

Wheeled Excavators

A 309 **A 311**
Litronic® Litronic®

Operating Weight: 11,300 - 13,500 kg
Engine Output: 65 kW / 88 HP - 68 kW / 92 HP
Bucket Capacity: 0.15 - 0.44 m³



LIEBHERR

A 309

Litronic®

Operating Weight: 11,300 - 12,500 kg
Engine Output: 65 kW / 88 HP
Bucket Capacity: 0.15 - 0.44 m³

A 311

Litronic®

Operating Weight: 12,100 - 13,500 kg
Engine Output: 68 kW / 92 HP
Bucket Capacity: 0.15 - 0.44 m³



Performance

Liebherr compact excavators are the ideal machines for effortless execution of the most diverse tasks.

These small wheeled excavators distinguish themselves in tight spaces due to their tremendous digging performance and exceptional lift capacity. Various stabilizer and attachment options accommodate the excavator for a multitude of applications.

Reliability

Due to the robust steel structure, the use of high-tensile materials as well as Liebherr components, these wheeled excavators excel through maximum reliability.

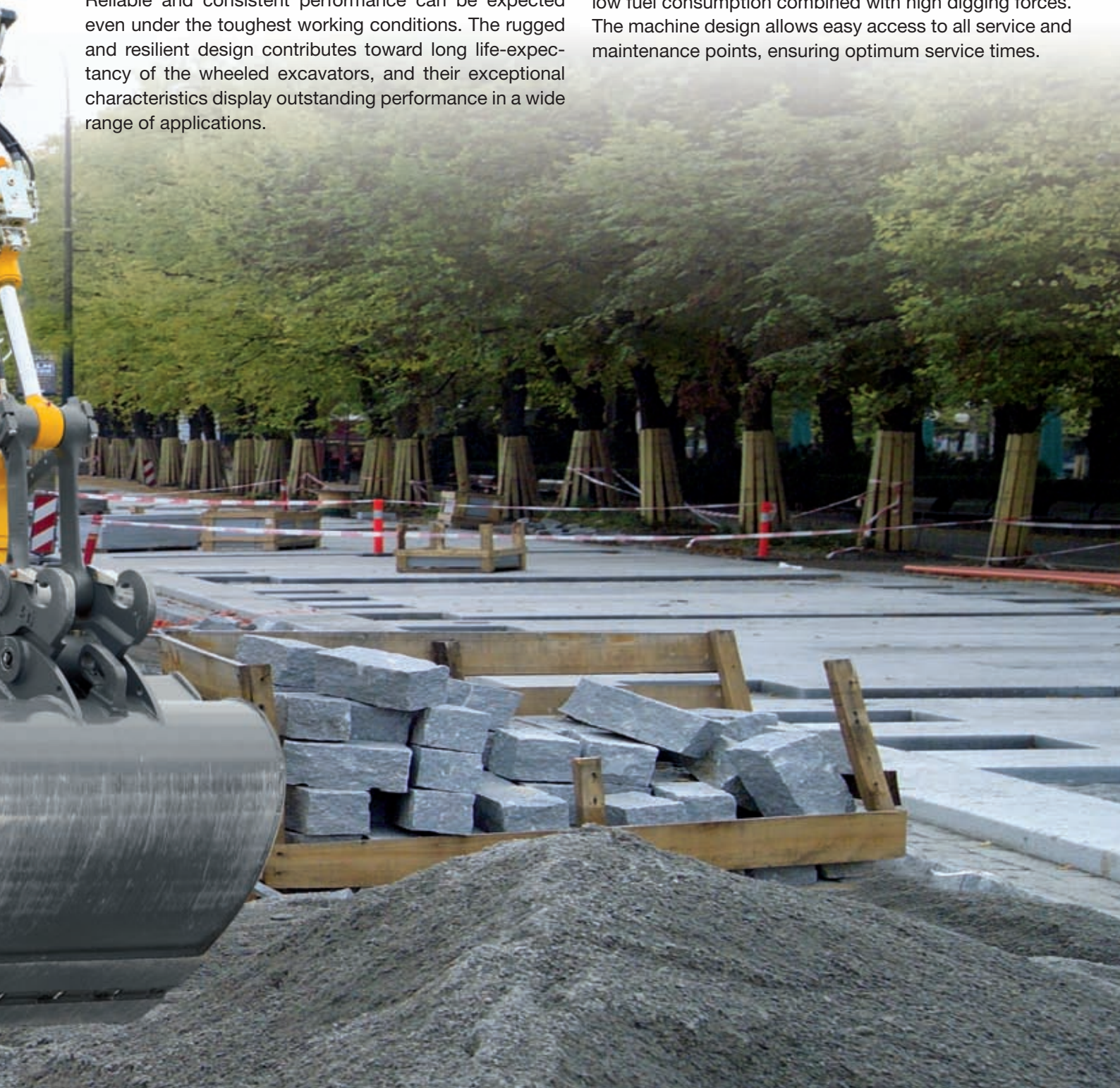
Reliable and consistent performance can be expected even under the toughest working conditions. The rugged and resilient design contributes toward long life-expectancy of the wheeled excavators, and their exceptional characteristics display outstanding performance in a wide range of applications.

Comfort

The Liebherr oversize cabs are a novelty in this machine class. All operating elements are ergonomically positioned and arranged within easy view of the operator. The operator's seat can be adjusted individually and a clear all-round-view ensures a safe and relaxed working environment. All service and maintenance points are easily accessible.

Economy

The Liebherr-Litronic-System increases machine performance and reduces fuel consumption. Even in tight spaces, the compact excavators are unequalled in terms of low fuel consumption combined with high digging forces. The machine design allows easy access to all service and maintenance points, ensuring optimum service times.





New blade concept

- More application possibilities with only one support through the two-section, parallel running dozing and prop-up blade
 - maximum stability due to large support area
 - possibility for levelling or surface cleaning
 - horizontal alignment of the machine on uneven terrain
 - blade sections can be controlled individually or combined



Performance



Liebherr compact excavators are the ideal machines for effortless execution of the most diverse tasks.

These small wheeled excavators distinguish themselves in tight spaces due to their tremendous digging performance and exceptional lift capacity. Various stabilizer and attachment options accommodate the excavator for a multitude of applications.

Sound concept

High lift capacities

Clear arrangement on the uppercarriage combined with lateral mounting of the engine in front of the counterweight provides the excavator with exceptional stability.

Quick working cycles

High swing torque is achieved via maximum engine output and a specially designed swing drive in combination with the Liebherr swing ring featuring internal-teeth.

Unequaled performance

Maximum output and forces are constantly at your disposal.

Optimum stability

Optimised frame

High-resistant welding seams, specially selected steel elements and a proven tub design, as well as stabiliser options and single or two-section blades, guarantee optimum stability.

Drive power

The standard power-shift transmission allows rapid uphill travel, as well as gear-change without stopping the excavator. The creeper gear assures precise travel movements, even over extremely difficult ground conditions. Unlimited flexibility is guaranteed via the optional all-wheel drive and crab steer.

Ideal for working in confined areas

- Minimum clearance circle due to reduced front and rear turning radii
- Working attachment with offset of 1.10 m for parallel work
- Protected interior-mounted boom adjustment cylinder
- Protected hydraulic hoses



Litronic

- For improved excavator performance
- For reduced fuel consumption
- For highest precision and numerous simultaneous movements



Clean air

- Air-intake to the engine is located in the cleanest area behind the cab
- Filtering out of 90% of all dust and water particles by preliminary cyclone separator
- The result is a long engine lifespan and long filter-replacement intervals



Reliability

Due to the robust steel structure, the use of high-tensile materials as well as Liebherr components, these wheeled excavators excel through maximum reliability. Reliable and consistent performance can be expected even under the toughest working conditions. The rugged and resilient design contributes toward long life-expectancy of the wheeled excavators, and their exceptional characteristics display outstanding performance in a wide range of applications.

Quality right down to the last detail

Liebherr components

Construction machinery components such as swing ring, swing gear, hydraulic cylinder and electronic parts have been specifically designed, tested and produced by Liebherr. Components such as swing ring and swing gear for example, are synchronised with each other already in the design stage resulting a consistently high quality standard.

Functional safety

Standard safety components ensure high availability. The operator can focus entirely on the task at hand as the integrated on-board electronic system continuously monitors and adjusts working data with predefined data.

High quality functional elements

Fuel filter

The standard mounted Liebherr centrifugal fuel filter system separates water and impurities completely and reliably from the fuel.

Exhaust system

Due to its large volume, the purpose built three-chamber exhaust system yields low noise emissions as well as long life-expectancy of exhaust system and engine.

