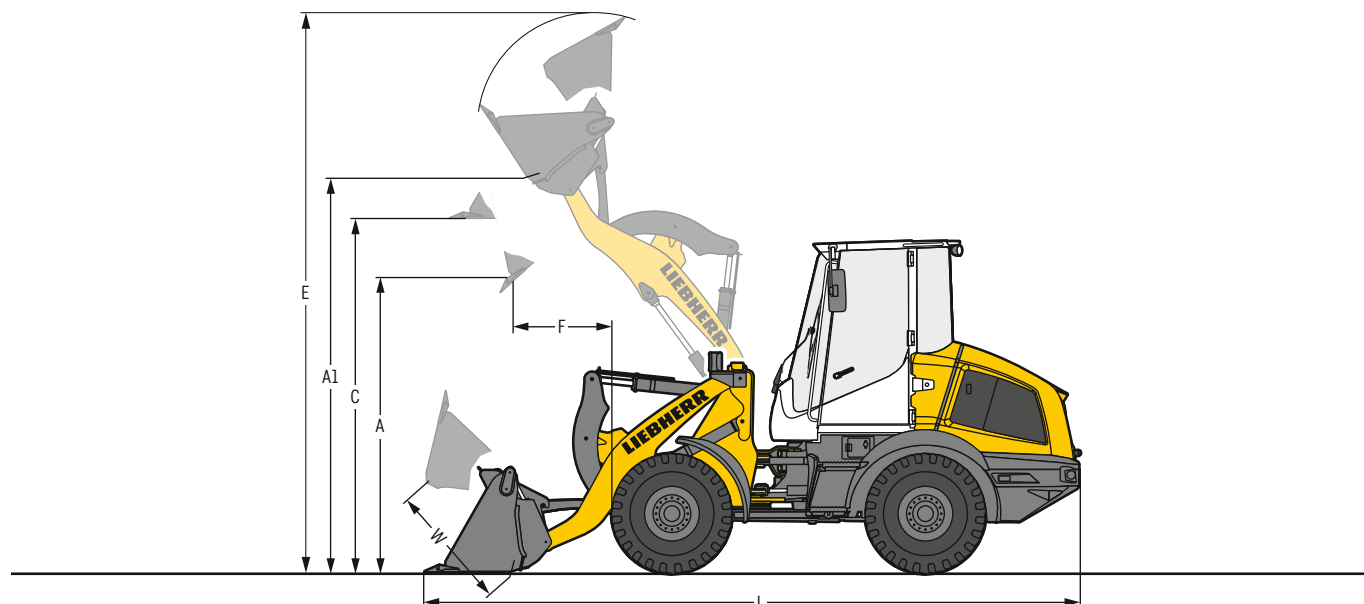
Sound pressure level to ISO 6396	L 507 E	
L _{PA} (inside cab)	dB(A)	65
Sound power level to 2000/14/EC		
L _{WA} (surround noise)	dB(A)	91

Capacities

	L 507 E	
Transmission	l	2.1
HV component coolant	l	9.2
E-drive coolant	l	7.5
Front axle / differential	l	5.0
Rear axle / differential	l	4.4
Front axle / wheel hubs	l	1.6
Rear axle / wheel hubs	l	1.6
Hydraulic tank	l	51
Hydraulic system, total	l	70

Attachment

4 in 1 bucket



4 in 1 bucket

		L 507 E
		STD
		ZK-QH
Geometry		T
Cutting tools		0.8
Bucket capacity	m ³	1.8
Specific material density	t/m ³	2,100
Bucket width	mm	2,545
A Dumping height at max. lift height and 42° discharge	mm	3,230
A1 Max. dumping height with opened bucket	mm	2,950
C Max. height of bucket bottom	mm	4,720
E Max. operating height	mm	880
F Reach at max. lift height and 42° discharge	mm	5,585
L Overall length	mm	960
W Max. bucket opening	mm	3,975
Turning circle radius over outside bucket edge	mm	3,550
Tipping load, straight*	kg	3,240
Tipping load, fully articulated*	kg	6,195
Operating weight*	kg	405/70R18
Tyre size		

