

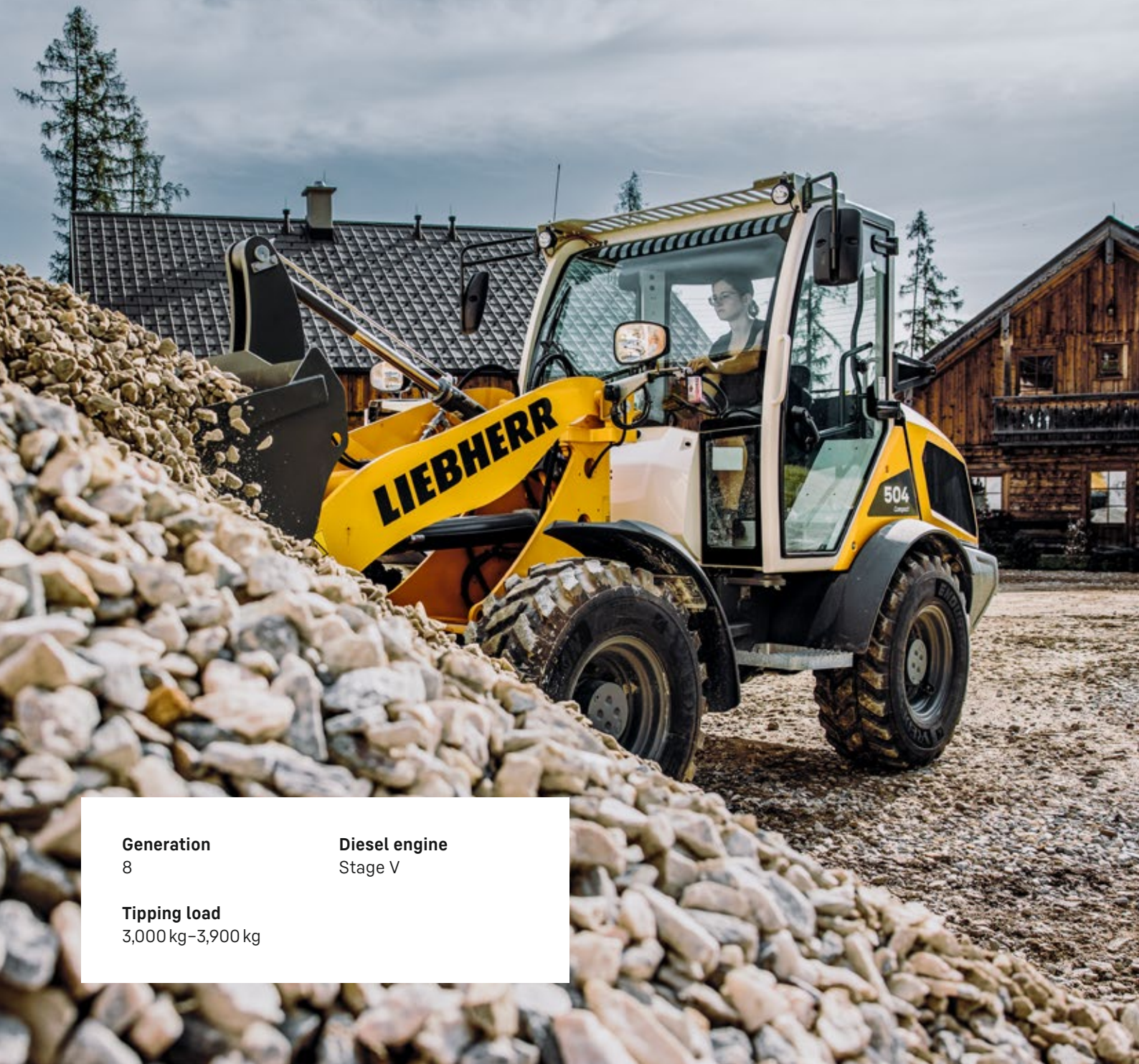
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# L 504 – L 508 Compact