Magnetic rod

The standard magnetic rod in the hydraulic system extends the useful life of the oil.



Liebherr hydraulic cylinder

- Size adapted for each machine
- High quality surface coating of the piston rod
- The Liebherr cylinders are fitted with a special long-life sealing system
- Working cylinders feature double-sided shock absorption
- Each cylinder is tested during the manufacturing process



More protection and freedom-of-movement

- Hydraulic hoses run inside the boom and stick and are therefore well protected
- The cylinders are optimally mounted and do not protrude laterally



Storage compartment – everything in its place

- Variable tray design
- Plenty of space behind the operator's seat, even for a standard cooling box
- Large lockable storage tray in the uppercarriage
- Standard toolbox in the undercarriage





Comfort

The Liebherr oversize cabs are a novelty in this machine class. All operating elements are ergonomically positioned and arranged within easy view of the operator. The operator's seat can be adjusted individually and a clear all-round-view ensures a safe and relaxed working environment. All service and maintenance points are easily accessible.

Mobile comfort

Easy access

Wide steps, ergonomic handles and an adjustable steering column ensure easy and comfortable access to the Liebherr operator's cab.

Excellent overview

Thorough uppercarriage design concept combined with reduced upper-carriage height, largely glazed windows and rounded edges ensure excellent view to the entire working area.

Pleasant environment

Noise emissions in and outside the cab are reduced due to low engine speed, complex noise insulation and optimized hydraulic components. The noise level is equivalent to a modern diesel automobile.

Maintenance friendly

Easy access

Large engine compartment cover guarantees free and easy access to engine.

Maintenance tasks with ease of operation

A standard stop-valve on the hydraulic tank disconnects the system in order to ease maintenance on the hydraulic system.

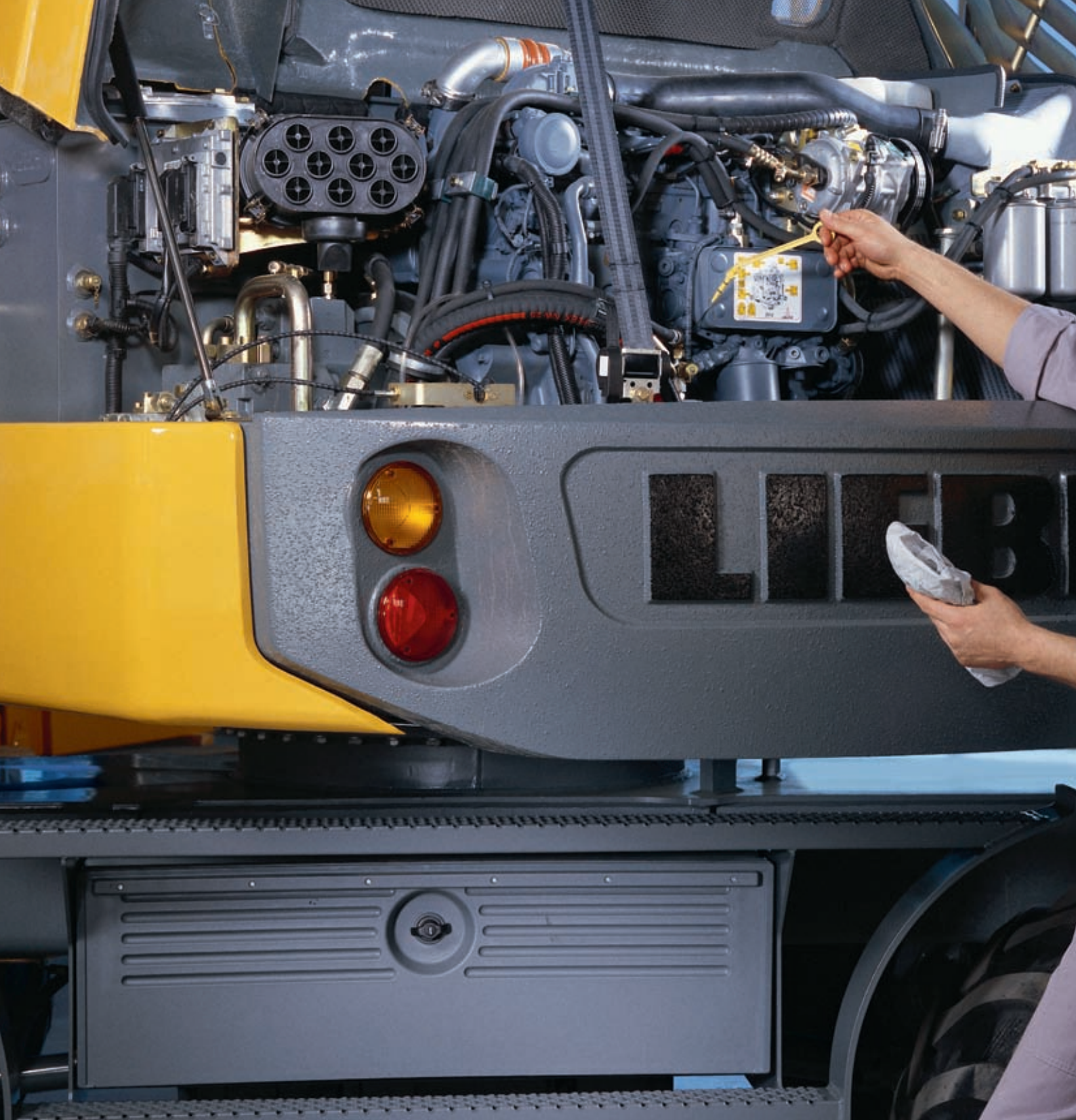
Operator's control position

- ErgoPlus automatic seat adjustment in accordance with operator's height
- Combined or independent adjustment of operator's seat and consoles
- Operator's seat adjustment in accordance with operators height and weight
- Additional beverage holders and document storage compartment in the left-hand console



Leg-room

- Ergonomic foot pedals for relaxed and stress-free operation
- Steering column freely adjustable via functional foot lever
- Anti-slip foot-mat with horizontal strips for easy cleaning of the cab



Intelligent cooling system

- Thermostatically adjusted, air-conditioning system operating upon requirement reducing fuel consumption and noise emissions
- Extension of drive component life expectancy
- Accelerated warm-up phase and cabin conditioning
- Exhaust system positioned outside the engine compartment being cooled





Economy

The Liebherr-Litronic-System increases machine performance and reduces fuel consumption. Even in tight spaces, the compact excavators are unequalled in terms of low fuel consumption combined with high digging forces. The machine design allows easy access to all service and maintenance points, ensuring optimum service times.

Low operating costs

Automatic idling

A switch function reduces engine speed to idling when no working or travel operation is being carried out, thus reducing fuel consumption and emissions.

Maintenance points

Service points such as engine, filter or fuel gauges are easily accessible from ground level. The large rear cover allows quick and easy maintenance.

Optimized attachments

High-tensile structural parts, designed and manufactured in accordance with the FEM method, guarantee high lift capacities for effective results at any building site.

Investment for the future

Comprehensive service offer

Efficient customer-orientated after-sales-service is provided by close collaboration of our dealers and factory-trained service personnel. Direct access to Liebherr is ensured via our service locations which are fully integrated into the Liebherr logistics system. Electronic access to our worldwide spare-parts management system ensures around-the-clock availability of 98% for all spare-parts.

High resale value

Liebherr excavators are made from high quality materials and designed for durability, guaranteeing a high resale value.

