

Stereoloaders

L 507 - L 518

Stereo

Stereo

Generation

6

Tipping load

3,750 – 6,550 kg

Engine

Stage V



LIEBHERR

Performance

Power for Increased
Productivity

Economy

Minimum Costs at
High Handling Capacity

L 507 Stereo

Tipping load, articulated 3,750 kg

Bucket capacity 0.9 m³

Operating weight 5,550 kg

Engine output (ISO 14396)

50 kW/68 HP

L 509 Stereo

Tipping load, articulated 4,430 kg

Bucket capacity 1.2 m³

Operating weight 6,390 kg

Engine output (ISO 14396)

54 kW/73 HP

L 514 Stereo

Tipping load, articulated 5,750 kg

Bucket capacity 1.5 m³

Operating weight 8,860 kg

Engine output (ISO 14396)

76 kW/103 HP

L 518 Stereo

Tipping load, articulated 6,550 kg

Bucket capacity 1.7 m³

Operating weight 9,190 kg

Engine output (ISO 14396)

76 kW/103 HP



Reliability

Robustness and Quality
for Durable Machines

Comfort

Maximum Operator Comfort
for More Productivity

Maintainability

Time and Cost Savings
Through Simple Maintenance



Performance



Power for Increased Productivity

The Stereoloaders impress with their compact design and extreme agility. They thus allow for fast and efficient manoeuvring and can be used in particular in confined spaces. Quick working cycles, high payloads and high levels of machine availability lead to increased handling capacity.

Powerful and Efficient Machine Concept

Highest Level of Performance

The high-performance Liebherr wheel loaders L 507 Stereo – L 518 Stereo are the ideal solution for all applications, especially for industrial use. They are suited to road construction, municipal tasks and diverse construction applications. The unique steering system and the compact design make the Stereoloaders extremely agile and versatile. The stereo steering system combines articulated steering with a steered rear axle for a reduced articulation angle of just 30°. As a result, they allow for particularly high payloads at a low operating weight. At the same time it means maximum stability and safety on all terrains. This guarantees precise and safe working and improved efficiency.

High Productivity in the most Confined of Spaces

Thanks to the unique stereo steering, Stereoloaders boast a turning radius which is 20 % smaller than in comparably-sized articulated wheel loaders. This ensures maximum manoeuvrability and boosts productivity even when space is at a premium.

Unique Steering System

- Maximum manoeuvrability thanks to tight turning radius
- Extreme levels of agility and flexibility boost efficiency of use
- Fast and efficient working even in confined spaces



Flexibility and Versatility

Lift Arm Optimised for the Application

The Z-bar linkage provides maximum power, regardless of the task. It delivers high breakout forces in the lower lift arm position. The ideal prerequisite for conventional wheel loader applications – simple, quick filling of the bucket leads to high handling capacity. At the same time, it boasts high holding forces in the upper lift arm area. The best solution for industrial use as it allows large attachments to be fitted for transporting heavy loads. In fork operation, the Z-bar linkage provides optimised load guidance throughout the entire lifting range. Secured against tipping out of position, the loading fork allows for working in a particularly safe, smooth and precise manner.

Wide Range of Applications

The wide range of attachments means the right tool is always to hand. This enables the Stereoloaders to act as powerful and profitable all-rounders, ready to tackle the widest possible variety of applications with ease. The optimised hydraulic quick hitch allows quick and efficient attachment changeover. This improves the utilisation of the machine, boosts productivity and greatly extends the range of possible applications.

Excellent Stability and Tipping Safety

- Maximum stability and safety on all terrains
- Precise and safe working
- A plus in productivity thanks to safe transport of high payloads



Practical, Versatile and Flexible in Use

- Z-bar linkage for increased productivity in all applications
- Optimised load guidance provides for safer, smoother and more precise working
- Quickly interchangeable attachments increase productivity



Economy



Minimum Costs at High Handling Capacity

Always there to rely on, the safe, practical and compact Stereoloaders make a reliable contribution to commercial success. Controlled cooling reduces fuel consumption and harmful noise emission, to the benefit of both driver and environment in the long run. For applications where speed counts, the models are available in Speeder version.

Low Operating Costs

High Handling Capacity

The compact design and low operating weight of the Stereoloaders guarantee the safe transportation of high payloads and thus an excellent handling capacity. The powerful hydrostatic Liebherr driveline allows smooth, continuous acceleration without noticeable gear shifting or interruption in tractive force. Excellent traction, even in heavy terrain, is a result of the automatic self-locking differential. Powerful working and high driving comfort increases productivity.

Controlled Cooling

The cooling is demand-controlled, which saves fuel and reduces harmful noise emissions. The fan drive provides the exact level of cooling performance required. This reduces operating costs and increases profitability while retaining maximum loading performance and efficiency.

High Safe and Versatile Usage

Higher Ground Speed

A Stereo variant and a Speeder variant of the L 507–L 518 wheel loaders will be available. The L 507 Speeder and L 509 Speeder models achieve a top speed of 38 km/h, whereas the L 514 Speeder and L 518 Speeder models achieve a top speed of 40 km/h. The machines are therefore ideally suited for all applications and long distances.

Innovative Exhaust Gas Treatment

To reduce exhaust emission, the exhaust gas treatment system of Stereoloaders is equipped with a Diesel oxidation catalyst (DOC) and a diesel particle filter (DPF), with additional selective catalytic reduction (SCR) on the L 514 Stereo and L 518 Stereo variants. This time-tested solution is state-of-the-art in this machine class and effectively reduces exhaust emissions.

Continuous Use

The diesel particle filter can be burned free by active regeneration during operation in the usual manner, thus allowing uninterrupted operation. The long intervals between regeneration increase productivity, save fuel and reduce operating costs.

Efficient Use

- Maximum productivity by high payloads
- Excellent traction even in heavy terrain
- Controlled cooling saves energy and costs

Ideally Suited for Applications Involving High Ground Speeds: Speeder

- Top speed of L 507 / L 509 models is 38 km/h
- Top speed of L 514 / L 518 models is 40 km/h
- Flexible and versatile use
- Time saving means increased productivity

High Level of Machine Utilisation

- Tried and tested exhaust gas treatment system
- Continuous use thanks to active regeneration during operation



Drive concept L 514/L 518

Reliability



Robustness and Quality for Durable Machines

First introduced in 1994 and proven ever since, the “stereo concept” still qualifies as unique in wheel loader design, ensuring maximum performance even under the toughest of operating conditions. Specially-developed components, sophisticated technology and high quality offer a high level of reliability and availability.

OEM Quality Components

Durable and Powerful

Liebherr has many decades of experience in the development, construction and production of components. Ideally adapted to each other, they guarantee a high degree of performance and reliability. Liebherr also develops and produces all steel components. These rugged components ensure the long life of the wheel loaders.

Strenuous endurance tests prove to the strength and quality of the components in use. Even under the toughest of usage conditions, the Stereoloaders satisfy Liebherr's stringent quality standards. This ensures reliable use throughout the entire life time of the machine. Consistently powerful machines increase productivity.

Liebherr Drive Concept

The components of the tried and tested hydrostatic Liebherr driveline are extremely robust and powerful. This ensures that the machine has a long life time and will work reliably even under the toughest of operating conditions.

Reliable Cooling System

Optimal Cooling Performance

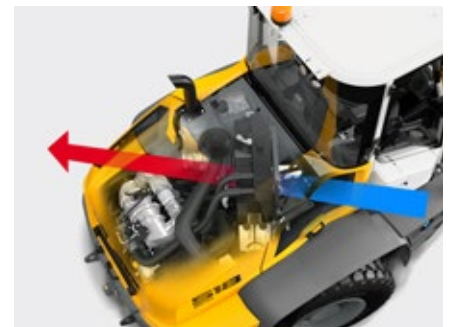
Air is drawn into the system laterally behind the operator's cab. Air passes through the entire engine compartment crossways on L 507 Stereo and L 509 Stereo models and diagonally on L 514 Stereo and L 518 Stereo variants. This ensures optimum heat dissipation from the engine and provides for consistent and uniform cooling performance. In especially dusty applications, optional equipment such as reversible fan drive, fluff trap for the radiator and large-mesh radiator protect the cooling system from contaminants getting in. This guarantees improved cooling output while simultaneously reducing cleaning expenses. Minimal cleaning expenses mean more efficient, more cost-effective working.



Installation position of components on L 514/L 518



Cooling system L 507/L 509



Cooling system L 514/L 518

Powerful Components

- Ideal interaction of components to each other for maximum performance
- Maximum endurance even under the toughest operating conditions
- Rugged, durable machines for reliable operations

Intelligent Cooling System

- Cooling position on the cleanest position of the wheel loader
- High machine availability thanks to lower radiator contamination
- Controlled cooling for improved cooling performance and reliable use

High Machine Availability

- Cooling air is drawn in laterally behind the cab and passes through the whole engine compartment
 - L 507/ L 509 transverse cooling
 - L 514/ L 518 diagonal cooling
- High, safe and versatile usage thanks to robust and powerful components

Comfort



Operator's cab L 514 / L 518

Maximum Operator Comfort for More Productivity

The cab design is optimally adapted to the operator's day-to-day requirements. The roomy and ergonomic operator's cab and easy operation of Stereoloaders create perfect conditions for comfortable and productive working.

Clearly Arranged Cab

Productive and Safe Working

The modern, ergonomic cab design allows the operator to work with high concentration without fatigue – this increases safety and productivity. The displays, controls and operator's seat are carefully coordinated to form an ergonomic unit. The operating and control instruments are well laid out and user-friendly and guarantee simple handling. Operators using the machine for the first time can quickly familiarise themselves with its operation. This saves time and increases on-site flexibility.

Perfect Visibility

The generous glass surfaces of the cab offer exceptional all-round visibility of the attachment and working area. Optimised for visibility, the engine hood design provides a largely unobstructed view towards the rear, which is further improved by the reversing camera integrated into the Liebherr display, available as an option. Even in confined spaces, maximum safety for people, the machine and the load is guaranteed.

Well-Being Guaranteed

Optimum storage areas and stowage spaces increase operator well-being. The optional air conditioning system with improved cooling output ensures a pleasant working atmosphere. In addition, circulation of air is also improved thanks to the vent window which opens as far as 180°. This also facilitates communication towards the outside.