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## LIEBHERR

Wheel loaders



**Generation**  
8

**Diesel engine**  
Stage V

**Tipping load**  
3,000 kg–3,900 kg



## L 504

**Tipping load, articulated**  
3,000 kg  
**Bucket capacity**  
0.7 m<sup>3</sup>  
**Operating weight**  
4,600 kg  
**Engine output**  
34 kW / 46 HP

## L 506

**Tipping load, articulated**  
3,500 kg  
**Bucket capacity**  
0.8 m<sup>3</sup>  
**Operating weight**  
4,970 kg  
**Engine output**  
47.5 kW / 64 HP

## L 508

**Tipping load, articulated**  
3,900 kg  
**Bucket capacity**  
1.0 m<sup>3</sup>  
**Operating weight**  
5,700 kg  
**Engine output**  
47.5 kW / 64 HP

# Technical data

## Diesel engine

	L 504 Compact	L 506 Compact L 508 Compact	L 506 Speeder L 508 Speeder	
<b>Diesel engine</b>	4TNV88C	4TNV86CHT	4TN86CHT	
<b>Design</b>	Water-cooled diesel suction engine			
<b>Cylinder inline</b>	4	4	4	
<b>Fuel injection process</b>	Common Rail direct injection			
<b>Output to</b>	kW / HP	32 / 43	44.5 / 60	52 / 70
<b>ISO 9249 ~ SAE J1349</b>	at RPM	2,650	2,500	2,500
<b>Rated output to</b>				
<b>ISO 14396 / ECE-R.120</b>	kW / HP	34 / 46	47.5 / 64	55 / 74
<b>Nominal speed</b>	at RPM	2,650	2,500	2,500
<b>Max. torque to</b>	Nm	140	207	263
<b>ISO 14396</b>	at RPM	1,950	1,690	1,690
<b>Displacement</b>	litres	2,190	2,091	2,091
<b>Bore / Stroke</b>	mm	88 / 90	86 / 90	86 / 90
<b>Stage V</b>				
<b>Harmful emissions values</b>	According to regulation (EU) 2016 / 1628			
<b>Emission control</b>	Closed diesel particle filter system			
<b>Air cleaner system</b>	Dry type filter with main and safety element			
<b>Electrical system</b>				
<b>Operating voltage</b>	V	12	12	12
<b>Capacity</b>	Ah	1x100	1x100	1x100
<b>Alternator</b>	V/A	12/80	12/80	12/80
<b>Starter</b>	V/kW	12/2.3	12/2.3	12/2.3