Engine

- Water cooled diesel engine with direct injection, turbo charged
- Large 4.0 l displacement
- Speed of only 2000 rpm required for travelling and working



Ease of maintenance

- Rounded corners and edges for protection and visibility
- High grade electric systems

Technical Data



Engine

Rating per ISO 9249	
A 309 Litronic	65 kW (88 HP) at 1,800 RPM
A 311 Litronic	68 kW (92 HP) at 1,800 RPM
Model	Deutz TCD2012 L04 according to level IIIA/Tier 3
Type	4 cylinder in-line
Bore/Stroke	101/126 mm
Displacement	4.0 l
Engine operation	4-stroke diesel unit pump system turbo-charged
Exhaust emissions	in accordance with EC-guidelines
Cooling system	water-cooled with stepless, thermostatic and controlled fan
Air cleaner	dry-type air cleaner with preliminary cyclone separator, dust discharge, main and safety elements
Fuel tank	210 l
Engine idling	sensor controlled
Electrical system	
Voltage	24 V
Batteries	2 x 92 Ah/12 V
Alternator	24 V/50 A



Hydraulic System

Hydraulic pump	variable displacement, swashplate pump
Max. flow	194 l/min.
Max. hydr. pressure	350 bar
Hydraulic pump regulation and control	Liebherr-Synchron-Comfort-system (LSC) with electronic horsepower regulation, pressure cut-off, load sensing and torque controlled swing drive priority
Hydraulic tank capacity	100 l
Hydraulic system capacity	max. 210 l
Filtration	one main return filter with integrated partial micro filtration (5 µm)
Cooling system	compact cooling system comprising cooling unit for water, hydraulic oil and charge air with stepless, thermostatically controlled fan, fan can be folded away for comfortable cleaning of the radiator
Engine speed and output tuning	stepless alignment of engine output and hydraulic power via engine speed variable mode-settings



Hydraulic Controls

Power distribution	via control valve with integrated safety valves, simultaneous and independent operation of travel drive, swing drive and work
Control type	
Attachment and swing	proportional via joystick levers
Travel	proportional via foot pedal
Additional functions	proportional via foot pedals
Option	Liebherr-Proportional-Controls, proportionally acting transmitters on the joysticks for additional hydraulic functions



Swing Drive

Drive	Liebherr swashplate motor with torque control and integrated brake valve
Transmission	Liebherr compact planetary reduction gear
Swing ring	Liebherr sealed single race ball bearing swing ring, internal teeth
Swing speed	0 – 10.0 RPM stepless
Swing torque	38 kNm (acceleration adjustable)
Holding brake	pedal controlled positioning brake



Operator Cab

Cab	largely dimensioned ergonomic cab resiliently mounted, sound insulated, tinted windows, front window stores overhead, door with sliding window, large roof window, sun visor
Operator's seat	shock absorbing suspension, adjustable to operator's weight, 6-way adjustable seat, backward/forward seat adjusting with automatic height adjustment, lumbar support integrated into adjustable seat consoles
Joysticks	ergonomically arranged, non-glare instrumentation, menu-driven retrieval of current operating conditions via display, automatic monitoring, display, warning (acoustic and visual) and saving of anomalous operating conditions, such as engine overheating and excessively low engine oil pressure or hydraulic oil temperature
Digital hour meter	visible from outside
Heating system	hot water heat exchanger to provide heated fresh air or circulated air, with additional front window air vents, operating unit in right console
Noise emission	
ISO 6396	L_{pA} (inside cab) = 72 dB(A)
2000/14/EC	L_{WA} (surround noise) = 98 dB(A)
Sound level in correspondence	with "Blue Angel" guidelines.



Undercarriage

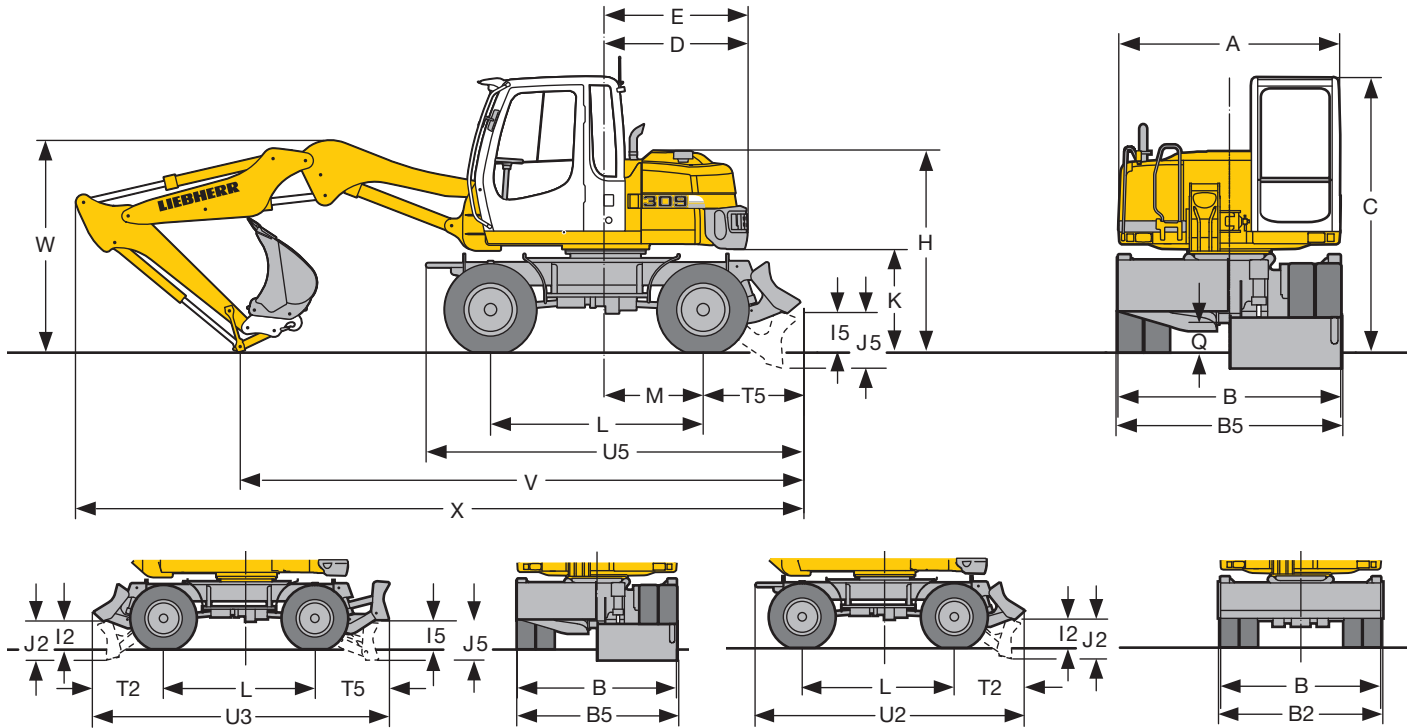
Drive	variable flow swashplate motor with automatic brake valve
Transmission	oversized two speed power shift transmission with additional creeper speed
Travel speed	0 – 1.5 km/h (creeper speed off road) 0 – 5.0 km/h (off road) 0 – 6.0 km/h (creeper speed on road) 0 – 20.0 km/h (road travel) 0 – max. 30.0 km/h Speeder (Option)
Driving operation	automotive driving with accelerator pedal, tempo-mat function: stepless saving of accelerator pedal position, both off- and on-road
Axles	24 t excavator axles, automatic or operator controlled front axle oscillation lock
Brakes	steering and rigid axle with wet, maintenance-free multi disc brakes with minimized backlash. Spring applied/pressure released parking brake integrated into gear box
Stabilization	stabilizing blade (adjustable during travel for dozing) divided blade stabilizing blade + divided blade
Optional	2 point outriggers all wheel steer/crab steer with electronic wheel straightening



Attachment

Hydraulic cylinders	Liebherr cylinders with special seal system. Shock absorption
Pivots	sealed, low maintenance
Lubrication	in easily accessible locations

Dimensions

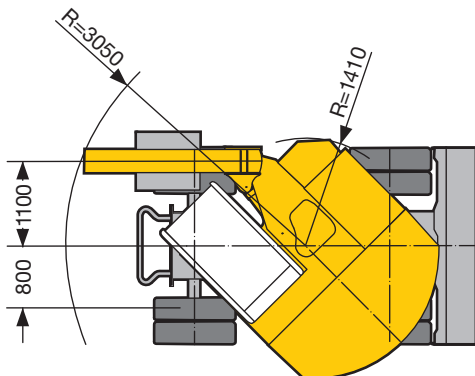


	A 309 Litronic	mm	A 311 Litronic	mm
A		2,500		2,500
B		2,525		2,525
B2		2,550		2,550
B5		2,550		2,550
C		3,110		3,110
D		1,600		1,750
E		1,600		1,750
H		2,275		2,275
I2		440		440
I5		465		465
J2		620		620
J5		645		645
K		1,170		1,170
L		2,400		2,540
M		1,100		1,100
Q		320		320
T2		1,120		1,120
T5		1,165		1,165
U2		4,230		4,370
U3		4,685		4,825
U5		4,295		4,435

E = Tail radius

Tires 9.00-20

A 309 Litronic



A 309 Litronic

	Stick	Hydr. Adjustable Boom 2.10 m		
		stabilizing blade	divided blade	stabilizing blade + divided blade
	m	mm	mm	mm
V	1.85	6,400	6,450	6,450
W	1.85	2,500	2,500	2,500
X	1.85	8,300	8,300	8,400

