
R 972 Litronic

LIEBHERR

Crawler excavator

**Generation**

5.2

Operating weight

Backhoe: 68,450–76,500 kg

Shovel: 69,950–70,650 kg

Engine

330 kW / 449 HP

Stage IIIA

(compliant)

Bucket capacity

Backhoe: 3.00–5.50 m³

Shovel: 3.50–5.00 m³

Experience progress: R 972

Equipment

- Wide choice of backhoe front boom and stick configurations
- Welded structure with cast steel components for improved stress-resistance and longer service life
- Safety check valves to prevent boom and stick cylinder pipes from bursting, with integrated regeneration system for lower fuel consumption

Buckets

- Different levels of protection to suit different areas of application:
 - Standard for loose, non-abrasive materials
 - HD for hard-to-break, moderately abrasive materials
 - HDV for highly abrasive materials
- Different blade designs:
 - straight (for earth-moving and grading)
 - semi-delta (for hard-to-break, hard-to-extract materials)
 - delta (for compacted or slightly cracked materials)

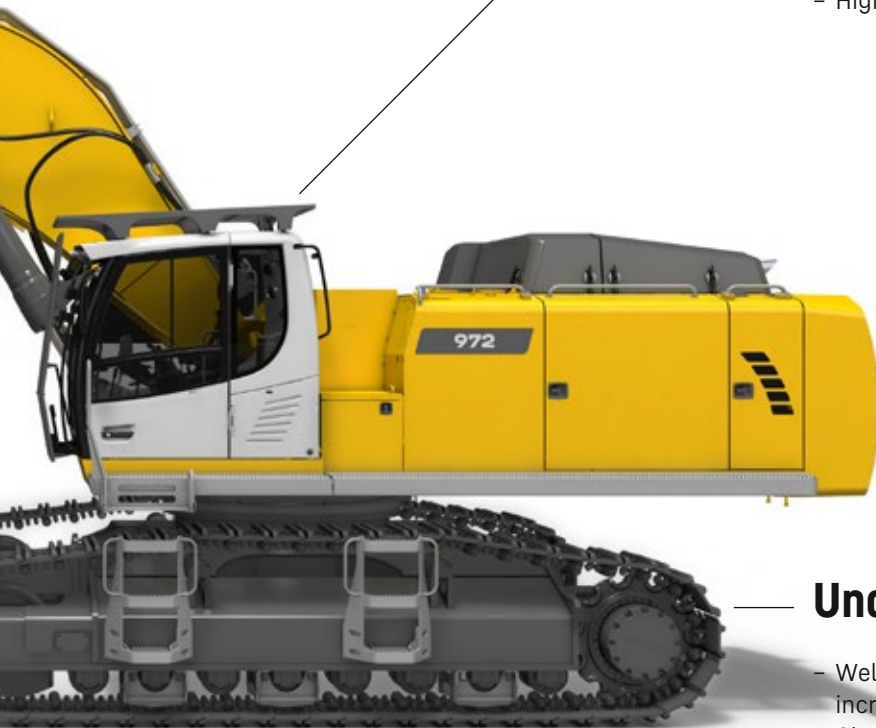


New functions / options

- **Liebherr Power Efficiency – Engine Control**
Up to 10% lower fuel consumption
- **Bucket Fill Assist**
Automatic bucket-filling cycle for increased productivity
- **Modetronic**
Customisable operating modes for optimum adjustment of work cycles to each type of application

Comfort

- Quiet, comfortable cab, the largest and most spacious in its category
- Seat with heater and pneumatic multi-directional shock absorption (air conditioning optional)
- High-resolution 9" color touchscreen



Undercarriage

- Welded undercarriage with rigid X profile for increased robustness
- Chamfered rack pads with double grouser for more manoeuvrability on difficult terrain
- Moulded two-tooth sprocket for longer service life
- Track rollers on double bearings for increased reliability and durability over time
- Stronger travel motor housing protection for improved resistance to wear and tear from hard, abrasive rocks

Experience progress: R 972 Shovel

Safety

- Completely unobstructed panoramic view, plus rear-view and side-view monitoring cameras for increased safety
- Retractable console for safe and easy access to the cab
- Impact-resistant windscreen and roof glass panel
- Cab riser for the best possible view of the loading area (optional)

Equipment

- Shovel attachment with parallel drivetrain for powerful, even penetration
- Bucket cylinders located under the equipment for better protection
- Optional cylinder guards