## Driveline

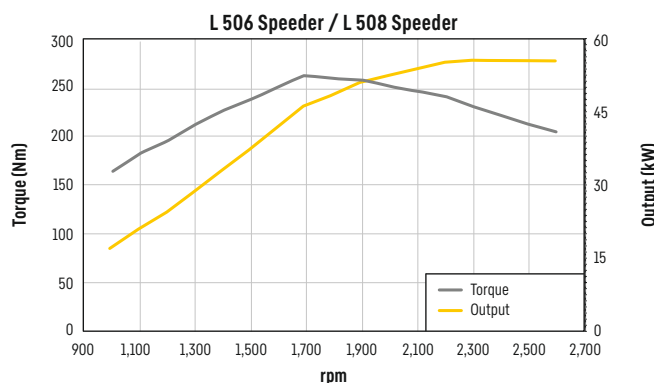
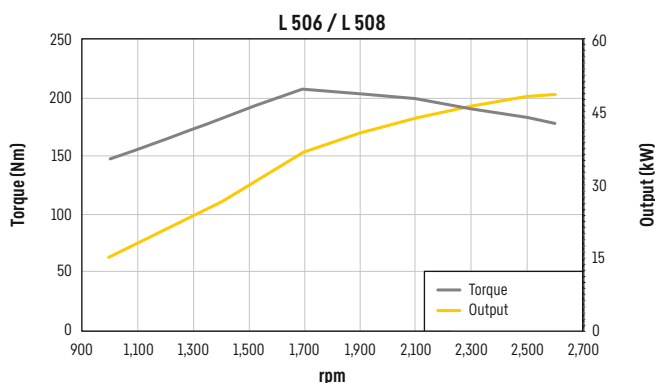
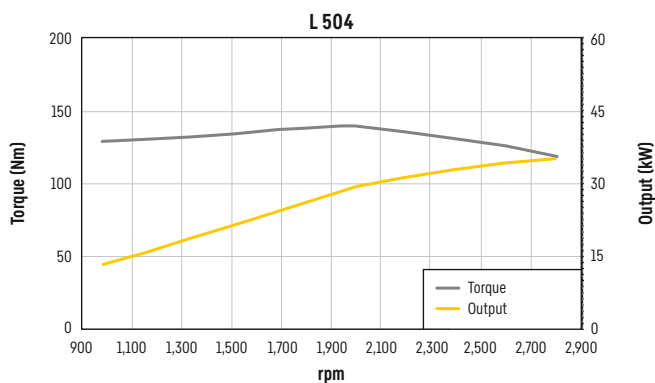
	L 504 Compact	L 506 Compact L 508 Compact	L 506 Speeder L 508 Speeder
<b>Continuous hydrostatic driveline</b>			
<b>Design</b>	Swash plate type variable flow pump and variable axial piston motor in closed loop circuit		
<b>Filtration</b>	Return filter for the closed circuit		
<b>Control</b>	By travel and inching pedal. The inching pedal makes it possible to control the tractive and thrust forces steplessly to match ground and operating conditions. The Liebherr control lever is used to control forward and reverse travel		
<b>Travel speed range</b>	Speed range 1: 0-6 km/h	Speed range 1: 0-6 km/h	Speed range 1: 0-6 km/h
	Speed range A1-2: 0-20 km/h	Speed range A1-2: 0-20 km/h	Speed range A1-2: 0-30 km/h*
	forward and reverse		
	Speeds quoted apply with the tyres indicated as standard on loader model!		

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

## Brakes

	L 504 Compact L 506 Compact L 508 Compact	L 506 Speeder L 508 Speeder
<b>Service brake</b>	Hydrostatic travel drive, acting on all four wheels, non-wearing, additional hydraulic drum brake	Hydrostatic travel drive, acting on all four wheels, non-wearing, additional dual-circuit brake system: Drum brake on the front axle and wet disc brake in rear axle
<b>Parking brake</b>	Negative brake system acting on the drum brake	Negative brake system in the rear axle acting on the wet disc brakes

The braking system meets the requirements of the ISO 3450.



## Axles

	L 504 Compact L 506 Compact L 506 Speeder	L 508 Compact L 508 Speeder
<b>Four-wheel drive</b>		
<b>Design</b>	Fixed mounted planetary-hub axle	
Height of obstacles which can be driven over	mm	320
		350
<b>Differentials</b>	with all four wheels keeping contact with the ground Automatic multi-disc limited slip differentials with 45% locking action in both axles	
<b>Reduction gear</b>	Planetary final drive in wheel hubs	
<b>Track width</b>	1,370 mm with tyres indicated as standard (L 504) 1,370 mm with tyres indicated as standard (L 506) 1,500 mm with tyres indicated as standard (L 508)	

## Steering

<b>Design</b>	Oscillating center pivot
<b>Angle of articulation</b>	40° to each side
<b>Angle of oscillation – centre-pivot steering</b>	10° to each side
<b>Max. operating pressure</b>	bar 180

## Attachment hydraulics

	L 504	L 506	L 508
<b>Design</b>	Gear pump to supply the hydraulic and steering systems (via priority valve)		
<b>Cooling</b>	Hydraulic oil cooling with fan rigidly connected to the diesel engine		
<b>Filtration</b>	Return flow in-line filter		
<b>Control</b>	Single lever control, directly pilot-controlled, 1st and 2nd hydraulic additional function are electrically and proportionally controlled		
<b>Lifting function</b>	Lifting, neutral, lowering Float position controlled by Liebherr control lever with detent		
<b>Tilt function</b>	Tilt back, neutral, dump		
<b>Max. flow</b>	l/min. 61	70	80
<b>Max. pressure</b>	bar 230	230	230