Exceptional All-Round Visibility

- Unobstructed visibility in all directions through optimal cab and engine hood design
- Generous glass surfaces
- More safety and productivity thanks to exceptional visibility



Operator's cab L 507/L 509

Simple and Intuitive Operation

Ergonomic Controls

Stereoloaders can be operated in an intuitive manner. The height-adjustable display, which comes as standard, allows all operating-relevant machine data to be viewed and configured quickly. Visual and acoustic warning devices ensure high operational reliability. The high operating comfort allows the operator to work particularly efficiently and safely.

Liebherr Control Lever

The Liebherr control lever, which is built into the operator's seat as standard, allows all working and manoeuvring operations to be performed with a high degree of precision and sensitivity. This ensures precise and safe operation.

The proportional control of hydraulic attachment is carried out by the Liebherr control lever with mini-joystick. The hydraulic attachment can be controlled with great sensitivity and very ergonomically.

Comfortable and Stable Driving Performance

The damped articulated oscillating centre pivot compensates for uneven ground features and provides for excellent overall and tipping stability and maximum driving comfort even when crossing obstacles. This significantly increases efficiency of use.

Safe, Comfortable and Wide Entry

- The cab can be entered and exited in a comfortable and safe manner, even with the Stereoloader in its fully pivoted position
- Quick and safe cab access boosts productivity



Unique Oscillating Centre Pivot

- Uneven ground features are compensated for
- Excellent stability and tipping safety
- Comfortable and stable driving performance increases efficiency of use



Maintainability



Time and Cost Savings Through Simple Maintenance

The most important points for daily maintenance of the Stereoloaders can be reached safely and conveniently from the ground. Quick and safe checks save time and money.

Exceptional Service Accessibility

Efficient and Simple Maintenance

Thanks to compact design and the unique mounting position of the components, the Stereoloaders offer exceptional accessibility for maintenance. The positioning of the cooling package laterally behind the operator's cab lowers contamination of the cooling system, reducing maintenance and cleaning requirements and saving time and money.

Safe and Free Service Access

All points requiring day-to-day maintenance can be reached comfortably, safely and cleanly from the ground. A mere walk-around inspection will suffice when the machine is handed over between operators. All check points and fluid levels are instantly visible during a machine walk-around.

Short Service Times for More Productivity

The entire engine compartment is accessible via just one access panel. Service points are easy to see and reach. Maintenance work can be carried out comfortably and safely from the ground. This ensures time-saving maintenance and increases productivity.

Strong Service Partner

Safe Partnership with Strong Service

When buying a Liebherr wheel loader the customer not only looks to a long-lived high-end product but also a reliable longterm partnership. A service network combined with a highly-modern central warehouse is available for optimum service and quick replacement part provision. This guarantees short routes and rapid support in the event of service. Round-the-clock if required.

Competent Liebherr Service Offers Maximum Reliability

Comprehensive know-how ensures a first-class execution of all service and maintenance work. This contributes decisively to the availability and profitability of your machine. Employees at Liebherr service partners are trained on an ongoing basis. They have extensive knowledge of quick and safe service performance. They can turn to the expertise of manufacturing plants at any time.

Low Maintenance

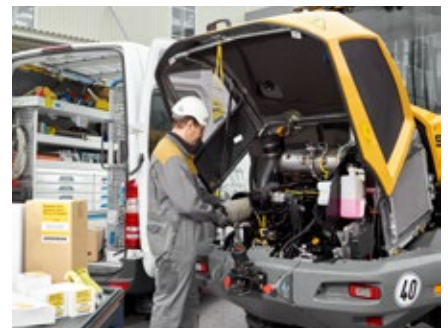
- Less contamination of the radiator thanks to its clever position laterally behind the operator's cab
- Quick and safe control saves time and money

Optimum Service Accessibility

- The entire engine compartment is accessible via just one enclosure
- All points for daily maintenance can be reached from the ground
- Short downtimes means more efficiency

Perfect Service for Optimum Machine Availability

- Quick and effective support thanks to an extensive service network
- Replacement parts service with 24-hour delivery
- Quick and reliable service carried out by qualified service specialists



Safety in and Around the Machine

Personnel Safety

- + Excellent all-round visibility
- + Optimal visibility of the equipment and the load
- + Comfortable and safe access for productive working
- ✓ Generous glass surfaces of the operator's cab
- ✓ Optimised visibility thanks to optimal cab and engine hood design
- ✓ Optimised hydraulic quick hitch
- ✓ Broad access ladder with anti-slip steps and sturdy handrails

Cargo Safety

- + Robust, durable lift arm
- + Quick working cycles
- + Safe lifting of the load without manual adjustment and without loss of load
- + Fast and safe positioning of the load
- + Safe transport of the load, even on uneven terrain
- ✓ Strong steel construction
- ✓ High-quality hydraulic components
- ✓ Powerful Z-bar linkage
- ✓ Unique oscillating centre pivot

Stability and Tipping Safety

- + Maximum stability and safety on all terrains
- + Maximum manoeuvrability
- + Comfortable and stable driving performance
- + Maximum productivity by high payload
- ✓ Stereo steering with just 30° angle of articulation
- ✓ Unique oscillating centre pivot
- ✓ Excellent ratio between operating weight and tipping load





Operating Safety

- + Increased performance and productivity
- + Focused operator work is supported
- + Simple handling, can be learned quickly
- + Efficient and simple checks to ensure the machine is safe to use
- ✓ New, modern and ergonomic cab design
- ✓ Control of working and travel functions with one control lever
- ✓ Ergonomic and intuitive arrangement of control instruments
- ✓ All maintenance and check points are easily accessible by walking around the machine

Safe and Versatile Usage

- + Performance-oriented and cost-optimised use
- + Efficient and flexible use, even in confined spaces
- + Flexible in use
- + High performance
- + Constant and reliable cooling
- + High machine availability through minimal cleaning expenses
- + Time savings in daily maintenance
- ✓ Most efficient hydrostatic driveline, Speeder optional
- ✓ Extreme agility thanks to stereo steering and oscillating centre pivot
- ✓ Wide range of attachments
- ✓ Stable machine design and robust components optimally suited to each other
- ✓ Controlled cooling
- ✓ The radiator is installed laterally behind the operator's cab
- ✓ Rapid control of all maintenance points from the ground

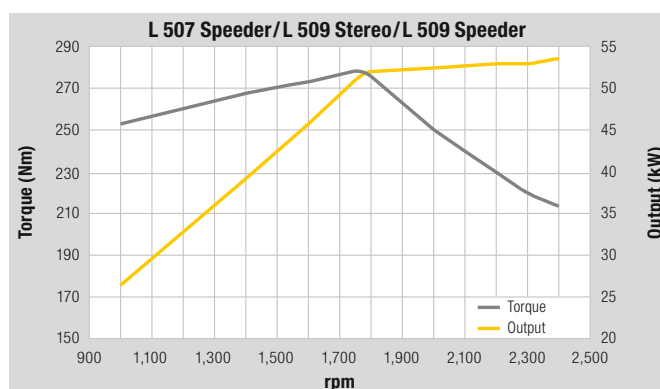
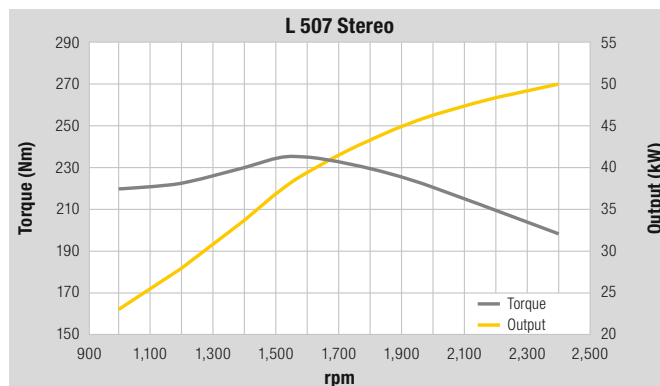
Technical Data



Engine

	L 507 Stereo	L 507 Speeder L 509 Stereo L 509 Speeder
Diesel engine	4TNV98C	4TNV98CT
Design	Water-cooled in-series diesel engine, exhaust gas treatment with a closed diesel particle filter system	Water-cooled turbocharged in-series diesel engine, exhaust gas treatment with a closed diesel particle filter system
Cylinder inline	4	4
Fuel injection process	Electronic Common Rail high-pressure injection	
Max. gross output to ISO 3046 and SAE J1995	kW/HP 50/68 at RPM 2,400	54/73 2,400
Max. net output to ISO 9249 and SAE J1349	kW/HP 48/65 at RPM 2,400	52/71 2,400
Rated output to ISO 14396	kW/HP 50/68 at RPM 2,400	54/73 2,400
Max. net torque to ISO 9249 and SAE J1349	Nm 237 at RPM 1,560	280 1,560
Displacement	litres 3.32	3.32
Bore/Stroke	mm 98/110	98/110
Air cleaner system	Dry type filter with main and safety element	
Electrical system		
Operating voltage	V 12	12
Capacity	Ah 100	100
Alternator	V/A 12/80	12/80
Starter	V/kW 12/3	12/3

The exhaust emissions are below the limits in stage V.



Driveline

	L 507 Stereo L 509 Stereo	L 507 Speeder L 509 Speeder
Hydrostatic driveline		
Design	Continuous, swash plate type variable flow pump and variable axial piston motor in closed loop circuit	2-speed automated gearbox, swash plate type variable flow pump and variable axial piston motor in closed loop circuit
Filtration	Suction return line filter for closed circuit	
Control	By travel and inching pedal. The inching pedal makes it possible to control the tractive and thrust forces steplessly at full engine speed. The Liebherr control lever is used to control forward and reverse travel	
Travel speed range	Speed range 1: 0 – 6 km/h Speed range 2: 0 – 20 km/h forward and reverse Speeds quoted apply with the tyres indicated as standard on loader model.	Speed range 1: 0 – 18 km/h Speed range 2: 0 – 38 km/h



Axles

	L 507 Stereo L 509 Stereo	L 507 Speeder L 509 Speeder
Four-wheel drive		
Front axle	Fixed	
Rear axle	Axle pivot steering, fixed	
Height of obstacles which can be driven over	mm 370	370
	with all four wheels remaining in contact with the ground	
Differentials	Automatic multi-disc limited slip differentials with 45 % locking action 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 (L 507) 1,630 mm with tyres indicated as standard (L 509)	



Brakes

	L 507 Stereo	L 507 Speeder
Service brake	Wear-free service brake due to hydrostatic driveline, applied to all four wheels and additional hydraulically activated drum brake	Wear-free service brake due to hydrostatic driveline, 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 on the drum 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.