Buckets

Different bucket designs:

- Design I: Non-abrasive materials such as limestone without flint inclusions
- Design II: Pre-mined material or easily loosened rocks (DIN 18300 classes 3 to 4)
- Design III: Very abrasive materials such as rocks with high silica content, sandstone, granite etc.
- Front shovel with semi-automatic flap closure, ideally shaped for optimum material penetration and high filling rate





Cab

- 800 mm cab riser for better view
- Optional FOPS and FGPS guards for complete safety when working
- Quiet, comfortable cab

Maintenance

- Access platform for engine and hydraulic control block compartments to enable safe, ergonomic maintenance work
- Left and right catwalks as standard; wide catwalks with hand rail optional
- Automatic central lubrication system as standard
- Shut-off valve on hydraulic tank outlet as standard

Technical data



Engine

Rating per ISO 9249	330 kW (449 HP) at 1,800 RPM
Torque	2,750 Nm at 1,100 RPM
Model	Liebherr D9508 A7
Type	8 cylinder V engine
Bore	128 mm
Stroke	157 mm
Displacement	16.16 l
Engine operation	4-stroke diesel Common-Rail
Exhaust gas treatment	Engine Stage IIIA: with EGR
Cooling system	Water-cooled and integrated motor oil cooler, after-cooled and fuel cooled
Air cleaner	Dry-type air cleaner with pre-cleaner, primary and safety elements
Fuel tank	1,140 l
Electrical system	
Voltage	24 V
Batteries	2 x 180 Ah / 12 V
Starter	24 V / 7.8 kW
Alternator	Three-phase current 28 V / 140 A
Engine idling	Sensor controlled
Motor management	Connection to the integrated excavator system controlling via CAN-BUS to the economical utilisation of the service that is available



Hydraulic controls

Power distribution	Via control valves in single block with integrated safety valves
Flow summation	To boom and stick
Closed-loop circuit	For uppercarriage swing drive
Servo circuit	Electro-hydraulic control
Equipment and swing	Proportional via joystick levers
Travel	- Proportional control via foot pedals or removable levers - Speed pre-selection
Additional functions	Proportional regulation via foot pedals or mini-joystick



Hydraulic system

Hydraulic pumps	Two Liebherr variable displacement, swashplate pumps
For equipment and travel drive	2 x 410 l/min.
Max. flow	350 bar
Max. pressure	Reversible, variable displacement, swashplate pump, closed-loop circuit
For swing drive	245 l/min.
Max. flow	370 bar
Max. pressure	Electro-hydraulic with electronic engine speed sensing regulation, minimum flow adjustment, flow compensation, high flow
Pump regulation	435 l
Hydraulic tank	920 l
Hydraulic system	2 full flow filters in return line with integrated fine filter area (5 µm)
Filtration	Compact cooler for water cooler, after-cooler, fuel cooler and transmission pump oil, sandwiched with cooler for oil and condenser of air-conditioning with hydrostatically controlled fan drives
Cooling system	Adjustment of engine and hydraulic performance via a mode pre-selector to match application, e.g. for especially economical and environmentally friendly operation or for maximum digging performance and heavy-duty jobs
MODE selection	Stepless adjustment of engine output via RPM at each selected mode
RPM adjustment	20 pre-adjustable pump flows and pressures for add-on attachments
Tool Control	



Swing drive

Drive	Liebherr swashplate motor with integrated brake valve
Transmission	Liebherr compact planetary reduction gears
Swing ring	Liebherr, sealed race ball bearing swing ring, internal teeth
Swing speed	0-5.6 RPM stepless
Swing torque	233 kNm
Holding brake	Wet multi-disc (spring applied, pressure released)