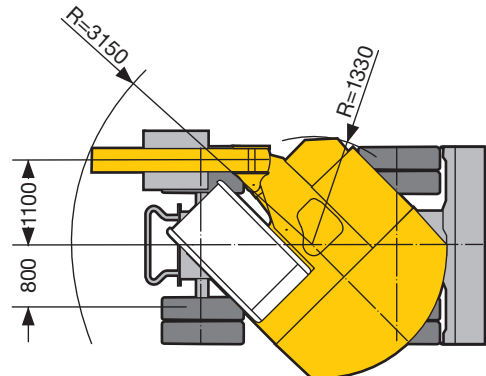
A 311 Litronic

	Stick	Hydr. Adjustable Boom 2.35 m		
		stabilizing blade	divided blade	stabilizing blade + divided blade
	m	mm	mm	mm
V	1.85	6,600	6,600	6,600
	2.05	6,350	6,350	6,350
W	1.85	2,500	2,500	2,500
	2.05	2,500	2,500	2,500
X	1.85	8,600	8,600	8,600
	2.05	8,750	8,750	8,750

Min. turning radius on tires 9.00-20

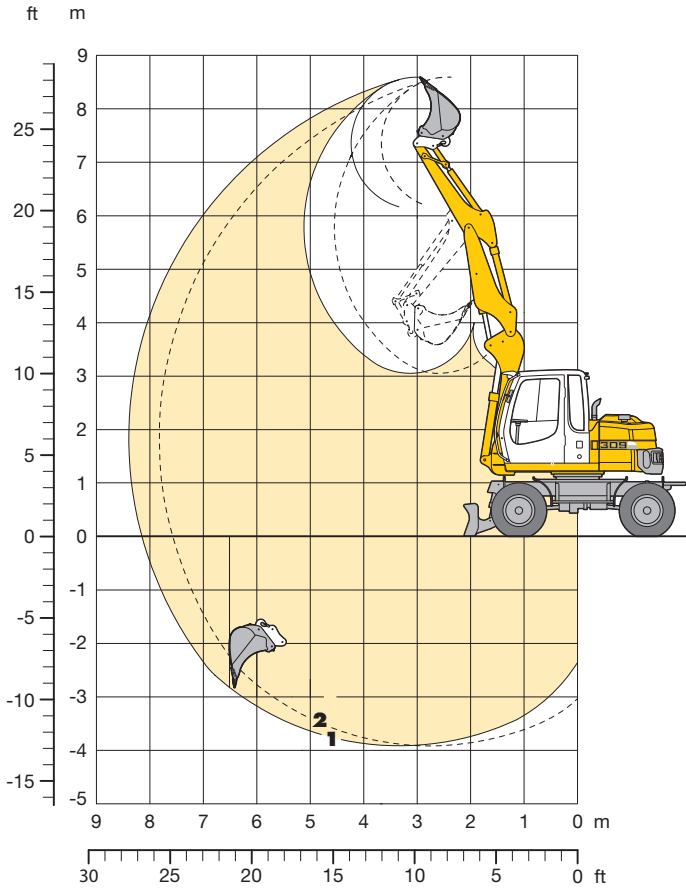
	4 steer (optional)	front wheel steer
A 309 Litronic	4.57 m	6.26 m
A 311 Litronic	4.73 m	6.60 m

A 311 Litronic



Backhoe Attachment A 309 Litronic®

with Hydr. Adjustable Boom 2.10 m



Digging Envelope with Quick Change Adapter

1

Stick length	m	1.85
Max. digging depth	m	3.90
Max. reach at ground level	m	8.15
Max. dumping height	m	6.15
Max. teeth height	m	8.60

2 with stick 1.85 m at max. attachment offset

Digging Forces without Quick Change Adapter

1

Max. digging force (ISO 6015)	kN	44.8
	t	4.6
Max. breakout force (ISO 6015)	kN	76.3
	t	7.8

Operating Weight

The operating weight includes the basic machine with 8 tires plus spacer rings, hydr. adjustable boom 2.10 m, stick 1.85 m, quick change adapter 33 and bucket 750 mm/0.33 m³.

Undercarriage versions	Weight
A 309 Litronic® with stabilizer blade	11,300 kg
A 309 Litronic® with divided blade	11,600 kg
A 309 Litronic® with stabilizer blade + divided blade	12,200 kg

Buckets Machine stability per ISO 10567* (75% of tipping capacity)

Cutting width mm	Capacity ISO 7451 ¹⁾ m ³	Weight kg	Stabilizers raised	Divided blade down	Stabilizer blade + divided blade down
			Stick length (m) 1.85	Stick length (m) 1.85	Stick length (m) 1.85
300 ²⁾	0.15	160	□	□	□
400 ²⁾	0.20	190	□	□	□
450 ²⁾	0.20	170	□	□	□
550 ²⁾	0.22	190	□	□	□
650 ²⁾	0.27	210	□	□	□
750 ²⁾	0.33	230	□	□	□
850 ²⁾	0.38	240	△	□	□
950 ²⁾	0.44	270	■	△	□
300 ³⁾	0.15	150	□	□	□
400 ³⁾	0.21	180	□	□	□
450 ³⁾	0.21	160	□	□	□
550 ³⁾	0.24	190	□	□	□
650 ³⁾	0.30	210	□	□	□
750 ³⁾	0.35	220	□	□	□
850 ³⁾	0.42	240	■	□	□
950 ³⁾	0.48	270	■	△	□

* Indicated loads are based on ISO 10567 and do not exceed 75% of tipping or 87% of hydraulic capacity, max. stick length without quick change adapter, lifted 360° on firm with blocked oscillating axle

1) comparable with SAE (heaped)

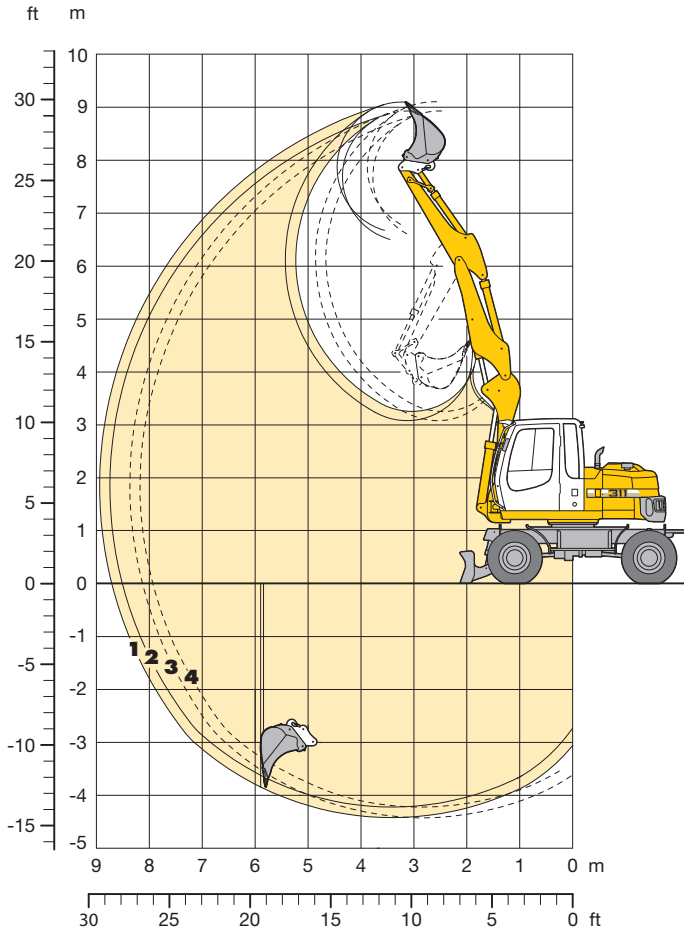
2) Bucket with teeth 3) Bucket with cutting lip

Buckets up to 400 mm cutting width with limited digging depth

Max. material weight □ = ≤ 1.8 t/m³, △ = ≤ 1.5 t/m³, ■ = ≤ 1.2 t/m³, ▲ = not authorized

Backhoe Attachment A 311 Litronic®

with Hydr. Adjustable Boom 2.35 m



Digging Envelope with Quick Change Adapter

		1	2
Stick length	m	1.85	2.05
Max. digging depth	m	4.20	4.40
Max. reach at ground level	m	8.50	8.70
Max. dumping height	m	6.50	6.65
Max. teeth height	m	8.90	9.10

3 with stick 1.85 m at max. attachment offset
4 with stick 2.05 m at max. attachment offset

Digging Forces without Quick Change Adapter

		1	2
Max. digging force (ISO 6015)	kN	55.3	51.3
	t	5.6	5.2
Max. breakout force (ISO 6015)	kN	96.6	96.6
	t	9.8	9.8

Operating Weight

The operating weight includes the basic machine with 8 tires plus spacer rings, hydr. adjustable boom 2.35 m, stick 2.05 m, quick change adapter 33 and bucket 750 mm/0.33 m³.