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

	L 507	L 509
Design	Gear pump to supply the hydraulic and steering systems (via priority valve)	
Cooling	Hydraulic oil cooling using thermostatically controlled fan	
Filtration	Suction return line filter in the hydraulic reservoir	
Control	Liebherr control lever, hydraulically operated, 3rd and 4th electrically, proportional control circuit	
Lift circuit	Lifting, neutral, lowering Float position controlled by Liebherr control lever with detent, automatic hoist kick out optional	
Tilt circuit	Tilt back, neutral, dump Automatic bucket return to dig optional	
Max. flow	l/min. 70	93
Max. pressure	bar 230	210



Attachment

	L 507	L 509
Geometry	Powerful Z-bar linkage with tilt cylinder, hydraulic quick hitch as standard	
Cycle time at nominal load	ZK	ZK
Lifting	s 4.9	5.6
Dumping	s 1.7	2.0
Lowering (empty)	s 3.5	4.1



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/recirculated air mode, cab heating via cooling water, arrangement of the air nozzles ensures quick defrosting and defogging of the windows, electrically heated rear window



Sound Level

	L 507	L 509
Sound pressure level to ISO 6396		
L _{pA} (inside cab)	dB(A) 73	73
Sound power level to 2000/14/EC		
L _{WA} (surround noise)	dB(A) 101	101



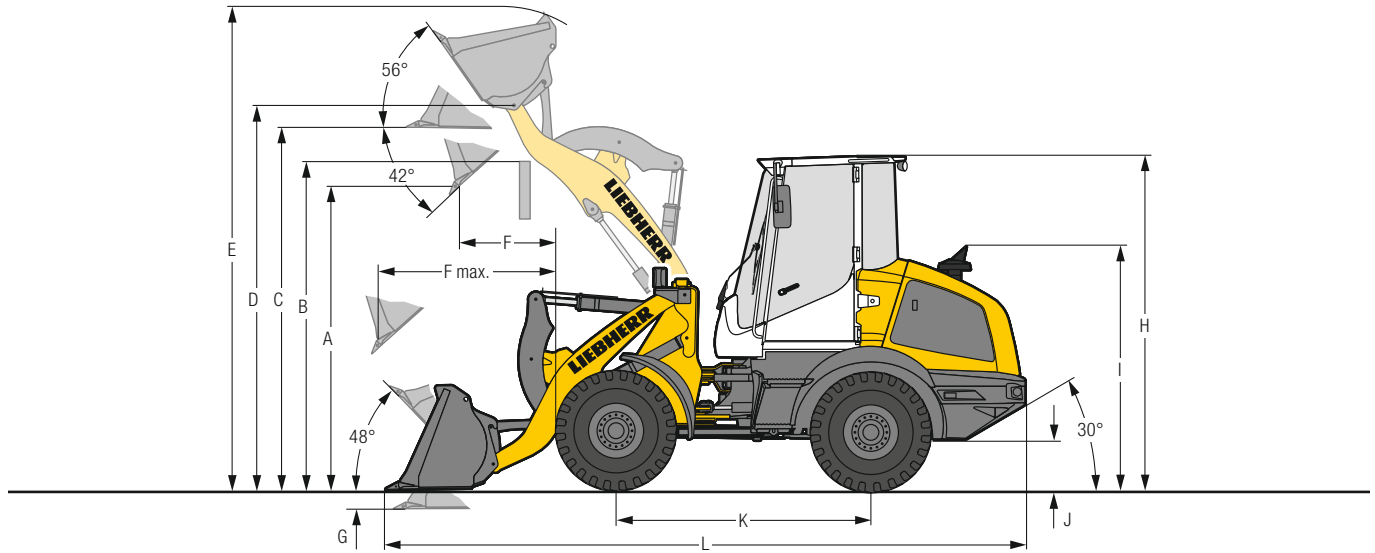
Capacities

	L 507 Stereo	L 507 Speeder	L 509 Stereo	L 509 Speeder
Fuel tank	l 90	90	90	90
Engine oil (inclusive filter change)	l 10.2	10.2	10.2	10.2
Travel gear/rear axle	l 0.8	1.3	0.8	1.3
Coolant	l 9	9	9	9
Front axle/differential	l 4.7	3.7	6.3	6.8
Rear axle/differential	l 3.5	4.3	5.7	6
Front axle/wheel hubs	l 1.4	1.4	1.4	1.4
Rear axle/wheel hubs	l 1.4	1.4	1.4	1.4
Hydraulic tank	l 65	65	65	65
Hydraulic system, total	l 102	102	102	102

Dimensions

Z-bar Linkage

L 507 / L 509



Excavation Bucket



		L 507		L 509	
		STD		STD	HL
		ZK-QH		ZK-QH	ZK-QH
		T		T	T
Geometry					
Cutting tools					
Lift arm length	mm	2,150		2,250	2,560
Bucket capacity according to ISO 7546**	m³	0.9		1.2	1.0
Specific material density	t/m³	1.8		1.8	1.8
Bucket width	mm	2,050		2,330	2,100
A Dumping height at max. lift height and 42° discharge	mm	2,550		2,645	3,145
B Dump-over height	mm	2,870		3,000	3,450
C Max. height of bucket bottom	mm	3,015		3,145	3,585
D Max. height of bucket pivot point	mm	3,215		3,345	3,785
E Max. operating height	mm	4,040		4,260	4,680
F Reach at max. lift height and 42° discharge	mm	815		910	875
F max. Max. reach at 42° discharge	mm	1,500		1,645	1,935
G Digging depth	mm	80		95	110
H Height above operator's cab	mm	2,750		2,780	2,780
I Height above exhaust	mm	1,980		2,010	2,010
J Ground clearance	mm	285		295	295
K Wheelbase	mm	2,150		2,300	2,300
L Overall length	mm	5,495		5,815	6,170
Turning circle radius over outside bucket edge	mm	3,885		4,225	4,325
Breakout force (SAE)	kN	48		55	59
Tipping load, straight*	kg	4,070		4,850	4,100
Tipping load, fully articulated*	kg	3,750		4,430	3,750
Operating weight*	kg	5,550		6,390	6,630
Tyre size		365/70R18 L2		405/70R18 L2	

* The figures shown include the above tyres, all lubricants, a full fuel tank, 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)

** Actual bucket capacity may be approx. 10 % larger than the calculation according to ISO 7546 standard. The degree to which the bucket can be filled depends on the material – see page 22.

STD = Standard lift arm length

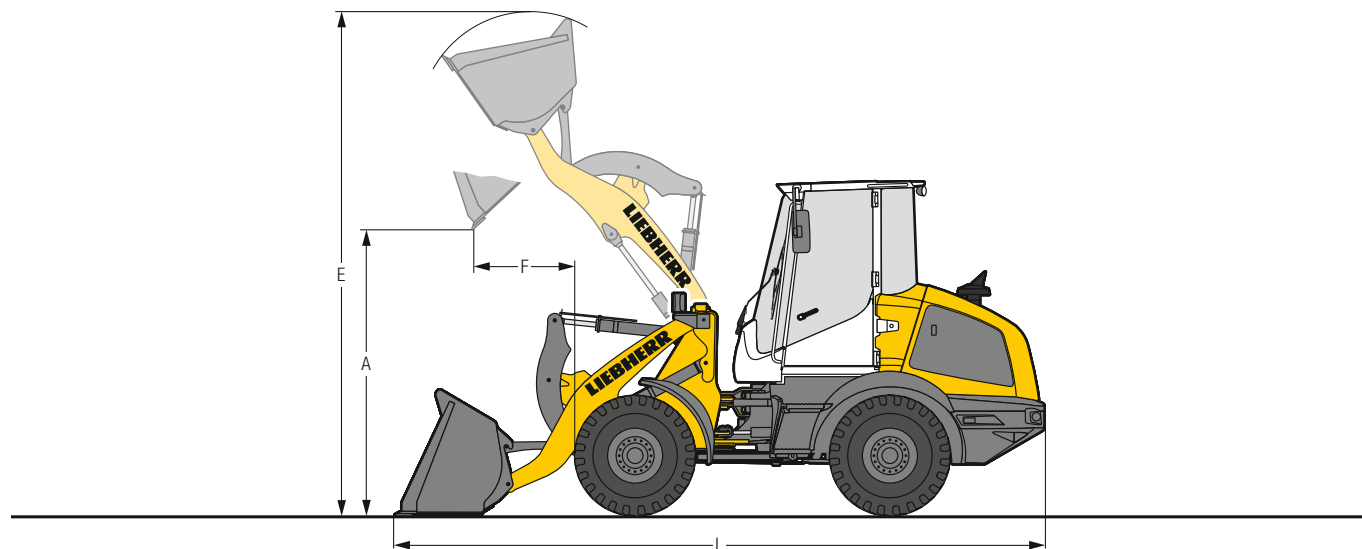
HL = High Lift

ZK-QH = Z-bar linkage incl. quick hitch

T = Welded-on tooth holder with add-on teeth

Attachment

Light Material Bucket



L 507 / L 509

Heavy Material Density



		L 507		L 509	
		STD	STD	STD	HL
Geometry		ZK-QH	ZK-QH	ZK-QH	ZK-QH
Cutting tools		BOCE	BOCE	BOCE	BOCE
Bucket capacity	m³	1.2	1.6	1.6	2.0
Specific material density	t/m³	1.4	1.0	1.3	1.0
Bucket width	mm	2,330	2,400	2,400	2,400
A Dumping height at max. lift height	mm	2,510	2,420	2,550	2,465
E Max. operating height	mm	4,130	4,205	4,330	4,485
F Reach at maximum lift height	mm	840	870	935	1,040
L Overall length	mm	5,465	5,580	5,820	5,960
Tipping load, straight*	kg	3,920	3,825	4,700	4,620
Tipping load, fully articulated*	kg	3,575	3,490	4,275	4,200
Operating weight*	kg	5,675	5,730	6,455	6,465
Tyre size		365/70R18 L2		405/70R18 L2	