## Attachment

	L 504	L 506	L 508
<b>Geometry</b>	Powerful Z-bar linkage with parallel guidance and hydraulic quick hitch as standard		
<b>Bearings</b>	Lathe-turned thick-walled bushings with lubricating grooves		
<b>Cycle time at nominal load</b>	ZK	ZK	ZK
Lifting	s 5.1	5.4	6.5
Dumping	s 1.4	1.7	2.1
Lowering (empty)	s 3.3	3.9	5.9

## Operator's cab

<b>Design</b>	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, right side hinged window with vent opener or 180° opening, single-pane safety glass (ESG), heated rear window (ESG), all panes are tinted. Adjustable steering column optional	
<b>Liebherr operator's seat</b>	4 way adjustable, vibration-damped operator's seat "Standard" (mechanically sprung, adjustable to operator's weight)	
<b>Cab heating and ventilation</b>	Operator's cabin with defroster and electrically heated rear window, fresh air filter, air recirculation system and hot water heating, cabin ventilation	
<b>Vibration emissions</b>		
Vibrations in the hand/arm	m/s <sup>2</sup>	≤ 2.5
Vibrations through the whole body	m/s <sup>2</sup>	≤ 0.5

## Sound level

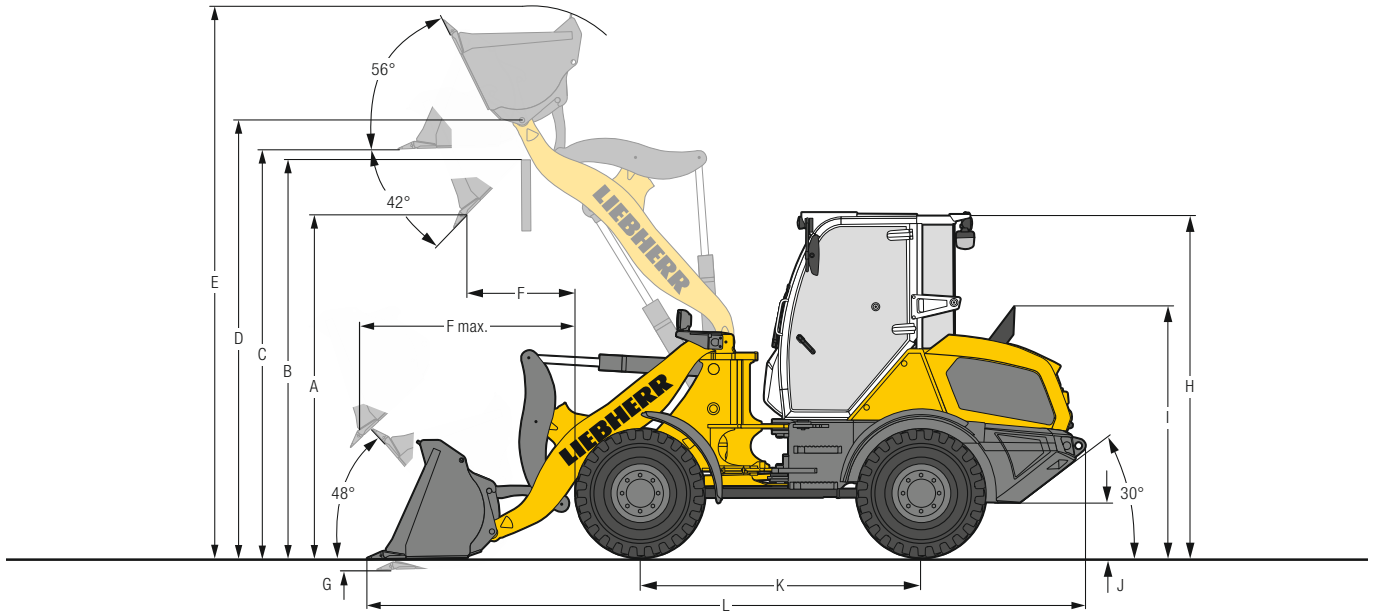
	L 504	L 506	L 508
<b>Sound pressure level to ISO 6396</b>			
L <sub>PA</sub> (inside cab)	dB(A) 79	79	79
<b>Sound power level to 2000/14/EG</b>			
L <sub>WA</sub> (surround noise)	101	101	101