Cab

Cab	LED work headlights integrated in the ceiling, a door with a sliding window (can be opened on both sides), large storing box and several stowing possibilities, shock-absorbing suspension, sound damping insulating, tinted laminated safety glass, separate window shades for the sunroof window and windscreen, cigarette lighter and 12V plug, storage bins, lunchbox, cup holder
Operator's seat	Liebherr-Comfort seat, airsprung with automatic weight adjustment, vertical and longitudinal seat damping including consoles and joysticks. Seat and armrests adjustable separately and in combination (adjustable in length, height and inclination), seat heating as standard
Arm consoles	Oscillating consoles with seat, tiltable console left
Operation and displays	Large high-resolution operating unit, intuitive, colour display with touchscreen, video-compatible, numerous setting, control and monitoring options, e.g. air conditioning control, fuel consumption, machine and attachment parameters
Air-conditioning	Automatic air-conditioning, recirculated air function, fast de-icing and demisting at the press of a button, air vents can be operated via a menu. Recirculated air and fresh air filters can be easily replaced and are accessible from the outside. Heating-cooling unit, designed for extreme outside temperatures, sensors for solar radiation, inside and outside temperatures
Noise emission	
ISO 6396	80 dB(A) = L_{pA} (inside cab)
2000/14/EC	109 dB(A) = L_{WA} (surround noise)



Undercarriage

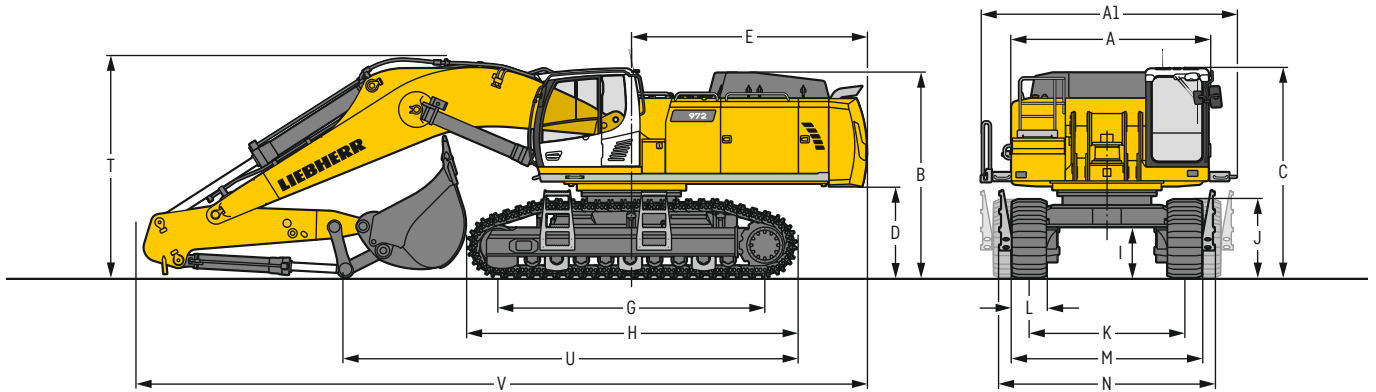
Versions	
HD	Gauge 3,300 mm
LC-V	Gauge 3,390 mm
Drive	Liebherr swashplate motor with brake valves on both sides
Transmission	Liebherr compact planetary reduction gear
Maximum travel speed	4.1 km/h 3.6 km/h (with drawbar pull increase)
Drawbar pull on crawler	441 kN 505 kN (with drawbar pull increase)
Track components	DBK, maintenance-free
Track rollers / Carrier rollers	9 / 2 (HD) 9 / 3 (LC-V)
Tracks	Sealed and greased
Track pads	Double grouser
Holding brake	Wet multi-disc (spring applied, pressure released)
Brake valves	Outside the travel motor
Lashing eyes	Integrated



Equipment

Type	Combination of resistant steel plates and cast steel components
Hydraulic cylinders	Liebherr cylinders with seal and guidance systems
Bearings	Sealed, low maintenance
Lubrication	Automatic central lubrication system (except link and tilt geometry)
Hydraulic connections	Pipes and hoses equipped with SAE split-flange connections
Buckets	Standard equipped with Liebherr tooth system

Dimensions



		HD			LC-V		
		mm			mm		
A	Uppercarriage width	3,515			3,515		
A1	Uppercarriage width with catwalks	4,495			4,495		
B	Uppercarriage height	3,450			3,600		
C	Cab height	3,530			3,680		
D	Counterweight ground clearance	1,445			1,595		
E	Rear-end length	4,135			4,135		
G	Wheelbase	4,575			4,690		
H	Undercarriage length	5,695			5,780		
I	Undercarriage ground clearance	610			895		
J	Track height	1,315			1,390		
K	Track gauge	3,300			2,730 / 3,390 ²⁾		
L	Track pad width	500	600	750	500	600	750
M	Width over tracks	3,920	3,920	4,050	3,360 / 4,020 ²⁾	3,360 / 4,020 ²⁾	3,480 / 4,140 ²⁾
N	Width over steps	4,330 ¹⁾	4,330 ¹⁾	4,330 ¹⁾	3,940 ¹⁾ / 4,600 ^{1) 2)}	3,940 ¹⁾ / 4,600 ^{1) 2)}	3,940 ¹⁾ / 4,600 ^{1) 2)}