* The figures shown include the above tyres, all lubricants, a full fuel tank, 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

HL = High Lift

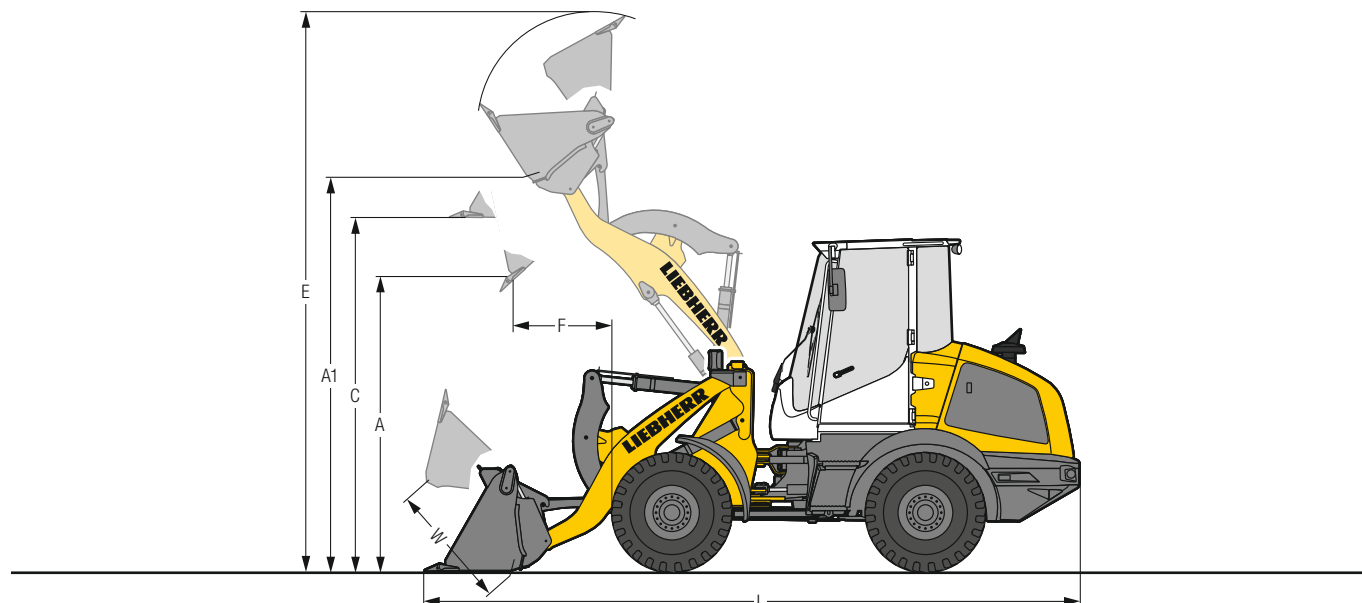
ZK-QH = Z-bar linkage incl. quick hitch

BOCE = Bolt-on cutting edge

Attachment

4 in 1 Bucket

L 507 / L 509



4 in 1 Bucket



		L 507		L 509	
		STD		STD	HL
Geometry		ZK-QH		ZK-QH	ZK-QH
Cutting tools		T		T	T
Bucket capacity	m ³	0.8		1.0	0.9
Specific material density	t/m ³	1.8		1.8	1.8
Bucket width	mm	2,100		2,330	2,100
A Dumping height at max. lift height and 42° discharge	mm	2,545		2,645	3,155
A1 Max. dumping height with opened bucket	mm	3,230		3,360	3,800
C Max. height of bucket bottom	mm	2,950		3,080	3,520
E Max. operating height	mm	4,720		4,895	5,285
F Reach at max. lift height and 42° discharge	mm	880		970	930
L Overall length	mm	5,585		5,885	6,205
W Max. bucket opening	mm	960		960	960
Turning circle radius over outside bucket edge	mm	3,975		4,285	4,310
Tipping load, straight*	kg	3,550		4,270	3,740
Tipping load, fully articulated*	kg	3,240		3,885	3,400
Operating weight*	kg	5,835		6,660	6,875
Tyre size		365/70R18 L2		405/70R18 L2	

* The figures shown include the above tyres, all lubricants, a full fuel tank, 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

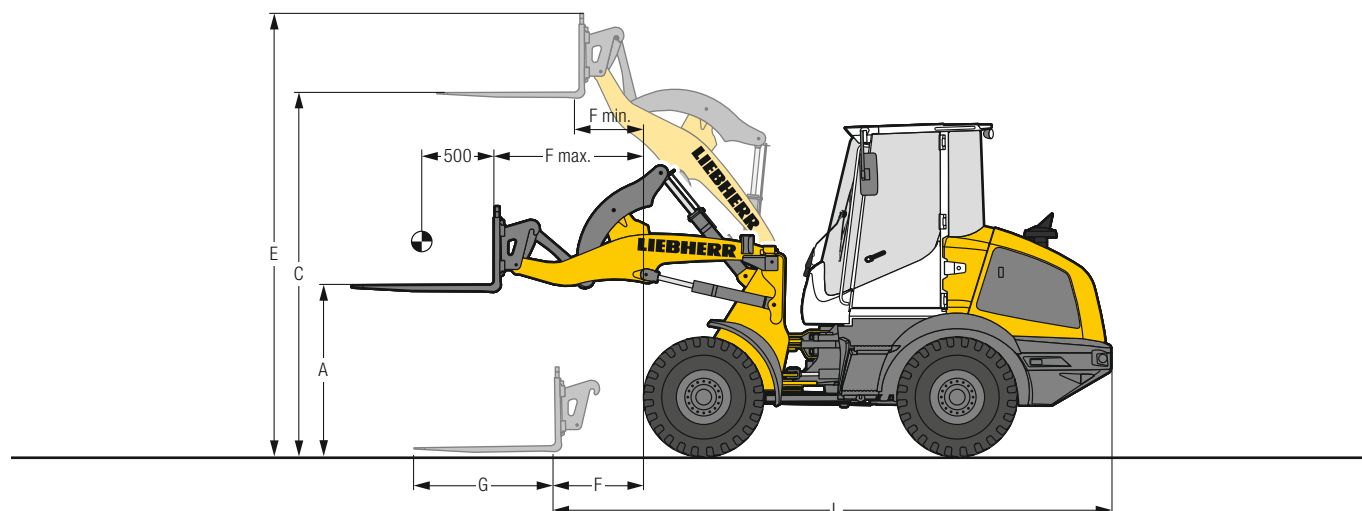
HL = High Lift

ZK-QH = Z-bar linkage incl. quick hitch

T = Welded-on tooth holder with add-on teeth

Attachment

Fork Carrier and Fork



FEM II Fork Carrier and Fork



		L 507		L 509	
		STD	STD	STD	HL
Geometry		ZK-QH	ZK-QH	ZK-QH	ZK-QH
A	Lifting height at max. reach	mm	1,450	1,500	1,490
C	Max. lifting height	mm	3,045	3,175	3,615
E	Max. operating height	mm	3,715	3,840	4,280
F	Reach at loading position	mm	740	810	1,200
F max.	Max. reach	mm	1,235	1,330	1,640
F min.	Reach at max. lifting height	mm	525	570	500
G	Fork length	mm	1,200	1,200	1,200
L	Length - basic machine	mm	4,825	5,040	5,425
	Tipping load, straight*	kg	3,215	3,840	3,400
	Tipping load, fully articulated*	kg	2,930	3,500	3,090
	Recommended payload for uneven ground = 60% of tipping load, articulated ³⁾	kg	1,820	2,100	1,850
	Recommended payload for smooth surfaces = 80% of tipping load, articulated ³⁾	kg	2,300 ¹⁾	2,500 ²⁾	2,470
	Operating weight*	kg	5,445	6,175	6,490
	Tyre size	365/70R18 L2		405/70R18 L2	

* The figures shown include the above tyres, all lubricants, a full fuel tank, 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)

¹⁾ Payload is limited by tilt cylinder - max. load capacity for the fork carrier FEM II 2,500 kg

²⁾ Payload is limited by FEM II fork carrier and forks to 2,500 kg

³⁾ According to EN 474-3

STD = Standard lift arm length

HL = High Lift

ZK-QH = Z-bar linkage incl. quick hitch

Bucket Selection

L 507 / L 509

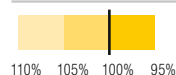
L 507

Lift arm	Bucket	Material density (t/m³)										
			0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	
ZK-QH	GPB 0.9 m³								1.0		0.9	
	LMB 1.2 m³						1.3		1.2			
	LMB 1.6 m³				1.8		1.6					
	4in1 0.8 m³							0.9		0.8		

L 509

Lift arm	Bucket	Material density (t/m³)										
			0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	
ZK-QH	GPB 1.2 m³								1.3		1.2	
	LMB 1.6 m³						1.8		1.6			
	LMB 2.0 m³					2.2		2.0				
	4in1 1.0 m³								1.1		1.0	
ZK-QH-HL	GPB 1.0 m³								1.1		1.0	
	LMB 1.6 m³					1.8		1.6				
	4in1 0.9 m³								1.0		0.9	

Bucket Filling Factor



Lift Arm

ZK	Z-bar linkage, standard lift arm length
ZK-QH	Z-bar linkage with quick hitch, standard lift arm length
ZK-QH-HL	Z-bar linkage with quick hitch, High Lift

Bucket

GPB	General purpose bucket (Excavation bucket)
LMB	Light material bucket
4in1	4 in 1 bucket