* The figures shown include the above tyres, all lubricants, batterie standard (32.2 kWh), the ROPS/FOPS cab and the operator.
Different tyres and optional equipment will change the operating weight and tipping load. (Tipping load, fully articulated according to ISO 14397-1)

STD = Standard lift arm length
ZK-QH = Z-bar linkage incl. quick hitch
T = Welded-on tooth holder with add-on teeth

Equipment

Basic wheel loader

32.2 kWh lithium-ion battery	●
64.4 kWh lithium-ion battery	+
Automatic central lubrication system	+
Combined inching-braking system	●
Connection for electrical equipment 7-pole	+
Guard for headlights	+
Liebherr biodegradable hydraulic oil	+
Load lashing lugs	●
Lockable doors and engine hood	●
On-board AC charging technology up to 400V / 32A	●
On-board AC charging technology up to 400V / 32A and DC charging technology up to 65 KW	+
on-board tool kit	●
Parking brake	●
Power socket rear (13-pole, 12V)	+
Rear license panel light	+
Ride control	+
Special paint	+
Speeder version	+
Towing hitch	+
Tractive force adjustment	+
Travel light on front section LED	●
Type 2 IP67 charging cable, CEE plug, adjustable charging power 3.5 - 22 kW	+
Variable speed limit and fixed speed	+



Equipment

1st and 2nd electro-hydraulic, proportional additional function	+
1st electro-hydraulic, proportional additional function	+
Continuous mode, additional function	+
Float position	●
Fork carrier and pallet forks	●
High-dump bucket	+
Hydraulic quick hitch	●
Hydraulic quick hitch Solidlink	+
Leak oil line	+
Lift arm Z-bar linkage	●
Light material bucket	+
Loading buckets incl. a range of cutting tools	+
Pipe break protection	+
Preparation for hydraulic quick hitch Solidlink (quick hitch without Solidlink block)	+
Programmable automatic lifting and lowering	+
Tilt cylinder protection	+
Unpressurised return flow	+
Working hydraulics lockout	●

● = Standard

+ = Option

- = not available

* = activation required free of charge

Here you can download our wheel loader brochures:



Operator's cab

3 way continuously adjustable steering column (height-adjustable, tilting, folding)	+
Air conditioning system	+
Amber beacon LED	+
Clothes hook	●
Electronical theft protection with code	+
Emergency exit	●
Exterior mirror, tiltable	●
Exterior mirror, tiltable and heatable	+
Fire extinguisher in cab 2 kg	+
First aid kit	+
Floor mat	●
Fold-out window right 180°	●
Headlights front, double design, LED	+
Headlights front, single design, LED	●
Headlights rear, double design, LED	+
Headlights rear, single design, halogen / LED	+
Hot-water heater with defroster and recirculated air mode	●
Interior rear-view mirror	●
Liebherr Connect	
MyLiebherr Maintenance	+
MyLiebherr Performance	+
MyLiebherr Portal*	●
Liebherr control lever with mini-joystick for 1st and 2nd hydraulic, proportional additional function moving with operator's seat (incl. travel direction)	●
Operating hour meter (integrated in display unit)	●
Operator seat "Comfort" – air sprung with seat heating	+
Operator seat "Standard" – mechanically sprung	●
Particle filter F5	●
Power socket 12V	●
Premium display (Touchscreen), with height adjustment and tilting function	●
Preparation for radio installation	+
Radio Liebherr "Comfort" (DAB+ / USB / AUX / BLUETOOTH / handsfree set)	+
Radio Liebherr "Standard" (USB / AUX)	+
Rear window heated electrically	●
Sliding window left	+
Soundproof ROPS / FOPS cab	●
Steering column fixed	●
Steering column folding	+
Storage box	●
Storage compartment	●
Sunblind front	●
Sunblind front / rear	+
Wide angle mirror	+
Windscreen guard	+
Wipe system front / rear	●



Safety

Back-up alarm acoustical / visual	+
Country-specific versions	+
Rear space monitoring with camera (integrated in display unit)	+