¹⁾ width with removable steps

²⁾ work position

		Stick length	Mono boom 7.00 m direct mounting	
		m	mm	
			HD	LC-V
T	Boom height	2.60	3,900	3,900
		3.00	4,000	4,000
U	Length on ground	2.60	8,000	7,950
		3.00	6,150	7,600
V	Overall length	2.60	12,850	12,850
		3.00	12,750	12,750
Bucket			4.00 m ³	

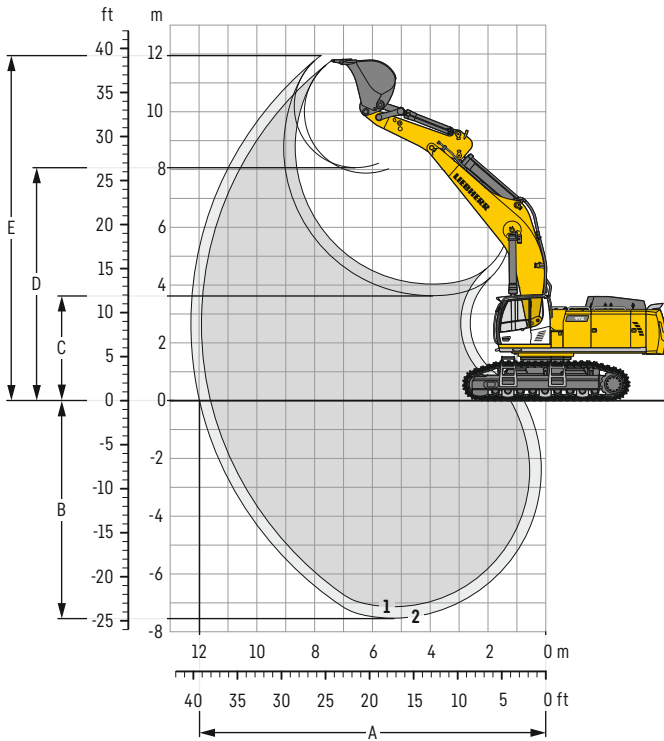
Transport dimensions

removable elements disassembled

		Mono boom 7.00 m	
		mm	
Transport width		4,495	
		Stick	mm
		m	
Transport length	2.60	12,850	
	3.00	12,750	
Transport height	2.60	3,900	
	3.00	4,000	
Bucket		4.00 m ³	

Backhoe bucket

with mono boom 7.00 m



Digging envelope

without quick coupler		1	2
Stick length	m	2.60	3.00
A Max. reach at ground level	m	11.60	11.95
B Max. digging depth	m	7.15	7.55
C Min. dumping height	m	4.05	3.65
D Max. dumping height	m	7.85	8.05
E Max. cutting height	m	11.75	11.95

Forces

without quick coupler		1	2
Stick digging force (ISO 6015)	kN	308	282
Bucket digging force (ISO 6015)	kN	354	354
Stick digging force (SAE J1179)	kN	289	266
Bucket digging force (SAE J1179)	kN	306	306

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 11.0 t, mono boom 7.00 m, stick 2.60 m and HD bucket 4.00 m³ (4,500 kg).

Undercarriage		HD		
Pad width	mm	500	600	750
Weight	kg	68,450	69,150	70,150
Ground pressure	kg/cm ²	1.38	1.16	0.94

Undercarriage		LC-V		
Pad width	mm	500	600	750
Weight	kg	71,200	71,900	73,000
Ground pressure	kg/cm ²	1.41	1.18	0.96

The operating weight includes the basic machine with counterweight 14.5 t, mono boom 7.00 m, stick 2.60 m and HD bucket 4.00 m³ (4,500 kg).