Bulk Material Densities and Bucket Filling Factors

		t/m³	%			t/m³	%			t/m³	%
Gravel	moist	1.9	105	Earth	dry	1.3	115	Glass waste	broken	1.4	100
	dry	1.6	105		wet excavated	1.6	110		solid	1.0	100
	crushed stone	1.5	100	Topsoil		1.1	110	Compost	dry	0.8	105
Sand	dry	1.5	105	Basalt		1.95	100		wet	1.0	110
	wet	1.9	110	Granite		1.8	95	Wood chips/Saw dust		0.5	110
Gravel and Sand	dry	1.7	105	Sandstone		1.6	100	Paper	shredded/loose	0.6	110
	wet	2.0	100	Slate		1.75	100		recovered paper/cardboard	1.0	110
Sand/Clay		1.6	110	Bauxite		1.4	100	Coal	heavy material density	1.2	110
Clay	natural	1.6	110	Limestone		1.6	100		light material density	0.9	110
	dry	1.4	110	Gypsum	broken	1.8	100	Waste	domestic waste	0.5	100
Clay/Gravel	dry	1.4	110	Coke		0.5	110		bulky waste	1.0	100
	wet	1.6	100	Slag	broken	1.8	100				

Tyres



Tyre Types

	Size and tread code		Change of operating weight kg	Width over tyres mm	Change in vertical dimensions* mm	Use
L 507						
Dunlop	365/70R18 SP T9	L2	− 16	1,920	1	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	405/70R18 SP T9	L2	40	1,950	24	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	365/80R20 SP T9	L2	60	1,910	56	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	405/70R20 SP T9	L2	96	1,950	50	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	15.5/55R18 SP PG7	L2	− 32	1,920	− 28	Sand, Gravel, Asphalt (all ground conditions)
Firestone	340/80R18 Duraforce UT	L3	21	1,900	15	Gravel, Asphalt, Industry (all ground conditions)
Firestone	405/70R18 Duraforce UT	L3	92	1,960	23	Gravel, Asphalt, Industry (all ground conditions)
Firestone	365/80R20 Duraforce UT	L3	80	1,920	53	Gravel, Asphalt, Industry (all ground conditions)
Firestone	400/70R20 Duraforce UT	L3	122	1,950	43	Gravel, Asphalt, Industry (all ground conditions)
Firestone	400/70R20 R8000 UT	L2	99	1,950	43	Earthworks, Green area (all ground conditions)
Michelin	9.00R20 X MINE D2	L5	324	1,900	47	Stone, Scrap, Recycling (firm ground conditions)
Michelin	400/70R20 BIBLOAD	L3	96	1,950	38	Gravel, Asphalt, Industry (firm ground conditions)
Michelin	400/70R20 XMCL	L2	112	1,960	44	Earthworks, Green area (all ground conditions)
Mitas	365/70R18 EM-01	L2	0	1,920	0	Gravel, Asphalt (all ground conditions)
Mitas	365/80R20 EM-01	L2	72	1,920	52	Gravel, Asphalt (all ground conditions)
Mitas	405/70R18 EM-01	L2	56	1,960	25	Gravel, Asphalt (all ground conditions)
Mitas	405/70R20 EM-01	L2	92	1,960	50	Gravel, Asphalt (all ground conditions)
Trelleborg	400/70R20 TH400	L2	106	1,950	38	Earthworks, Green area (all ground conditions)
L 509						
Dunlop	365/80R20 SP T9	L2	4	2,040	31	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	405/70R18 SP T9	L2	− 16	2,080	− 1	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	405/70R20 SP T9	L2	40	2,080	25	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	455/70R20 SP T9	L2	110	2,160	54	Sand, Gravel, Asphalt (all ground conditions)
Dunlop	15.5/55R18 SP PG7	L2	− 88	2,050	− 53	Sand, Gravel, Asphalt (all ground conditions)
Firestone	365/80R20 Duraforce UT	L3	24	2,050	28	Gravel, Asphalt, Industry (all ground conditions)
Firestone	400/70R20 Duraforce UT	L3	66	2,080	18	Gravel, Asphalt, Industry (all ground conditions)
Firestone	405/70R18 Duraforce UT	L3	36	2,090	− 2	Gravel, Asphalt, Industry (all ground conditions)
Firestone	400/70R20 R8000 UT	L2	43	2,080	18	Earthworks, Green area (all ground conditions)
Michelin	9.00R20 X MINE D2	L5	268	2,030	22	Stone, Scrap, Recycling (firm ground conditions)
Michelin	400/70R20 BIBLOAD	L3	40	2,080	13	Gravel, Asphalt, Industry (firm ground conditions)
Michelin	400/70R20 XMCL	L2	56	2,090	19	Earthworks, Green area (all ground conditions)
Mitas	405/70R18 EM-01	L2	0	2,090	0	Gravel, Asphalt (all ground conditions)
Mitas	365/80R20 EM-01	L2	16	2,050	27	Gravel, Asphalt (all ground conditions)
Mitas	405/70R20 EM-01	L2	36	2,090	25	Gravel, Asphalt (all ground conditions)
Trelleborg	400/70R20 TH400	L2	50	2,080	13	Earthworks, Green area (all ground conditions)

* The stated values are theoretical and may deviate in practice.

Before operating the vehicle with tyre foam filling or tyre protection chains, please discuss this with the Liebherr-Werk Bischofshofen GmbH.

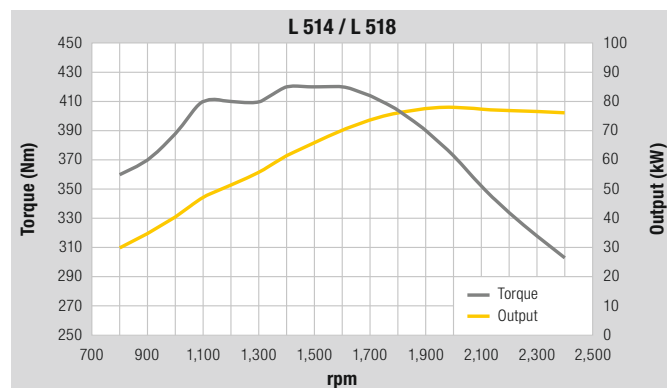
Technical Data



Engine

	L 514	L 518
Diesel engine	4045HB551	4045HB551
Design	Water-cooled turbocharged in-series engine, intercooler, exhaust gas treatment with a closed diesel particle filter system and SCR technology	
Cylinder inline	4	4
Fuel injection process	Electronic Common Rail high-pressure injection	
Max. gross output to ISO 3046 and SAE J1995	kW/HP 78/106 at RPM 2,000	78/106 2,000
Max. net output to ISO 9249 and SAE J1349	kW/HP 76/103 at RPM 2,000	76/103 2,000
Rated output to ISO 14396	kW/HP 76/103 at RPM 2,400	76/103 2,400
Max. net torque to ISO 9249 and SAE J1349	Nm 405 at RPM 1,600	405 1,600
Displacement	litres 4.5	4.5
Bore/Stroke	mm 106/127	106/127
Air cleaner system	Dry type filter with main and safety element	
Electrical system		
Operating voltage	V 12	12
Battery	Ah 100	100
Alternator	V/A 12/90	12/90
Starter	V/kW 12/4.2	12/4.2

The exhaust emissions are below the limits in stage V.



Driveline

	L 514 Stereo L 518 Stereo	L 514 Speeder L 518 Speeder
Hydrostatic driveline		
Design	Continuous, swash plate type variable flow pump and variable axial piston motor in closed loop circuit	2-speed automated gearbox, swash plate type variable flow pump and variable axial piston motor in closed loop circuit
Filtration	Suction return line filter for closed circuit	
Control	By travel and inching pedal. The inching pedal makes it possible to control the tractive and thrust forces steplessly at full engine speed. The Liebherr control lever is used to control forward and reverse travel	
Travel speed range	Speed range 1: 0 – 8 km/h Speed range 2: 0 – 25 km/h Forward and reverse with tyre size 17.5R25 Speeds quoted apply with the tyres indicated as standard on loader model.	Speed range 1: 0 – 18 km/h Speed range 2: 0 – 40 km/h



Axles

	L 514	L 518
Four-wheel drive		
Front axle	Fixed	
Rear axle	Axle pivot steering, with 5° oscillating angle to each side	
Height of obstacles which can be driven over	mm 600	600
	with all four wheels remaining in contact with the ground	
Differentials	Automatic multi-disc limited slip differentials with 45 % locking action in both axles	
Reduction gear	Planetary final drive in wheel hubs	
Track width	1,870 mm with tyres indicated as standard	



Brakes

	L 514 Stereo L 518 Stereo	L 514 Speeder L 518 Speeder
Service brake	Wear-free service brake due to hydrostatic driveline, applied to all four wheels and additional hydraulically activated drum brake	Wear-free service brake due to hydrostatic driveline, 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 on the drum 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.



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	5° to each side
Max. pressure	bar 180



Attachment Hydraulics

	L 514	L 518
Design	Gear pump to supply the hydraulic and steering systems (via priority valve)	
Cooling	Hydraulic oil cooling using thermostatically controlled fan	
Filtration	Return line filter in the hydraulic reservoir	
Control	Liebherr control lever, hydraulically operated, with load-dependent delivery rate distribution, 3rd and 4th electrically, proportional control circuit	
Lift circuit	Lifting, neutral, lowering Float position controlled by Liebherr control lever with detent, automatic hoist kick out optional	
Tilt circuit	Tilt back, neutral, dump Automatic bucket return to dig	
Max. flow	l/min. 115	115
Max. pressure	bar 240	280



Attachment

	L 514	L 518
Geometry	Powerful Z-bar linkage with tilt cylinder, hydraulic quick hitch optional	
Bearings	Sealed	
Cycle time at nominal load	ZK	ZK
Lifting	s 6.9	6.9
Dumping	s 3.0	3.0
Lowering (empty)	s 4.9	4.9



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
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/recirculated air mode, cab heating via cooling water, arrangement of the air nozzles ensures quick defrosting and defogging of the windows, electrically heated rear window



Sound Level

	L 514	L 518
Sound pressure level to ISO 6396		
L _{PA} (inside cab)	dB(A) 70	70
Sound power level to 2000/14/EC		
L _{WA} (surround noise)	dB(A) 101	101