## Capacities

	L 504 Compact	L 506 Compact	L 506 Speeder	L 508 Compact	L 508 Speeder
<b>Fuel tank</b>	l 65	65	65	65	65
<b>Engine oil (inclusive filter change)</b>	l 10.2	10.2	10.2	10.2	10.2
<b>Transmission</b>	l 0.5	0.5	0.5	1	1
<b>Coolant</b>	l 10	10	10	10	10
<b>Front axle / differential</b>	l 4.5	4.5	4.5	5.7	5.7
<b>Rear axle / differential</b>	l 4.5	5.0	5.0	5.7	6.7
<b>Front axle / wheel hubs</b>	l 0.5	0.5	0.5	0.5	0.5
<b>Rear axle / wheel hubs</b>	l 0.5	0.5	0.5	0.5	0.5
<b>Hydraulic tank</b>	l 44	44	44	44	44
<b>Hydraulic system, total</b>	l 71	71	71	71	71

# Dimensions

## Z-bar linkage



### Excavation bucket

	L 504	L 506	L 508
Geometry	ZK-QH	ZK-QH	ZK-QH
Cutting tools	T	T	T
Lift arm length	mm 2,200	2,200	2,300
Bucket capacity according to ISO 7546**	m <sup>3</sup> 0.7	0.8	1.0
Specific material density	t/m <sup>3</sup> 1.8	1.8	1.8
Bucket width	mm 1,800	1,900	2,100
A Dumping height at max. lift height and 42° discharge	mm 2,520	2,505	2,625
B Dump-over height	mm 2,815	2,825	2,980
C Max. height of bucket bottom	mm 2,980	2,990	3,140
D Max. height of bucket pivot point	mm 3,180	3,190	3,340
E Max. operating height	mm 3,980	4,020	4,240
F Reach at max. lift height and 42° discharge	mm 690	720	815
F max. Max. reach at 42° discharge	mm 1,460	1,490	1,605
G Digging depth	mm 65	50	80
H Height above operator's cab	mm 2,480	2,480	2,630
I Height above exhaust	mm 1,890	1,890	1,890
J Ground clearance	mm 325	325	325
K Wheelbase	mm 2,150	2,150	2,150
L Overall length	mm 5,365	5,395	5,495
Turning circle radius over tyres	mm 3,850	3,850	3,945
Turning circle radius over outside bucket edge	mm 4,320	4,370	4,495
Breakout force (SAE)	kN 40	47	57
Tipping load, straight*	kg 3,400	3,950	4,400
Tipping load, fully articulated*	kg 3,000	3,500	3,900
Operating weight*	kg 4,600	4,970	5,700
Tyre size	340/80R18	340/80R18	400/70R18

\* 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)