Undercarriage		HD		
Pad width	mm	500	600	750
Weight	kg	71,950	72,650	73,650
Ground pressure	kg/cm ²	1.45	1.23	1.01

Undercarriage		LC-V		
Pad width	mm	500	600	750
Weight	kg	74,700	75,400	76,500
Ground pressure	kg/cm ²	1.48	1.25	1.03

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

Cutting width mm	Capacity ISO 7451 m ³	Weight kg	HD undercarriage (with track pads 600 mm)		LC-V undercarriage (with track pads 600 mm)	
			Stick length (m)		Stick length (m)	
			2.60	3.00	2.60	3.00
with counterweight 11.0t						
STD ¹⁾	1,950	3,00	3,100	▲	▲	▲
	2,150	3,50	3,350	▲	▲	▲
	1,950	4,00	3,600	▲	▲	▲
	2,150	4,50	3,800	■	▲	■
	2,250	5,00	3,950	▲	■	■
2,450	5,50	4,200	■	△	△	
HD ²⁾	2,000	3,00	3,900	▲	▲	▲
	2,200	3,50	4,300	▲	▲	▲
	2,000	4,00	4,500	▲	■	■
	2,200	4,50	4,850	■	■	■
	2,300	5,00	5,050	■	△	△
HDV ³⁾	2,000	3,00	4,350	▲	▲	▲
	2,200	3,50	4,750	▲	▲	▲
	2,000	4,00	5,000	▲	▲	▲
	2,200	4,50	5,350	▲	■	■
	2,300	5,00	5,600	■	△	△
with counterweight 14.5t						
STD ¹⁾	1,950	3,00	3,100	▲	▲	▲
	2,150	3,50	3,350	▲	▲	▲
	1,950	4,00	3,600	▲	▲	▲
	2,150	4,50	3,800	▲	■	■
	2,250	5,00	3,950	▲	■	■
2,450	5,50	4,200	■	△	△	
HD ²⁾	2,000	3,00	3,900	▲	▲	▲
	2,200	3,50	4,300	▲	▲	▲
	2,000	4,00	4,500	▲	■	■
	2,200	4,50	4,850	▲	■	■
	2,300	5,00	5,050	▲	△	△
HDV ³⁾	2,000	3,00	4,350	▲	▲	▲
	2,200	3,50	4,750	▲	▲	▲
	2,000	4,00	5,000	▲	▲	▲
	2,200	4,50	5,350	▲	■	■
	2,300	5,00	5,600	■	△	△

* Indicated loads are based on ISO 10567, at maximum reach, and may be swung 360° on firm and even ground

¹⁾ Standard bucket with Liebherr teeth Z 70

²⁾ HD bucket with Liebherr teeth Z 90

³⁾ HDV bucket with Liebherr teeth Z 90

Other buckets available upon request

Max. material weight ▲ = ≤ 2.0t/m³, ■ = ≤ 1.8t/m³, ▲ = ≤ 1.65t/m³, ■ = ≤ 1.5t/m³, △ = ≤ 1.2t/m³

Lift capacities

with mono boom 7.00 m, counterweight 11.0 t and track pads 600 mm

Stick 2.60 m

Under-carriage m	3.0m		4.5m		6.0m		7.5m		9.0m		m	
9.0									10.1*	10.1*	7.2	
7.5									9.4*	9.4*	8.3	
6.0			23.2*	23.2*	18.1*	18.1*	15.6*	15.6*	11.8*	11.8*	9.1	
4.5					20.9*	20.9*	16.5*	16.9*	12.5*	14.8*	9.6	
3.0					21.5*	23.5*	15.7*	18.3*	12.1*	15.4*	9.8	
1.5					20.6*	24.8*	15.1*	19.2*	11.8*	15.9*	9.7	
0			21.8*	21.8*	20.2*	24.9*	14.8*	19.5*	11.6*	15.9*	9.4	
-1.5	23.2*	23.2*	29.9*	29.9*	20.3*	23.7*	14.8*	18.8*		11.9*	13.8*	8.9
-3.0	31.0*	31.0*	26.4*	26.4*	20.6*	21.2*	15.1*	16.6*		13.9*	14.9*	8.0
-4.5			20.4*	20.4*	16.1*	16.1*				13.9*	13.9*	6.6
9.0							14.9*	14.9*		10.0*	10.0*	7.2
7.5							15.7*	15.7*		9.4*	9.4*	8.3
6.0			23.9*	23.9*	18.4*	18.4*	15.7*	15.7*	13.2*	13.2*	9.1	
4.5					21.2*	21.2*	17.1*	17.1*	13.4*	14.9*	9.6	
3.0					23.1*	23.7*	16.9*	18.4*	13.0*	15.5*	9.8	
1.5					22.3*	24.9*	16.3*	19.3*	12.7*	15.9*	9.7	
0			23.6*	23.6*	22.0*	24.8*	16.0*	19.5*	12.6*	15.8*	9.4	
-1.5	25.0*	25.0*	29.6*	29.6*	22.1*	23.5*	16.0*	18.6*		13.0*	14.1*	8.9
-3.0	30.5*	30.5*	25.9*	25.9*	20.8*	20.8*	16.2*	16.2*		14.9*	14.9*	8.0
-4.5			19.5*	19.5*	15.3*	15.3*				13.6*	13.6*	6.6