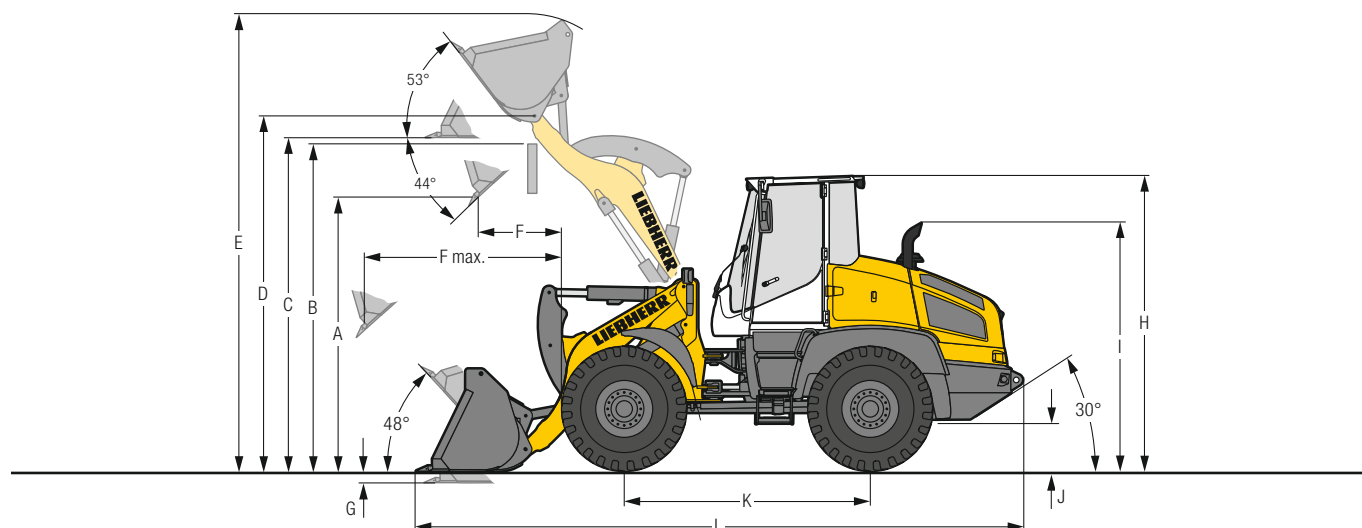
Capacities

	L 514 Stereo	L 514 Speeder	L 518 Stereo	L 518 Speeder
Fuel tank	l 155	155	155	155
Engine oil (inclusive filter change)	l 14	14	14	14
DEF tank	l 18	18	18	18
Travel gear/rear axle	l 1	2	1	2
Coolant	l 21	21	21	21
Front axle/differential	l 7.5	7.5	7.5	7.5
Rear axle/differential	l 7.5	7.5	7.5	7.5
Front axle/wheel hubs	l 1.5	1.5	4	4
Rear axle/wheel hubs	l 1.5	1.5	4	4
Hydraulic tank	l 72	72	72	72
Hydraulic system, total	l 115	115	115	115

Dimensions

Z-bar Linkage

L 514 / L 518



Excavation Bucket



		L 514			L 518		
		STD	STD	HL	STD	STD	HL
		ZK	ZK-QH	ZK-QH	ZK	ZK-QH	ZK-QH
		T	T	T	T	T	T
	Lift arm length	mm	2,400	2,400	2,645	2,400	2,645
	Bucket capacity according to ISO 7546**	m³	1.5	1.4	1.3	1.7	1.5
	Specific material density	t/m³	1.8	1.8	1.6	1.8	1.6
	Bucket width / Bucket weight	mm	2,400 / 620	2,400 / 590	2,400 / 540	2,400 / 655	2,400 / 565
A	Dumping height at max. lift height and 44° discharge	mm	2,915	2,915	3,170	2,875	2,835
B	Dump-over height	mm	3,350	3,370	3,645	3,350	3,370
C	Max. height of bucket bottom	mm	3,490	3,500	3,785	3,485	3,480
D	Max. height of bucket pivot point	mm	3,720	3,720	4,010	3,720	4,010
E	Max. operating height	mm	4,735	4,795	5,020	4,770	4,805
F	Reach at max. lift height and 44° discharge	mm	820	785	860	865	905
F max.	Max. reach at 44° discharge	mm	1,640	1,630	1,915	1,680	1,725
G	Digging depth	mm	75	70	125	80	70
H	Height above operator's cab	mm	3,025	3,025	3,025	3,025	3,025
I	Height above exhaust	mm	2,525	2,525	2,525	2,525	2,525
J	Ground clearance	mm	430	430	430	430	430
K	Wheelbase	mm	2,600	2,600	2,600	2,600	2,600
L	Overall length	mm	6,400	6,360	6,750	6,445	6,500
	Turning circle radius over outside bucket edge	mm	4,510	4,450	4,675	4,560	4,565
	Breakout force (SAE)	kN	73	68	70	80	75
	Tipping load, straight*	kg	6,280	6,095	5,275	7,160	6,860
	Tipping load, fully articulated*	kg	5,750	5,575	4,825	6,550	6,280
	Operating weight*	kg	8,860	9,070	9,120	9,190	9,320
	Tyre size	17.5R25 L3			17.5R25 L3		

* The figures shown include the above tyres, all lubricants, a full fuel tank, 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)

** Actual bucket capacity may be approx. 10 % larger than the calculation according to ISO 7546 standard. The degree to which the bucket can be filled depends on the material – see page 30.

STD = Standard lift arm length

HL = High Lift

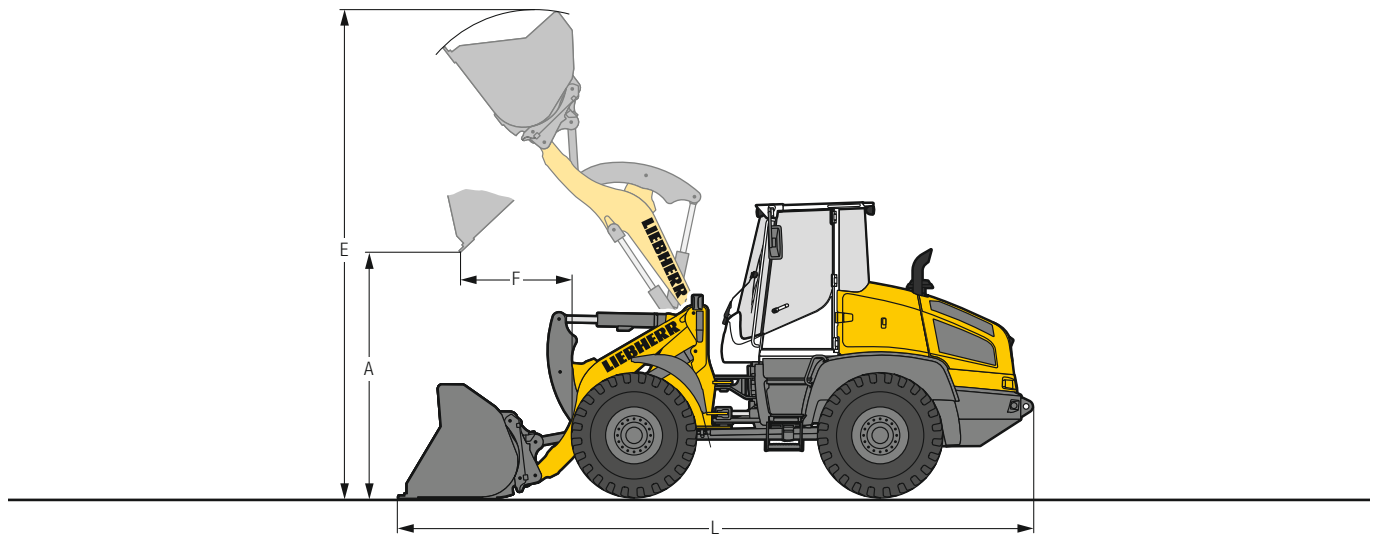
ZK = Z-bar linkage

ZK-QH = Z-bar linkage incl. quick hitch

T = Welded-on tooth holder with add-on teeth

Attachment

Light Material Bucket



L 514/L 518

Heavy Material Density



		L 514		L 518	
		STD	HL	STD	HL
Geometry		ZK-QH	ZK-QH	ZK-QH	ZK-QH
Cutting tools		BOCE	BOCE	BOCE	BOCE
Bucket capacity	m³	2.0	2.0	2.5	2.0
Specific material density	t/m³	1.3	1.0	1.1	1.2
Bucket width	mm	2,500	2,500	2,500	2,500
A Dumping height at max. lift height	mm	2,745	3,020	2,630	3,020
E Max. operating height	mm	4,970	5,265	5,105	5,265
F Reach at maximum lift height	mm	1,010	1,020	1,130	1,020
L Overall length	mm	6,540	6,865	6,730	6,865
Tipping load, straight*	kg	5,680	4,955	6,395	5,370
Tipping load, fully articulated*	kg	5,200	4,535	5,850	4,915
Operating weight*	kg	9,250	9,350	9,610	9,625
Tyre size		17.5R25 L3		17.5R25 L3	

* The figures shown include the above tyres, all lubricants, a full fuel tank, 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