Undercarriage versions	Weight
A 311 Litronic® with stabilizer blade	12,100 kg
A 311 Litronic® with divided blade	12,500 kg
A 311 Litronic® with stabilizer blade + divided blade	13,200 kg

Buckets Machine stability per ISO 10567* (75% of tipping capacity)

Cutting width mm	Capacity ISO 7451 ¹⁾ m ³	Weight kg	Stabilizers raised		Divided blade down		Stabilizer blade + divided blade down	
			Stick length (m)		Stick length (m)		Stick length (m)	
			1.85	2.05	1.85	2.05	1.85	2.05
300 ²⁾	0.15	160	□	□	□	□	□	□
400 ²⁾	0.20	190	□	□	□	□	□	□
450 ²⁾	0.20	170	□	□	□	□	□	□
550 ²⁾	0.22	190	□	□	□	□	□	□
650 ²⁾	0.27	210	□	□	□	□	□	□
750 ²⁾	0.33	230	□	□	□	□	□	□
850 ²⁾	0.38	240	△	△	□	□	□	□
950 ²⁾	0.44	270	■	■	□	△	□	□
300 ³⁾	0.15	150	□	□	□	□	□	□
400 ³⁾	0.21	180	□	□	□	□	□	□
450 ³⁾	0.21	160	□	□	□	□	□	□
550 ³⁾	0.24	190	□	□	□	□	□	□
650 ³⁾	0.30	210	□	□	□	□	□	□
750 ³⁾	0.35	220	□	□	□	□	□	□
850 ³⁾	0.42	240	△	△	□	□	□	□
950 ³⁾	0.48	270	■	■	△	△	□	□

* Indicated loads are based on ISO 10567 and do not exceed 75% of tipping or 87% of hydraulic capacity, max. stick length without quick change adapter, lifted 360° on firm with blocked oscillating axle

¹⁾ comparable with SAE (heaped)

²⁾ Bucket with teeth ³⁾ Bucket with cutting lip

Buckets up to 400 mm cutting width with limited digging depth

Max. material weight □ = ≤ 1.8 t/m³, △ = ≤ 1.5 t/m³, ■ = ≤ 1.2 t/m³, ▲ = not authorized

Lift Capacities A 309 Litronic®

with Hydr. Adjustable Boom 2.10 m

Stick 1.85 m

m	Undercarriage	2.0 m		3.0 m		4.0 m		5.0 m		6.0 m		7.0 m		8.0 m		m		
8.0	Stabilizers raised																	
	Divided blade down																	
	Stabilizer blade + divided blade down																	
7.0	Stabilizers raised					2.4	2.5*										1.9	2.1*
	Divided blade down					2.5*	2.5*										2.1*	2.1*
	Stabilizer blade + divided blade down					2.5*	2.5*										1.7*	1.7*
6.0	Stabilizers raised							1.7	2.3*								1.2	1.7*
	Divided blade down							2.0	2.3*								1.5	1.7*
	Stabilizer blade + divided blade down							2.3*	2.3*								1.7*	1.7*
5.0	Stabilizers raised	2.6*	2.6*					1.7	2.4*	1.2	1.9*						1.0	1.6*
	Divided blade down	2.6*	2.6*					2.0	2.4*	1.4	2.3*						1.2	1.6*
	Stabilizer blade + divided blade down	2.6*	2.6*					2.4*	2.4*	1.8	2.3*						1.5	1.6*
4.0	Stabilizers raised	2.2*	2.2*			2.3	2.6*	1.6	2.6	1.2	1.9	0.9	1.4				0.8	1.4
	Divided blade down	2.2*	2.2*			2.6*	2.6*	1.9	2.7*	1.4	2.4*	1.0	1.7*				1.0	1.6*
	Stabilizer blade + divided blade down	2.2*	2.2*			2.6*	2.6*	2.4*	2.7*	1.8	2.4*	1.4	1.7*				1.3	1.6*
3.0	Stabilizers raised			3.4	4.9*	2.2	3.5	1.6	2.5	1.2	1.9	0.9	1.4				0.8	1.3
	Divided blade down			4.1	4.9*	2.6	4.2*	1.9	3.1*	1.4	2.6*	1.0	2.3*				0.9	1.6*
	Stabilizer blade + divided blade down			4.9*	4.9*	3.3	4.2*	2.4	3.1*	1.8	2.6*	1.4	2.3*				1.2	1.6*
2.0	Stabilizers raised	2.8*	2.8*	3.3	5.6	2.2	3.5*	1.6	2.5	1.2	1.9	0.8	1.4				0.7	1.3
	Divided blade down	2.8*	2.8*	4.0	6.2*	2.6	5.0*	1.9	3.5*	1.4	2.8*	1.0	2.3*				0.9	1.6*
	Stabilizer blade + divided blade down	2.8*	2.8*	5.2	6.2*	3.3	5.0*	2.4	3.5*	1.8	2.8*	1.3	2.3*				1.2	1.6*
1.0	Stabilizers raised	2.8*	2.8*	3.1	5.5	2.1	3.5	1.5	2.4	1.1	1.8	0.8	1.4				0.7	1.3
	Divided blade down	2.8*	2.8*	3.8	7.1*	2.5	5.3*	1.8	3.8*	1.3	2.9*	1.0	2.4*				0.9	1.8*
	Stabilizer blade + divided blade down	2.8*	2.8*	5.0	7.1*	3.2	5.3*	2.3	3.8*	1.7	2.9*	1.3	2.4*				1.2	1.8*
0	Stabilizers raised	4.1*	4.1*	2.9	5.3	1.9	3.3	1.4	2.4	1.0	1.8	0.8	1.4				0.8	1.3
	Divided blade down	4.1*	4.1*	3.6	7.8*	2.3	5.3*	1.7	3.8*	1.3	2.9*	1.0	2.3*				0.9	2.0*
	Stabilizer blade + divided blade down	4.1*	4.1*	4.8	7.8*	3.1	5.3*	2.2	3.8*	1.7	2.9*	1.3	2.3*				1.2	2.0*
-1.0	Stabilizers raised	5.5*	5.5*	2.9	5.2	1.9	3.2	1.4	2.3	1.0	1.7						0.8	1.4
	Divided blade down	5.5*	5.5*	3.5	9.1*	2.3	5.4*	1.6	3.9*	1.2	2.9*						1.0	2.0*
	Stabilizer blade + divided blade down	5.5*	5.5*	4.8	9.1*	3.0	5.4*	2.2	3.9*	1.6	2.9*						1.3	2.0*
-2.0	Stabilizers raised	6.0	6.7*	2.9	5.3	1.9	3.2	1.3	2.3	1.0	1.7						1.0	1.7
	Divided blade down	6.7*	6.7*	3.5	8.8*	2.3	5.3*	1.6	3.5*	1.2	2.0*						1.2	1.8*
	Stabilizer blade + divided blade down	6.7*	6.7*	4.8	8.8*	3.0	5.3*	2.1	3.5*	1.6	2.0*						1.6	1.8*
-3.0	Stabilizers raised			3.0	5.3	1.9	3.2										1.8	3.2
	Divided blade down			3.6	5.9*	2.3	3.4*										2.2	3.3*
	Stabilizer blade + divided blade down			4.8	5.9*	3.0	3.4*										3.0	3.3*

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

The lift capacities on the load hook of the Liebherr quick-change adapter 33 without grab 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 stabilisers raised and over the rigid axle with the stabilisers down. The values apply when the adjusting cylinder is in the optimal position. Indicated loads comply with the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity, or are limited by the permissible load of the load hook on the quick-change adapter (max. 5 t). Without the quick-change adapter, lift capacities will increase by up to 110 kg.

In accordance with the harmonised EU Standard EN 474-5, hydraulic excavators used for lifting operations must be equipped with pipe rupture protection devices on the hoist cylinders and an overload warning device.