Stick 3.00 m

Under-carriage m	3.0m		4.5m		6.0m		7.5m		9.0m		m		
9.0							10.5*	10.5*			8.3*	8.3*	7.7
7.5							14.0*	14.0*			7.8*	7.8*	8.8
6.0							17.1*	17.1*	12.9	13.7*	7.6*	7.6*	9.5
4.5			28.2*	28.2*	19.9*	19.9*	16.3*	16.3*	12.5	14.3*	7.7*	7.7*	10.0
3.0					21.7*	22.7*	15.8	17.7*	12.1	15.0*	8.0*	8.0*	10.1
1.5					20.7	24.5*	15.1	18.9*	11.7	15.6*	8.6*	8.6*	10.1
0			24.0*	24.0*	20.2	24.9*	14.7	19.4*	11.5	15.8*	9.6*	9.6*	9.8
-1.5	22.4*	22.4*	31.3*	31.3*	20.1	24.1*	14.6	18.9*	11.5	15.1*	11.0	11.2*	9.3
-3.0	34.9*	34.9*	27.9*	27.9*	20.4	21.9*	14.8	17.2*			12.7	14.2*	8.4
-4.5	27.7*	27.7*	22.5*	22.5*	17.7*	17.7*					13.8*	13.8*	7.2
9.0							12.1*	12.1*			8.2*	8.2*	7.7
7.5							14.1*	14.1*			7.8*	7.8*	8.8
6.0							17.4*	17.4*	13.7*	13.7*	7.6*	7.6*	9.5
4.5			29.0*	29.0*	20.2*	20.2*	16.4*	16.4*	13.5	14.4*	7.7*	7.7*	10.0
3.0					23.0*	23.0*	17.0	17.9*	13.0	15.1*	8.1*	8.1*	10.1
1.5					22.4	24.6*	16.3	19.0*	12.7	15.7*	8.7*	8.7*	10.1
0			25.1*	25.1*	22.0	24.8*	16.0	19.4*	12.5	15.8*	9.7*	9.7*	9.8
-1.5	23.7*	23.7*	31.0*	31.0*	21.9	23.9*	15.9	18.8*	12.5	15.0*	11.4*	11.4*	9.3
-3.0	34.6*	34.6*	27.5*	27.5*	21.6*	21.6*	16.1	17.0*			14.1	14.4*	8.4
-4.5			21.7*	21.7*	17.1*	17.1*					13.7*	13.7*	7.2

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

The load values are quoted in tons (t) at stick end (without bucket), and may be swung 360° on firm and even ground. Adjacent values are valid for the undercarriage when in the longitudinal position. Capacities are valid for 600 mm wide track pads. Indicated loads are based on ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity (indicated via *). Without bucket cylinder, link and lever the lift capacities will increase by 1,150 kg. Lifting capacity of the excavator is limited by machine stability and hydraulic capacity.

According to European Standard, EN 474-5: In the European Union excavators have to be equipped with an overload warning device, a load diagram and automatic safety check valves on hoist cylinders and stick cylinder(s), when they are used for lifting operations which require the use of lifting accessories.

Determine maximum load lift from load lift chart displayed in the operator's cab or from load lift chart detailed in the operator's manual supplied with the machine.