HL = High Lift

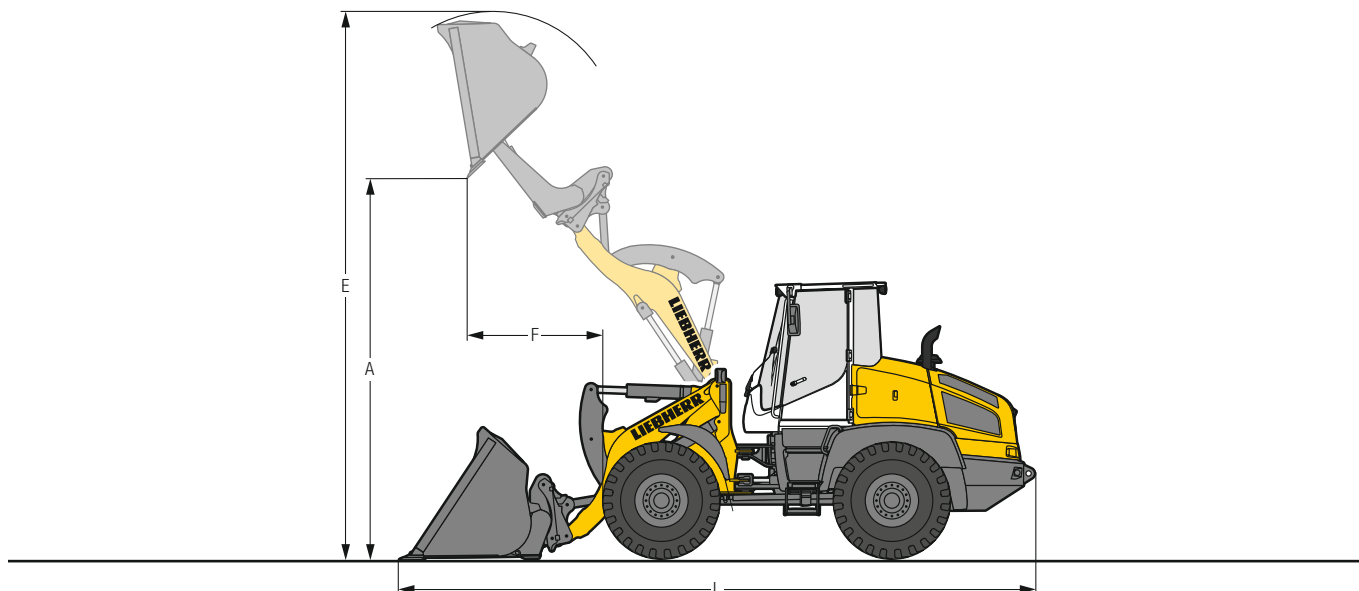
ZK-QH = Z-bar linkage incl. quick hitch

BOCE = Bolt-on cutting edge

Attachment

High-Dump Bucket

L 514 / L 518



Heavy Material Density



		L 514		L 518	
		STD	HL	STD	HL
Geometry		ZK-QH	ZK-QH	ZK-QH	ZK-QH
Cutting tools		BOCE	BOCE	BOCE	BOCE
Bucket capacity	m ³	2.2	1.8	2.5	2.0
Specific material density	t/m ³	1.0	1.0	1.0	1.0
Bucket width	mm	2,500	2,200	2,500	2,490
A Dumping height at max. lift height	mm	4,200	4,580	4,200	4,560
E Max. operating height	mm	5,760	6,060	5,850	5,970
F Reach at maximum lift height	mm	1,400	1,470	1,380	1,490
L Overall length	mm	6,965	7,300	6,965	7,240
Tipping load, straight*	kg	4,655	4,150	5,600	4,550
Tipping load, fully articulated*	kg	4,260	3,800	5,120	4,160
Operating weight*	kg	9,985	9,870	10,280	10,050
Tyre size		17.5R25 L3		17.5R25 L3	

Light Material Density



		L 514		L 518	
		STD	HL	STD	HL
Geometry		ZK-QH	ZK-QH	ZK-QH	ZK-QH
Cutting tools		BOCE	BOCE	BOCE	BOCE
Bucket capacity	m ³	3.5	3.0	4.0	3.5
Specific material density	t/m ³	0.5	0.5	0.5	0.5
Bucket width	mm	2,700	2,700	2,700	2,700
A Dumping height at max. lift height	mm	4,295	4,410	4,275	4,615
E Max. operating height	mm	6,045	6,115	6,200	6,355
F Reach at maximum lift height	mm	1,540	1,400	1,525	1,560
L Overall length	mm	7,170	7,235	7,170	7,500
Tipping load, straight*	kg	4,455	4,125	5,495	4,230
Tipping load, fully articulated*	kg	4,075	3,770	5,025	3,870
Operating weight*	kg	9,935	9,930	10,445	10,305
Tyre size		17.5R25 L3		17.5R25 L3	

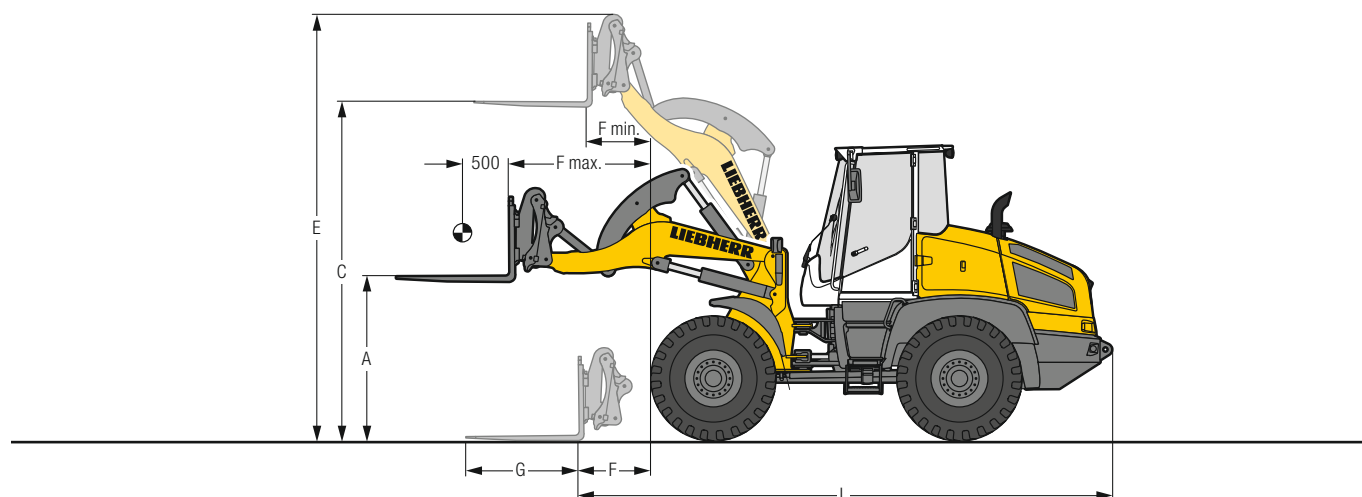
* The figures shown include the above tyres, all lubricants, a full fuel tank, the ROPS/FOPS cab and the operator. Different tyres and optional equipment will change the operating weight and tipping load. (Tipping load, fully articulated according to ISO 14397-1)

STD = Standard lift arm length
HL = High Lift

ZK-QH = Z-bar linkage incl. quick hitch
BOCE = Bolt-on cutting edge

Attachment

Fork Carrier and Fork



L 514/L 518

FEM III Fork Carrier and Fork



		L 514		L 518	
		STD	HL	STD	HL
	Geometry	ZK-QH	ZK-QH	ZK-QH	ZK-QH
A	Lifting height at max. reach	mm	1,745	1,725	1,725
C	Max. lifting height	mm	3,575	3,865	3,865
E	Max. operating height	mm	4,495	4,785	4,785
F	Reach at loading position	mm	765	1,095	1,095
F max.	Max. reach	mm	1,460	1,705	1,705
F min.	Reach at max. lifting height	mm	615	645	645
G	Fork length	mm	1,200	1,200	1,200
L	Length – basic machine	mm	5,640	5,970	5,970
	Tipping load, straight*	kg	4,500	3,980	4,550
	Tipping load, fully articulated *	kg	4,120	3,640	4,160
	Recommended payload for uneven ground = 60 % of tipping load, articulated ¹⁾	kg	2,475	2,185	2,495
	Recommended payload for smooth surfaces = 80 % of tipping load, articulated ¹⁾	kg	3,300	2,900	3,330
	Operating weight*	kg	8,930	9,030	9,200
	Tyre size	17.5R25 L3		17.5R25 L3	

* The figures shown include the above tyres, all lubricants, a full fuel tank, 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)

¹⁾ According to EN 474-3

STD = Standard lift arm length

HL = High Lift

ZK-QH = Z-bar linkage incl. quick hitch

Bucket Selection

L 514 / L 518

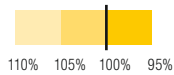
L 514

Lift arm	Bucket	Material density (t/m³)										
			0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	
ZK	GPB	1.5 m³							1.7		1.5	
	GPB	1.4 m³							1.5		1.4	
	LMB	2.0 m³					2.2		2.0			
ZK-QH	HDB	2.2 m³			2.4		2.2					
	HDB	3.5 m³		3.5								
	GPB	1.3 m³						1.4		1.3		
ZK-QH-HL	LMB	2.0 m³			2.2		2.0					
	HDB	1.8 m³			2.0		1.8					
	HDB	3.0 m³		3.0								

L 518

Lift arm	Bucket	Material density (t/m³)										
			0.4	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	
ZK	GPB	1.7 m³							1.9		1.7	
	GPB	1.5 m³							1.7		1.5	
	LMB	2.5 m³					2.8		2.5			
ZK-QH	HDB	2.5 m³					2.8		2.5			
	HDB	4.0 m³		4.0								
	GPB	1.4 m³						1.5		1.4		
ZK-QH-HL	LMB	2.0 m³					2.2		2.0			
	HDB	2.0 m³					2.2		2.0			
	HDB	3.5 m³		3.5								

Bucket Filling Factor



Lift Arm

ZK	Z-bar linkage, standard lift arm length
ZK-QH	Z-bar linkage with quick hitch, standard lift arm length
ZK-QH-HL	Z-bar linkage with quick hitch, High Lift

Bucket

GPB	General purpose bucket (Excavation bucket)
LMB	Light material bucket
HDB	High-dump bucket

Bulk Material Densities and Bucket Filling Factors

		t/m³	%			t/m³	%			t/m³	%
Gravel	moist	1.9	105	Earth	dry	1.3	115	Glass waste	broken	1.4	100
	dry	1.6	105		wet excavated	1.6	110		solid	1.0	100
	crushed stone	1.5	100	Topsoil		1.1	110	Compost	dry	0.8	105
Sand	dry	1.5	105	Basalt		1.95	100		wet	1.0	110
	wet	1.9	110	Granite		1.8	95	Wood chips/Saw dust		0.5	110
Gravel and Sand	dry	1.7	105	Sandstone		1.6	100	Paper	shredded/loose	0.6	110
	wet	2.0	100	Slate		1.75	100		recovered paper/cardboard	1.0	110
Sand/Clay		1.6	110	Bauxite		1.4	100	Coal	heavy material density	1.2	110
Clay	natural	1.6	110	Limestone		1.6	100		light material density	0.9	110
	dry	1.4	110	Gypsum	broken	1.8	100	Waste	domestic waste	0.5	100
Clay/Gravel	dry	1.4	110	Coke		0.5	110		bulky waste	1.0	100
	wet	1.6	100	Slag	broken	1.8	100				