Lift Capacities A 311 Litronic®

with Hydr. Adjustable Boom 2.35 m

Stick 1.85 m

m	Undercarriage	2.0 m		3.0 m		4.0 m		5.0 m		6.0 m		7.0 m		8.0 m		m		
8.0	Stabilizers raised																	
	Divided blade down																	
	Stabilizer blade + divided blade down																	
7.0	Stabilizers raised							1.9	2.5*								1.7	2.2*
	Divided blade down							2.2	2.5*								2.0	2.2*
	Stabilizer blade + divided blade down							2.5*	2.5*								2.2*	2.2*
6.0	Stabilizers raised							1.9	2.7*	1.4	2.4*						1.2	1.9*
	Divided blade down							2.3	2.7*	1.6	2.4*						1.5	1.9*
	Stabilizer blade + divided blade down							2.7*	2.7*	2.0	2.4*						1.9	1.9*
5.0	Stabilizers raised	2.8*	2.8*					1.9	2.8*	1.4	2.5						1.0	1.8*
	Divided blade down	2.8*	2.8*					2.2	2.8*	1.7	2.7*						1.2	1.8*
	Stabilizer blade + divided blade down	2.8*	2.8*					2.8	2.8*	2.1	2.7*						1.6	1.8*
4.0	Stabilizers raised	2.4*	2.4*	2.8*	2.8*	2.6	3.3*	1.9	3.2*	1.4	2.5	1.0	1.9				0.9	1.7
	Divided blade down	2.4*	2.4*	2.8*	2.8*	3.0	3.3*	2.2	3.3*	1.7	2.9*	1.2	2.6*				1.1	1.8*
	Stabilizer blade + divided blade down	2.4*	2.4*	2.8*	2.8*	3.3*	3.3*	2.7	3.3*	2.1*	2.9*	1.6	2.6*				1.4	1.8*
3.0	Stabilizers raised			3.8	6.5*	2.5	4.5	1.8	3.2	1.4	2.4	1.0	1.9				0.8	1.6
	Divided blade down			4.6	6.5*	3.0	5.2*	2.2	3.8*	1.6	3.1*	1.2	2.7*				1.0	1.8*
	Stabilizer blade + divided blade down			5.9	6.5*	3.7	5.2*	2.7	3.8*	2.1	3.1*	1.6	2.7*				1.3	1.8*
2.0	Stabilizers raised			3.7	6.8*	2.5	4.4	1.8	3.1*	1.3	2.4	1.0	1.9				0.8	1.5
	Divided blade down			4.5	6.8*	2.9	5.8*	2.1	4.2*	1.6	3.3*	1.2	2.8*				1.0	1.9*
	Stabilizer blade + divided blade down			5.8	6.8*	3.6	5.8*	2.6	4.2*	2.0	3.3*	1.5	2.8*				1.2	1.9*
1.0	Stabilizers raised	3.0*	3.0*	3.5	7.3	2.3	4.4	1.7	3.1	1.3	2.4	0.9	1.8				0.8	1.5
	Divided blade down	3.0*	3.0*	4.2	7.7*	2.8	6.1*	2.0	4.5*	1.5	3.5*	1.2	2.8*				1.0	2.0*
	Stabilizer blade + divided blade down	3.0*	3.0*	5.6	7.7*	3.6	6.1*	2.6	4.5*	2.0	3.5*	1.5	2.8*				1.2	2.0*
0	Stabilizers raised	4.6*	4.6*	3.3	7.1	2.2	4.3	1.6	3.1	1.2	2.3	0.9	1.8				0.8	1.6
	Divided blade down	4.6*	4.6*	4.0	7.9*	2.6	6.3*	1.9	4.5*	1.5	3.5*	1.1	2.8*				1.0	2.2*
	Stabilizer blade + divided blade down	4.6*	4.6*	5.4	7.9*	3.4	6.3*	2.5	4.5*	1.9	3.5*	1.5	2.8*				1.3	2.2*
-1.0	Stabilizers raised	6.3*	6.3*	3.3	7.1	2.1	4.2	1.6	3.0	1.2	2.2	0.9	1.8				0.9	1.7
	Divided blade down	6.3*	6.3*	4.0	9.7*	2.6	6.4*	1.9	4.6*	1.4	3.5*	1.1	2.5*				1.1	2.3*
	Stabilizer blade + divided blade down	6.3*	6.3*	5.3	9.7*	3.4	6.4*	2.4	4.6*	1.8	3.5*	1.4	2.5*				1.4	2.3*
-2.0	Stabilizers raised	6.8	7.8*	3.3	7.1	2.1	4.2	1.5	2.9	1.1	2.2						1.0	2.0
	Divided blade down	7.8*	7.8*	4.0	10.7*	2.6	6.5*	1.8	4.5*	1.4	3.0*						1.2	2.1*
	Stabilizer blade + divided blade down	7.8*	7.8*	5.4	10.7*	3.4	6.5*	2.4	4.5*	1.8	3.0*						1.6	2.1*
-3.0	Stabilizers raised	7.0	8.5*	3.3	7.2	2.1	4.2	1.5	2.9								1.4	2.6*
	Divided blade down	8.5*	8.5*	4.1	8.5*	2.6	5.0*	1.8	3.0*								1.7	2.6*
	Stabilizer blade + divided blade down	8.5*	8.5*	5.4	8.5*	3.4	5.0*	2.4	3.0*								2.3	2.6*

Stick 2.05 m

m	Undercarriage	2.0 m		3.0 m		4.0 m		5.0 m		6.0 m		7.0 m		8.0 m		m		
8.0	Stabilizers raised																2.7*	2.7*
	Divided blade down																2.7*	2.7*
	Stabilizer blade + divided blade down																2.7*	2.7*
7.0	Stabilizers raised							1.9	2.5*								1.6	2.0*
	Divided blade down							2.2	2.5*								1.8	2.0*
	Stabilizer blade + divided blade down							2.5*	2.5*								2.0*	2.0*
6.0	Stabilizers raised							1.9	2.5*	1.4	2.3*						1.2	1.7*
	Divided blade down							2.3	2.5*	1.6	2.3*						1.4	1.7*
	Stabilizer blade + divided blade down							2.5*	2.5*	2.1	2.3*						1.7*	1.7*
5.0	Stabilizers raised	2.6*	2.6*					1.9	2.5*	1.4	2.5	1.0	1.9				1.0	1.6*
	Divided blade down	2.6*	2.6*					2.2	2.5*	1.7	2.5*	1.2	2.0*				1.2	1.6*
	Stabilizer blade + divided blade down	2.6*	2.6*					2.5*	2.5*	2.1	2.5*	1.6	2.0*				1.5	1.6*
4.0	Stabilizers raised	2.1*	2.1*			2.6	2.7*	1.9	2.9*	1.4	2.4	1.0	1.9				0.8	1.6
	Divided blade down	2.1*	2.1*			2.7*	2.7*	2.2	2.9*	1.7	2.8*	1.2	2.5*				1.0	1.6*
	Stabilizer blade + divided blade down	2.1*	2.1*			2.7*	2.7*	2.7	2.9*	2.1	2.8*	1.6	2.5*				1.3	1.6*
3.0	Stabilizers raised			3.8	6.2*	2.5	4.5	1.8	3.2*	1.4	2.4	1.0	1.9				0.8	1.5
	Divided blade down			4.6	6.2*	3.0	4.9*	2.1	3.7*	1.7	3.0*	1.2	2.6*				0.9	1.6*
	Stabilizer blade + divided blade down			5.9	6.2*	3.7	4.9*	2.7	3.7*	2.0*	3.0*	1.6	2.6*				1.2	1.6*
2.0	Stabilizers raised	2.4*	2.4*	3.7	6.7*	2.4	4.4	1.8	3.1	1.3	2.4*	1.0	1.9	0.7	1.5		0.7	1.5
	Divided blade down	2.4*	2.4*	4.5	6.7*	2.9	5.8*	2.1	4.1*	1.6	3.3*	1.2	2.7*	0.9	1.7*		0.9	1.7*
	Stabilizer blade + divided blade down	2.4*	2.4*	5.8	6.7*	3.6	5.8*	2.6*	4.1*	2.0	3.3*	1.5	2.7*	1.2	1.7*		1.2	1.7*
1.0	Stabilizers raised	3.0*	3.0*	3.5	7.4*	2.3	4.4	1.7	3.1	1.3	2.4	0.9	1.8				0.7	1.5
	Divided blade down	3.0*	3.0*	4.2	7.7*	2.8	6.0*	2.0	4.4*	1.5	3.4*	1.2	2.8*				0.9	1.8*
	Stabilizer blade + divided blade down	3.0*	3.0*	5.6	7.7*	3.6	6.0*	2.6	4.4*	2.0	3.4*	1.5	2.8*				1.2	1.8*
0	Stabilizers raised	4.4*	4.4*	3.3	7.1	2.2	4.3	1.6	3.1	1.2	2.3	0.9	1.8				0.8	1.5
	Divided blade down	4.4*	4.4*	4.0	7.8*	2.6	6.3*	1.9	4.5*	1.5	3.4*	1.1	2.8*				0.9	2.0*
	Stabilizer blade + divided blade down	4.4*	4.4*	5.4	7.8*	3.4	6.3*	2.5	4.5*	1.9	3.4*	1.5	2.8*				1.2	2.0*
-1.0	Stabilizers raised	5.8*	5.8*	3.2	7.0	2.1	4.2	1.6	3.0	1.2	2.2	0.9	1.7				0.8	1.6
	Divided blade down	5.8*	5.8*	4.0	9.2*	2.6	6.4*	1.9	4.5*	1.4	3.5*	1.1	2.7*				1.0	2.2*
	Stabilizer blade + divided blade down	5.8*	5.8*	5.3	9.2*	3.4	6.4*	2.4	4.5*	1.8	3.5*	1.4	2.7*				1.3	2.2*
-2.0	Stabilizers raised	6.7	7.3*	3.3	7.1	2.1	4.2	1.5	2.9	1.1	2.2						0.9	1.8
	Divided blade down	7.3*	7.3*	4.0	10.8*	2.6	6.5*	1.8	4.6*	1.4	3.2*						1.1	2.1*
	Stabilizer blade + divided blade down	7.3*	7.3*	5.3	10.8*	3.4	6.5*	2.4	4.6*	1.8	3.2*						1.5	2.1*
-3.0	Stabilizers raised	6.9	8.0*	3.3	7.1	2.1	4.2	1.5	2.9								1.2	2.3*
	Divided blade down	8.0*	8.0*	4.1	9.2*	2.6	5.5*	1.8	3.5*								1.5	2.3*
	Stabilizer blade + divided blade down	8.0*	8.0*	5.4	9.2*	3.3	5.5*	2.4	3.5*								2.0	2.3*