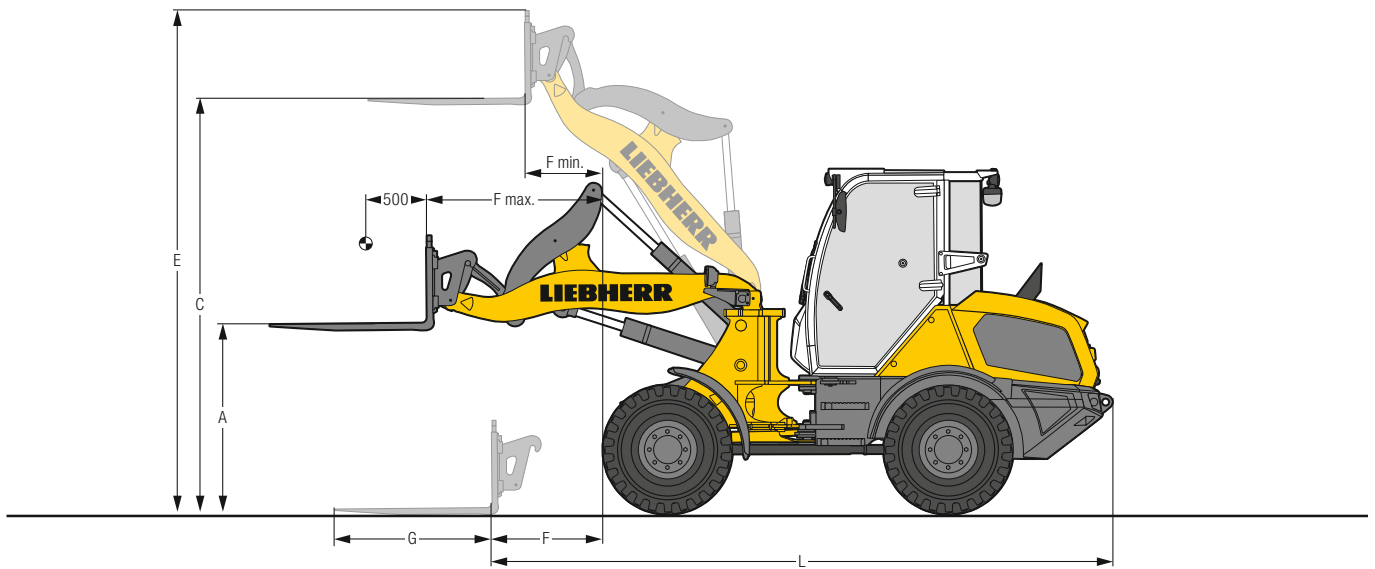
\*\* Actual bucket capacity may be approx. 10% larger than the calculation according to ISO 7546 standard. The degree to which the bucket can be filled depends on the material - see page 22.

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 504	L 506	L 506	L 508	L 508
		STD	STD	HL	STD	HL
		ZK-QH	ZK-QH	ZK-QH	ZK-QH	ZK-QH
<b>Geometry</b>						
<b>A</b>	Lifting height at max. reach	mm	1,355	1,355	1,355	1,465
<b>C</b>	Max. lifting height	mm	3,010	3,020	3,170	3,380
<b>E</b>	Max. operating height	mm	3,675	3,685	3,835	3,840
<b>F</b>	Reach at loading position	mm	795	795	940	830
<b>F max.</b>	Max. reach	mm	1,225	1,225	1,345	1,315
<b>F min.</b>	Reach at max. lifting height	mm	465	465	470	560
<b>G</b>	Fork length	mm	1,200	1,200	1,200	1,200
<b>L</b>	Length - basic machine	mm	4,710	4,710	4,845	4,745
	Tipping load, straight*	kg	2,630	3,050	2,850	3,500
	Tipping load, fully articulated*	kg	2,320	2,700	2,550	3,080
	Recommended payload for uneven ground = 60% of tipping load, articulated <sup>1)</sup>	kg	1,400	1,600	1,500	1,850
	Recommended payload for smooth surfaces = 80% of tipping load, articulated <sup>1)</sup>	kg	1,850	2,100	2,000	2,450
	Operating weight*	kg	4,580	4,930	4,950	5,580
	Tyre size		340/80R18	340/80R18	340/80R18	400/70R18

\* 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)