Tyres



Tyre Types

	Size and tread code		Change of operating weight kg	Width over tyres mm	Change in vertical dimensions* mm	Use
L 514						
Bridgestone	550/65R25 VTS	L3	377	2,470	12	Gravel (all ground conditions)
Bridgestone	17.5R25 VSDL	L5	628	2,360	57	Stone, Scrap, Recycling (firm ground conditions)
Goodyear	17.5R25 RL-4K	L4	545	2,370	42	Gravel, Industry, Stone (firm ground conditions)
Goodyear	17.5R25 RL-5K	L5	669	2,370	42	Stone, Scrap, Recycling (firm ground conditions)
Michelin	17.5R25 XLD D2A	L5	354	2,370	37	Stone, Mining spoil (firm ground conditions)
Michelin	17.5R25 X MINE PRO	L5	541	2,400	45	Stone, Scrap, Recycling (firm ground conditions)
L 518						
Bridgestone	550/65R25 VTS	L3	391	2,470	12	Gravel (all ground conditions)
Bridgestone	17.5R25 VSDL	L5	580	2,360	57	Stone, Scrap, Recycling (firm ground conditions)
Goodyear	17.5R25 RL-4K	L4	559	2,370	42	Gravel, Industry, Stone (firm ground conditions)
Goodyear	17.5R25 RL-5K	L5	683	2,370	42	Stone, Scrap, Recycling (firm ground conditions)
Michelin	17.5R25 XLD D2A	L5	368	2,370	37	Stone, Mining spoil (firm ground conditions)
Michelin	17.5R25 X MINE PRO	L5	555	2,400	45	Stone, Scrap, Recycling (firm ground conditions)
L 514/L 518						
Bridgestone	17.5R25 VJT	L3	91	2,360	18	Bulk material (firm ground conditions)
Bridgestone	17.5R25 VUT	L2	− 47	2,360	4	Gravel, Earthworks, Clay (all ground conditions)
Goodyear	17.5R25 RT-3B	L3	165	2,380	21	Gravel (all ground conditions)
Goodyear	17.5R25 TL-3A+	L3	233	2,380	23	Sand, Gravel, Earthworks, Clay (all ground conditions)
Michelin	17.5R25 XHA	L3	0	2,370	0	Sand, Gravel (all ground conditions)
Michelin	17.5R25 XHA2	L3	− 43	2,380	1	Sand, Gravel (all ground conditions)

* The stated values are theoretical and may deviate in practice.

Before operating the vehicle with tyre foam filling or tyre protection chains, please discuss this with the Liebherr-Werk Bischofshofen GmbH.

Tipping Load



What is tipping load?
Load at centre of gravity of working equipment, so that the wheel loader just begins to tip over the front axle.
This is the most unfavourable static-load position for the wheel loader. Lifting arms horizontal, wheel loader fully articulated at centre pivot.






Pay load.
The pay load must not exceed 50 % of the tipping load when articulated.
This is equivalent to a static stability-margin factor of 2.0.






Bucket capacity.
The bucket volume is determined from the pay load.






Pay load = $\frac{\text{Tipping load, articulated}}{2}$

Bucket capacity = $\frac{\text{Pay load (t)}}{\text{Specific bulk weight of material (t/m}^3\text{)}}$

The Liebherr Wheel Loaders

Wheel Loader						
		L 506 Compact	L 507 Stereo	L 508 Compact	L 509 Stereo	L 514 Stereo
Tipping load	kg	3,450	3,750	3,850	4,430	5,750
Bucket capacity	m³	0.8	0.9	1.0	1.2	1.5
Operating weight	kg	5,180	5,550	5,600	6,390	8,860
Engine output (ISO 14396)	kW/HP	46/63	50/68	50/68	54/73	76/103


Wheel Loader						
		L 518 Stereo	L 526	L 538	L 546	L 550 XPower®
Tipping load	kg	6,550	7,700	9,500	10,500	12,200
Bucket capacity	m³	1.7	2.1	2.6	2.8	3.2
Operating weight	kg	9,190	11,250	13,500	14,200	17,700
Engine output (ISO 14396)	kW/HP	76/103	100/136	111/151	120/163	140/190

Wheel Loader						
		L 556 XPower®	L 566 XPower®	L 576 XPower®	L 580 XPower®	L 586 XPower®
Tipping load	kg	13,700	15,900	17,600	19,200	21,600
Bucket capacity	m³	3.6	4.2	4.7	5.2	6.0
Operating weight	kg	18,400	23,900	25,700	27,650	32,600
Engine output (ISO 14396)	kW/HP	165/224	200/272	215/292	230/313	260/354

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Equipment


 Basic Wheel Loader	L 507	L 509	L 514	L 518
Crash protection, rear	–	–	+	+
Connection for electrical equipment 7-pole	+	+	+	+
Automatic central lubrication system	+	+	+	+
Battery main switch (lockable)	•	•	•	•
Tool kit	•	•	•	•
Diesel particle filter	•	•	–	–
Ride control	+	+	+	+
Parking brake	•	•	•	•
Fluff trap for radiator	–	–	+	+
Complete drive shaft protection	–	–	+	+
Speed limitation 20 km/h as a factory preset	•	•	+	+
Speed limitation adjustable on key	+	+	+	+
DEF tank	–	–	•	•
Pre-heat system for cold starting	•	•	•	•
Rear license panel light	+	+	+	+
Combined inching-braking system	•	•	•	•
Fuel pre-filter	•	•	•	•
Fuel pre-filter with pre-heating	–	–	+	+
Large-mesh radiator	–	–	+	+
Cooling water pre-heating 220 V	+	+	+	+
Multi-disc limited slip differentials in both axles	•	•	•	•
Liebherr biodegradable hydraulic oil	+	+	+	+
Reversible fan drive	+	+	+	+
Guard for headlights	+	+	+	+
SCR technology incl. diesel particle filter	–	–	•	•
Special paint	+	+	+	+
Speeder version	+	+	+	+
Auxiliary heater (Additional heating with engine preheating)	+	+	+	+
Power socket rear (13-pole, 12 V)	+	+	+	+
Lockable doors and engine hood	•	•	•	•
Load lashing lugs	•	•	•	•
Air pre-cleaner	+	+	+	+
Towing hitch	•	•	•	•

 Equipment	L 507	L 509	L 514	L 518
Working hydraulics lockout	•	•	•	•
Automatic hoist kick-out	+	+	+	+
Automatic bucket return	+	+	•	•
Fork carrier and pallet forks	+	+	+	+
High-Flow hydraulic	+	+	–	–
High-dump bucket	+	+	+	+
Lift arm Z-bar linkage	•	•	•	•
Lift arm Z-bar linkage High Lift	–	+	+	+
Hydraulic connections rear	+	+	+	+
Hydraulic quick hitch	•	•	+	+
Tilt cylinder protection	+	+	+	+
Loading buckets incl. a range of cutting tools	+	+	+	+
Light material bucket	+	+	+	+
Load holding valves	+	+	+	+
Float position	•	•	•	•
Control lever lock	+	+	+	+
3rd electro-hydraulic, proportional control circuit	+	+	+	+
3rd and 4th electro-hydraulic, proportional control circuit	+	+	+	+

Equipment

 Operator's Cab	L 507	L 509	L 514	L 518
Storage compartment	•	•	•	•
Storage box	•	•	•	•
Exterior mirror, tiltable	•	•	•	•
Exterior mirror, tiltable and heatable	+	+	+	+
Fold-out window right 180°	•	•	•	•
Operating hour meter (integrated in display unit)	•	•	•	•
Display with tilting and height adjustment function	•	•	•	•
Electronical theft protection with key	+	+	+	+
Operator seat "Comfort" – air sprung with seat heating	+	+	+	+
Operator seat "Standard" – mechanically sprung	•	•	•	•
Particle filter F5	•	•	•	•
Fire extinguisher in cab 2 kg	+	+	+	+
Cup holder	•	•	•	•
Inching device hand operated	+	+	+	+
Rear window heated electrically	•	•	•	•
Floor mat	•	•	•	•
Clothes hook	•	•	•	•
Air conditioning system	+	+	+	+
3 way continuously adjustable steering column (height-adjustable, tilting, folding)	+	+	+	+
Steering column folding	+	+	•	•
Steering column fixed	•	•	–	–
LiDAT (Liebherr data transfer system)	+	+	+	+
Liebherr control lever with mini-joystick for 3rd and 4th electrically, proportional control circuit moving with operator's seat	+	+	+	+
Liebherr control lever moving with operator's seat (incl. travel direction)	•	•	•	•
Emergency exit	•	•	•	•
Preparation for radio installation	+	+	+	+
Radio Liebherr "Comfort" (SD/USB/AUX/BLUETOOTH/handsfree set)	+	+	+	+
Radio Liebherr "Standard" (SD/USB/AUX)	+	+	+	+

• = Standard
+ = Option
– = not available

 Operator's Cab	L 507	L 509	L 514	L 518
Interior rear-view mirror	•	•	•	•
Amber beacon LED	+	+	+	+
Soundproof ROPS/FOPS cab	•	•	•	•
Wipe system front/rear	•	•	•	•
Headlights rear, single design, halogen/LED	+	+	+	+
Headlights rear, double design, LED	+	+	+	+
Headlights front, single design, halogen	•	•	•	•
Headlights front, single design, LED	+	+	+	+
Headlights front, double design, LED	+	+	+	+
Sliding window left	+	+	+	+
Windscreen guard	+	+	+	+
Sunblind front/rear	+	+	+	+
Power socket 12 V	•	•	•	•
First aid kit	+	+	+	+
Hot-water heater with defroster and recirculated air mode	•	•	•	•
Wide angle mirror	+	+	+	+

 Safety	L 507	L 509	L 514	L 518
Country-specific versions	+	+	+	+
Back-up alarm acoustical/visual	+	+	+	+
Rear space monitoring with camera (integrated in display unit)	+	+	+	+