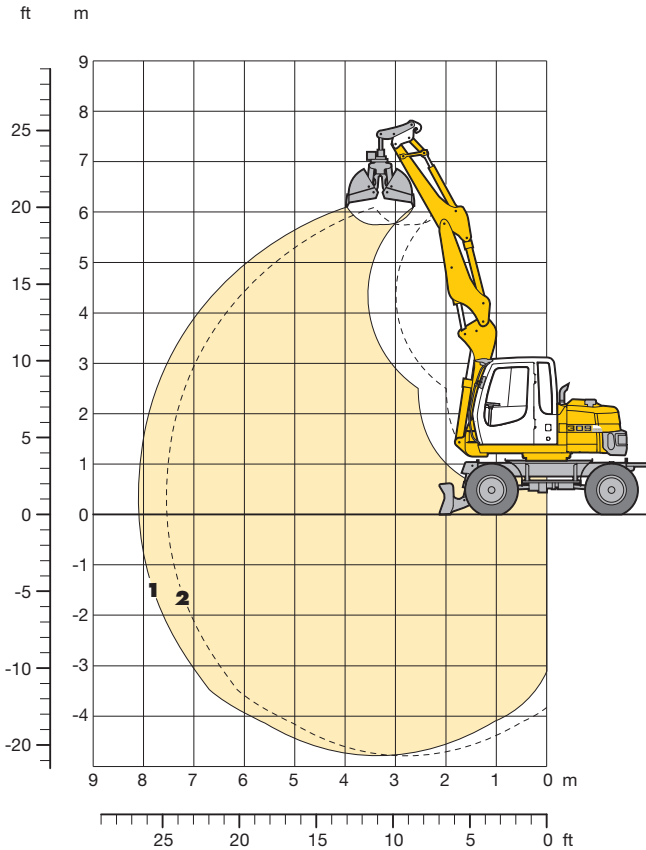
Height Can be slewed through 360° In longitudinal position of undercarriage Max. reach * Limited by hydr. capacity

The lift capacities on the load hook of the Liebherr quick-change adapter 33 without grab 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 stabilisers raised and over the rigid axle with the stabilisers down. The values apply when the adjusting cylinder is in the optimal position. Indicated loads comply with the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity, or are limited by the permissible load of the load hook on the quick-change adapter (max. 5 t). Without the quick-change adapter, lift capacities will increase by up to 110 kg.

In accordance with the harmonised EU Standard EN 474-5, hydraulic excavators used for lifting operations must be equipped with pipe rupture protection devices on the hoist cylinders and an overload warning device.

Clamshell Attachment A 309 Litronic®

with Hydr. Adjustable Boom 2.10 m



Digging Envelope with Quick Change Adapter

1

Stick length	m	1.85
Max. digging depth	m	4.80
Max. reach at ground level	m	8.10
Max. dumping height	m	5.75

2 with stick 1.85 m at max. attachment offset

Clamshell Model

5 B

Max. tooth force	52 kN (5.3 t)
Max. torque of hydr. swivel	1.40 kNm

Operating Weight

The operating weight includes the basic machine with 8 tires plus spacer rings, hydr. adjustable boom 2.10 m, stick 1.85 m, quick change adapter 33 and clamshell model 5 B/0.20 m³ (600 mm without ejector).

Undercarriage versions	Weight
A 309 Litronic® with stabilizer blade	11,600 kg
A 309 Litronic® with divided blade	11,900 kg
A 309 Litronic® with stabilizer blade + divided blade	12,500 kg

Clamshell Model 5 B Machine stability per ISO 10567* (75% of tipping capacity)

Width of shells mm	Capacity m ³	Weight kg	Stabilizers raised	Divided blade down	Stabilizer blade + divided blade down
			Stick length (m) 1.85	Stick length (m) 1.85	Stick length (m) 1.85
300 ¹⁾	0.10	410	□	□	□
400 ¹⁾	0.13	440	□	□	□
600 ¹⁾	0.20	470	□	□	□
800 ¹⁾	0.27	510	△	□	□
300 ²⁾	0.10	450	□	□	□
400 ²⁾	0.13	490	□	□	□

* Indicated loads are based on ISO 10567 and do not exceed 75% of tipping or 87% of hydraulic capacity, max. stick length without quick change adapter, lifted 360° on firm with blocked oscillating axle

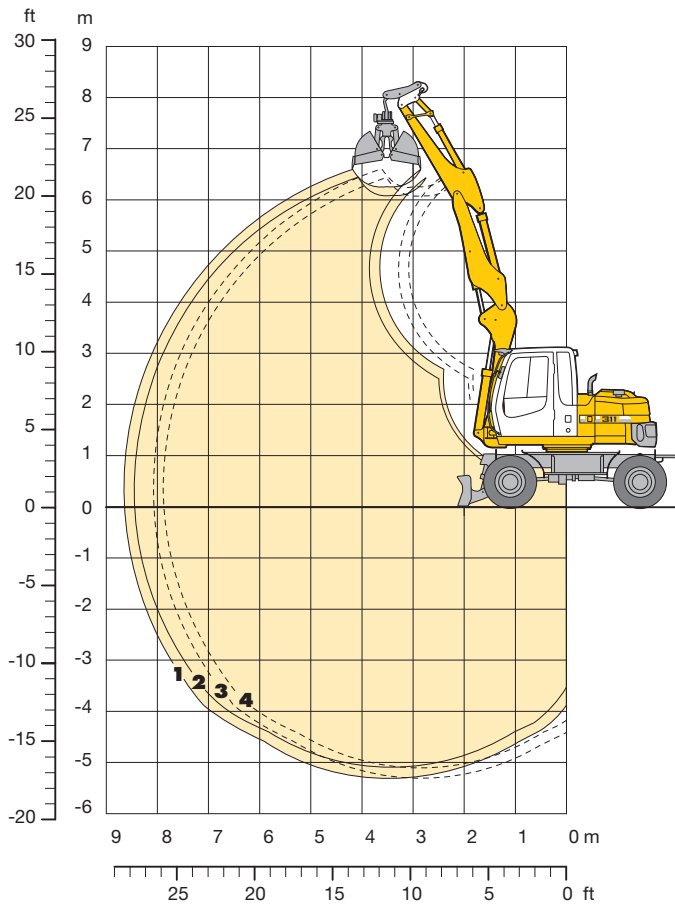
1) without ejector

2) with ejector

- = ≤ 1.8 t/m³ max. material weight
- △ = ≤ 1.5 t/m³ max. material weight
- = ≤ 1.2 t/m³ max. material weight
- ▲ = not authorized

Clamshell Attachment A 311 Litronic®

with Hydr. Adjustable Boom 2.35 m



Digging Envelope with Quick Change Adapter

		1	2
Stick length	m	1.85	2.05
Max. digging depth	m	5.10	5.30
Max. reach at ground level	m	8.45	8.65
Max. dumping height	m	6.10	6.30

3 with stick 1.85 m at max. attachment offset
4 with stick 2.05 m at max. attachment offset

Clamshell Model

	5 B
Max. tooth force	52 kN (5.3 t)
Max. torque of hydr. swivel	1.40 kNm

Operating Weight

The operating weight includes the basic machine with 8 tires plus spacer rings, hydr. adjustable boom 2.35 m, stick 2.05 m, quick change adapter 33 and clamshell model 5 B/0.20 m³ (600 mm without ejector).