<sup>1)</sup> According to EN 474-3

STD = Standard lift arm length

HL = High Lift

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

# Tyres



## Tyre types

	Size and tread code		Change of operating weight kg	Width over tyres mm	Change in vertical dimensions* mm	Use
<b>L 504 Compact / L 506 Compact / L 506 Speeder</b>						
Dunlop	15.5/55R18 SP PG7	L2	- 36	1,780	- 41	Sand, Gravel, Asphalt (all ground conditions)
Firestone	340/80R18 Duraforce UT	L3	17	1,760	2	Gravel, Asphalt, Industry (all ground conditions)
Firestone	365/80R20 Duraforce UT	L3	76	1,780	40	Gravel, Asphalt, Industry (all ground conditions)
Firestone	400/70R20 Duraforce UT	L3	118	1,810	30	Gravel, Asphalt, Industry (all ground conditions)
Firestone	405/70R18 Duraforce UT	L3	88	1,820	10	Gravel, Asphalt, Industry (all ground conditions)
Firestone	400/70R20 R8000 UT		95	1,810	30	Earthworks, Green area (all ground conditions)
Goodyear	365/80R20	L2	56	1,770	33	Sand, Gravel, Asphalt (all ground conditions)
Goodyear	365/70R18	L2	- 8	1,770	- 16	Sand, Gravel, Asphalt (all ground conditions)
Goodyear	405/70R20	L2	107	1,820	34	Sand, Gravel, Asphalt (all ground conditions)
Goodyear	405/70R18	L2	52	1,810	1	Sand, Gravel, Asphalt (all ground conditions)
Michelin	400/70R20 XMCL		108	1,820	31	Earthworks, Green area (all ground conditions)
Michelin	400/70R20 BIBLOAD	L3	92	1,810	25	Gravel, Asphalt, Industry (firm ground conditions)
Mitas	365/70R18 EM-01	L2	- 4	1,780	- 13	Gravel, Asphalt (all ground conditions)
Mitas	365/80R20 EM-01	L2	56	1,780	39	Gravel, Asphalt (all ground conditions)
Mitas	405/70R18 EM-01	L2	52	1,820	12	Gravel, Asphalt (all ground conditions)
Mitas	405/70R20 EM-01	L2	88	1,820	37	Gravel, Asphalt (all ground conditions)
Nokian	400/70R20 Hakkapeliitta TRI	L2	108	1,810	35	Winter tyres, Gravel, Asphalt (all ground conditions)
Trelleborg	400/70R20 TH400		102	1,810	25	Earthworks, Green area (all ground conditions)
Vredestein	340/80R18 Endurion	L3	0	1,780	0	Gravel, Asphalt, Industry (all ground conditions)
Vredestein	400/70R18 Endurion	L3	64	1,820	5	Gravel, Asphalt, Industry (all ground conditions)
Vredestein	400/70R20 Endurion	L3	104	1,820	40	Gravel, Asphalt, Industry (all ground conditions)
<b>L 508 Compact / L 508 Speeder</b>						
Dunlop	15.5/55R18 SP PG7	L2	- 100	1,920	- 46	Sand, Gravel, Asphalt (all ground conditions)
Firestone	340/80R18 Duraforce UT	L3	- 47	1,900	- 3	Gravel, Asphalt, Industry (all ground conditions)
Firestone	405/70R18 Duraforce UT	L3	24	1,960	5	Gravel, Asphalt, Industry (all ground conditions)
Firestone	365/80R20 Duraforce UT	L3	12	1,920	35	Gravel, Asphalt, Industry (all ground conditions)
Firestone	400/70R20 Duraforce UT	L3	54	1,950	25	Gravel, Asphalt, Industry (all ground conditions)
Firestone	400/70R20 R8000 UT	L2	31	1,950	25	Earthworks, Green area (all ground conditions)
Goodyear	405/70R20	L2	43	1,960	29	Sand, Gravel, Asphalt (all ground conditions)
Goodyear	405/70R18	L2	- 12	1,950	- 4	Sand, Gravel, Asphalt (all ground conditions)
Goodyear	365/80R20	L2	- 8	1,910	28	Sand, Gravel, Asphalt (all ground conditions)
Michelin	400/70R20 XMCL	L2	44	1,960	26	Earthworks, Green area (all ground conditions)
Michelin	400/70R20 BIBLOAD	L3	28	1,950	20	Gravel, Asphalt, Industry (firm ground conditions)
Mitas	405/70R18 EM-01	L2	- 12	1,960	7	Gravel, Asphalt, Industry (all ground conditions)
Mitas	365/80R20 EM-01	L2	- 8	1,920	34	Gravel, Asphalt, Industry (all ground conditions)
Mitas	405/70R20 EM-01	L2	24	1,960	32	Gravel, Asphalt, Industry (all ground conditions)
Nokian	400/70R20 Hakkapeliitta TRI	L2	44	1,950	30	Winter tyres, Gravel, Asphalt (all ground conditions)
Trelleborg	400/70R20 TH400	L2	38	1,950	20	Earthworks, Green area (all ground conditions)
Vredestein	340/80R18 Endurion	L3	- 64	1,920	- 5	Gravel, Asphalt, Industry (all ground conditions)
Vredestein	400/70R18 Endurion	L3	0	1,960	0	Gravel, Asphalt, Industry (all ground conditions)
Vredestein	400/70R20 Endurion	L3	40	1,960	35	Gravel, Asphalt, Industry (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.