Undercarriage versions	Weight
A 311 Litronic with stabilizer blade	12,400 kg
A 311 Litronic with divided blade	12,800 kg
A 311 Litronic with stabilizer blade + divided blade	13,500 kg

Clamshell Model 5 B Machine stability per ISO 10567* (75% of tipping capacity)

Width of shells mm	Capacity m ³	Weight kg	Stabilizers raised		Divided blade down		Stabilizer blade + divided blade down	
			Stick length (m)		Stick length (m)		Stick length (m)	
			1.85	2.05	1.85	2.05	1.85	2.05
300 ¹⁾	0.10	410	□	□	□	□	□	□
400 ¹⁾	0.13	440	□	□	□	□	□	□
600 ¹⁾	0.20	470	□	□	□	□	□	□
800 ¹⁾	0.27	510	△	△	□	□	□	□
300 ²⁾	0.10	450	□	□	□	□	□	□
400 ²⁾	0.13	490	□	□	□	□	□	□

* Indicated loads are based on ISO 10567 and do not exceed 75% of tipping or 87% of hydraulic capacity, max. stick length without quick change adapter, lifted 360° on firm with blocked oscillating axle

1) without ejector

2) with ejector

- = ≤ 1.8 t/m³ max. material weight
- △ = ≤ 1.5 t/m³ max. material weight
- = ≤ 1.2 t/m³ max. material weight
- ▲ = not authorized

Attachments

Ditchcleaning Buckets

A 309 Litronic

Ditchcleaning Buckets Machine stability per ISO 10567* (75% of tipping capacity)

Cutting width mm	Capacity ISO 7451 ¹⁾ m ³	Weight kg	Stabilizers raised		Divided blade down		Stabilizer blade + divided blade down	
			Stick length (m)		Stick length (m)		Stick length (m)	
			1.85		1.85		1.85	
Hydr. Adjustable Boom 2.10 m								
1,300 ⁴⁾	0.28	300	□		□		□	
1,500 ⁴⁾	0.33	330	△		□		□	
1,500 ²⁾	0.33	210	□		□		□	

A 311 Litronic

Ditchcleaning Buckets Machine stability per ISO 10567* (75% of tipping capacity)

Cutting width mm	Capacity ISO 7451 ¹⁾ m ³	Weight kg	Stabilizers raised		Divided blade down		Stabilizer blade + divided blade down	
			Stick length (m)		Stick length (m)		Stick length (m)	
			1.85	2.05	1.85	2.05	1.85	2.05
Hydr. Adjustable Boom 2.35 m								
1,500 ⁴⁾	0.33	330	□	△	□	□	□	□
1,500 ²⁾	0.33	210	□	□	□	□	□	□
1,500 ³⁾	0.36	420	■	■	□	□	□	□
1,700 ⁴⁾	0.37	390	△	■	□	□	□	□
2,000 ²⁾	0.45	270	■	■	□	△	□	□

* Indicated loads are based on ISO 10567 and do not exceed 75 % of tipping or 87 % of hydraulic capacity, max. stick length without quick change adapter, lifted 360° on firm with blocked oscillating axle

- 1) comparable with SAE (heaped)
- 2) rigid ditchcleaning bucket
- 3) with 2 x 50° rotator
- 4) with 2 x 45° rotator

□	= ≤ 1.8 t/m ³ max. material weight
△	= ≤ 1.5 t/m ³ max. material weight
■	= ≤ 1.2 t/m ³ max. material weight
▲	= not authorized

Equipment



Undercarriage

	309	311
2-circuit brake system	•	•
Support individually controllable	•	•
Tires Mitas EM 22	•	•
Travel speed levels (four)	•	•
Powershift transmission	•	•
Parking brake, maintenance-free	•	•
Tire variants, various	+	+
Pipe fracture safety on support cylinders	•	•
Custom paintwork undercarriage	+	+
Speeder*	+	+
Tool box on both sides, lockable	+	+
Tool box left, lockable	•	•
Central lubrication undercarriage	+	+



Uppercarriage

	309	311
Refueling pump, electrical	+	+
Main battery switch for electrical system	•	•
Engine hood with gas spring	•	•
Uppercarriage doors, lockable	•	•
Uppercarriage lock electro-hydraulically activated from the cab	•	•
Beacon on engine hood	+	+
Custom paintwork uppercarriage	+	+
Power socket 12 V, 20 A	+	+
Central lubricating system, automatic	+	+



Hydraulics

	309	311
Stop cock between hydraulic tank and pump(s)	•	•
Pressure test fittings	•	•
Accumulator for controlled lowering of the attachment with the engine shut down	•	•
Hydraulic oil from -20 °C to +40 °C	•	•
Hydraulic oil filter with integrated microfilter	•	•
Liebherr hydraulic oil, biologically degradable	+	+
Liebherr hydraulic oil, specially for warm and cold regions	+	+
Bypass filter	+	+
Change-over for controls (hammer/shear operation via pedals or joystick)	+	+



Engine

	309	311
Fuel theft protection	+	+
Fuel preheating	+	+
Coolant preheating 230 V	+	+
Liebherr particle filter	+	+
Fold-away fan for comfortable cleaning	•	•
Air pre-cleaner	•	•



Operator's Cab

	309	311
Hourmeter, readable from the outside	•	•
Roof window	•	•
Travel alarm	+	+
Fire extinguisher	+	+
Bottle holder	•	•
FOPS cab protection system	+	+
Slide-in front window	•	•
Floor mat removable	•	•
Coat hook	•	•
Air conditioner	+	+
Consoles and seat adjustable separately or in combination	•	•
Cooler, electrical	+	+
Steering column adjustable horizontally	•	•
LIDAT-Standard**	+	+
Liebherr proportional controls	+	+
Automatic engine shut-down (time adjustable)	+	+
Bullet proof glass (front and top)	+	+
Radio system	+	+
Smokers package	•	•
Rear view camera	+	+
Back-up alarm	+	+
Beacon	+	+
Tinted glass	•	•
Windshield washer	•	•
Rear wiper	+	+
Wiper lower front window	+	+
Sliding window in the door	•	•
Sun roller blind	•	•
Auxiliary heater with timer	+	+
Immobilizer electronic (key code)	+	+
Auxiliary headlights (front resp. rear)	+	+



Attachment

	309	311
Main boom, adjustable in height	+	+
Function rotating device incl. tubing	•	•
Function hammer/shear operation incl. tubing	+	+
Hoist limitation, electronic	+	+
Piston rod protection bucket cylinder	-	+
Piston rod protection adjustable boom cylinder	+	+
Load hook on stick	+	+
Shackle on stick	+	+
Leak oil line, additional for attaching tools	+	+
Liebherr ditchcleaning bucket program	+	+
Liebherr pallet forks	-	+
Liebherr quick change adapter, hydraulic or mechanical	+	+
Liebherr backhoe bucket program	+	+
Liebherr tooth system	+	+
Liebherr clamshell grapple program	+	+
LIKUFIX, coupling hydraulic tools from the cab	+	+
Pipe fracture safety boom cylinders	•	•
Pipe fracture safety stick resp. bucket cylinder	+	+
Hose quick coupling at end of stick	•	•
Custom painting for tools	+	+
Tool-Control, 10 tool adjustments selectable over the display	+	+
Overload warning device	•	•
Bottom chord protection for stick	+	+
Central lubricating system, expanded for connecting link	+	+

• = Standard, + = Option, - = not available

* = depending upon the country partially only 25 km/h permitted, ** = starting mid 2010

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

All illustrations and data may differ from standard equipment. Subject to change without notice.

The Liebherr Group of Companies

Wide product range

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

Exceptional customer benefit

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

State-of-the-art technology

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

Worldwide and independent

Hans Liebherr founded the Liebherr family company in 1949. Since that time, the enterprise has steadily grown to a group of more than 100 companies with over 32,000 employees located on all continents. The corporate headquarters of the Group is Liebherr-International AG in Bulle, Switzerland. The Liebherr family is the sole owner of the company.

www.liebherr.com



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