# Equipment

## Basic wheel loader

	L 504	L 506	L 508
Automatic central lubrication system	+	+	+
Battery main switch (lockable)	●	●	●
Combined inching-braking system	●	●	●
Connection for electrical equipment 7-pole	+	+	+
Cooling water pre-heating 230 V	+	+	+
Diesel particle filter	●	●	●
Fluff trap for radiator	+	+	+
Fuel pre-filter	●	●	●
Liebherr biodegradable hydraulic oil	+	+	+
Load lashing lugs	●	●	●
Lockable doors and engine hood	●	●	●
Multi-disc limited slip differentials in both axles	●	●	●
Oscillating center pivot	●	●	●
Parking brake	●	●	●
Power socket rear (13-pole, 12V)	+	+	+
Pre-heat system for cold starting	●	●	●
Rear license panel light	+	+	+
Ride control	+	+	+
Special paint	+	+	+
Speeder version (30 km/h)	-	+	+
Tool kit	+	+	+
Towing hitch	+	+	+



## Equipment

	L 504	L 506	L 508
1st and 2nd hydraulic, proportional additional function	+	+	+
1st hydraulic, proportional additional function	+	+	+
1st hydraulic, proportional additional function on Liebherr control lever	+	+	+
Bucket return (visual mark on lifting frame)	●	●	●
Control lever lock/continuous mode additional function	+	+	+
Direct control of attachment hydraulics	●	●	●
Float position	●	●	●
Fork carrier and pallet forks	+	+	+
Hydraulic connections rear	+	+	+
Hydraulic quick hitch	●	●	●
Hydraulic quick hitch Solidlink	+	+	+
Lift arm Z-bar linkage with parallel guidance	●	●	●
Lift arm Z-bar linkage, High Lift	-	+	+
Load holding valves	+	+	+
Loading buckets incl. a range of cutting tools	+	+	+
Preparation of Solidlink hydraulic quick coupling system (quick coupler without Solidlink block)	+	+	+
Pressure-free return flow additional function	+	+	+
Working hydraulics lockout	●	●	●



## Operator's cab

	L 504	L 506	L 508
3 way continuously adjustable steering column (height-adjustable, tilting, folding)	+	+	+
Air conditioning system (manual)	+	+	+
Amber beacon swiveling LED	+	+	+
Armrest left	+	+	+
Clothes hook	●	●	●
Comfort Grammer operator's seat with longitudinal absorption, seat heating and 2-point seatbelt	+	+	+
Cup holder	●	●	●
Display with tilting and height adjustment function	●	●	●
Electronical theft protection with code	+	+	+
Electronical theft protection with key	+	+	+
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, halogen	●	●	●
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 (incl. travel direction)	●	●	●
Liebherr control lever with mini-joystick for additional function	+	+	+
Operating hour meter (integrated in display unit)	●	●	●
Particle filter F5	●	●	●
Power socket 12V	●	●	●
Power socket USB	+	+	+
Preparation for radio installation	+	+	+
Radio "Comfort" (DAB+ / USB / AUX / BLUETOOTH / handsfree set)	+	+	+
Radio Liebherr "Standard" (USB / AUX)	+	+	+
Rear window heated electrically	●	●	●
Soundproof ROPS / FOPS cab	●	●	●
Speed limit & fixed speed	+	+	+
Standard Grammer operator's seat with mechanical absorption and 2-point seatbelt	●	●	●
Steering column fixed	●	●	●
Steering column folding	+	+	+
Storage box	●	●	●
Wipe system front / rear	●	●	●



## Safety

	L 504	L 506	L 508
Back-up alarm acoustical / visual	+	+	+
Country-specific versions	+	+	+
Rear space monitoring with camera (with own display)	+	+	+

- = Standard
- + = Option
- = not available
- \* = activation required free of charge