Lift capacities

with mono boom 7.00 m, counterweight 14.5 t and track pads 600 mm

Stick 2.60 m

Under-carriage m	3.0m		4.5m		6.0m		7.5m		9.0m		m
9.0									10.1*	10.1*	7.2
7.5									9.4*	9.4*	8.3
6.0			23.2*	23.2*	18.1*	18.1*	15.6*	15.6*	11.8*	11.8*	9.1
4.5					20.9*	20.9*	16.9*	16.9*	14.5*	14.8*	9.6
3.0					23.5*	23.5*	18.3*	18.3*	14.1*	15.4*	9.8
1.5					24.0*	24.8*	17.7*	19.2*	13.8*	15.9*	9.7
0			21.8*	21.8*	23.7*	24.9*	17.3*	19.5*	13.6*	15.9*	9.4
-1.5	23.2*	23.2*	29.9*	29.9*	23.7*	23.7*	17.3*	18.8*	13.8*	13.8*	8.9
-3.0	31.0*	31.0*	26.4*	26.4*	21.2*	21.2*	16.6*	16.6*	14.9*	14.9*	8.0
-4.5			20.4*	20.4*	16.1*	16.1*			13.9*	13.9*	6.6
9.0							14.9*	14.9*	10.0*	10.0*	7.2
7.5									9.4*	9.4*	8.3
6.0			23.9*	23.9*	18.4*	18.4*	15.7*	15.7*	13.2*	13.2*	9.1
4.5					21.2*	21.2*	17.1*	17.1*	14.9*	14.9*	9.6
3.0					23.7*	23.7*	18.4*	18.4*	15.1*	15.5*	9.8
1.5					24.9*	24.9*	18.9*	19.3*	14.8*	15.9*	9.7
0			23.6*	23.6*	24.8*	24.8*	18.6*	19.5*	14.6*	15.8*	9.4
-1.5	25.0*	25.0*	29.6*	29.6*	23.5*	23.5*	18.6*	18.6*	14.1*	14.1*	8.9
-3.0	30.5*	30.5*	25.9*	25.9*	20.8*	20.8*	16.2*	16.2*	14.9*	14.9*	8.0
-4.5			19.5*	19.5*	15.3*	15.3*			13.6*	13.6*	6.6

Stick 3.00 m

Under-carriage m	3.0m		4.5m		6.0m		7.5m		9.0m		m		
9.0							10.5*	10.5*			8.3*	8.3*	7.7
7.5							14.0*	14.0*			7.8*	7.8*	8.8
6.0							17.1*	17.1*	14.9*	14.9*	13.7*	13.7*	9.5
4.5			28.2*	28.2*	19.9*	19.9*	16.3*	16.3*	14.3*	14.3*	7.7*	7.7*	10.0
3.0					22.7*	22.7*	17.7*	17.7*	14.1*	15.0*	8.0*	8.0*	10.1
1.5					24.1*	24.5*	17.7*	18.9*	13.7*	15.6*	8.6*	8.6*	10.1
0			24.0*	24.0*	23.6*	24.9*	17.3*	19.4*	13.5*	15.8*	9.6*	9.6*	9.8
-1.5	22.4*	22.4*	31.3*	31.3*	23.6*	24.1*	17.2*	18.9*	13.5*	15.1*	11.2*	11.2*	9.3
-3.0	34.9*	34.9*	27.9*	27.9*	21.9*	21.9*	17.2*	17.2*			14.2*	14.2*	8.4
-4.5	27.7*	27.7*	22.5*	22.5*	17.7*	17.7*					13.8*	13.8*	7.2
9.0							12.1*	12.1*			8.2*	8.2*	7.7
7.5							14.1*	14.1*			7.8*	7.8*	8.8
6.0							17.4*	17.4*	15.0*	15.0*	13.7*	13.7*	9.5
4.5			29.0*	29.0*	20.2*	20.2*	16.4*	16.4*	14.4*	14.4*	7.7*	7.7*	10.0
3.0					23.0*	23.0*	17.9*	17.9*	15.1*	15.1*	8.1*	8.1*	10.1
1.5					24.6*	24.6*	18.9*	19.0*	14.7*	15.7*	8.7*	8.7*	10.1
0			25.1*	25.1*	24.8*	24.8*	18.6*	19.4*	14.5*	15.8*	9.7*	9.7*	9.8
-1.5	23.7*	23.7*	31.0*	31.0*	23.9*	23.9*	18.5*	18.8*	14.5*	15.0*	11.4*	11.4*	9.3
-3.0	34.6*	34.6*	27.5*	27.5*	21.6*	21.6*	17.0*	17.0*			14.4*	14.4*	8.4
-4.5			21.7*	21.7*	17.1*	17.1*					13.7*	13.7*	7.2

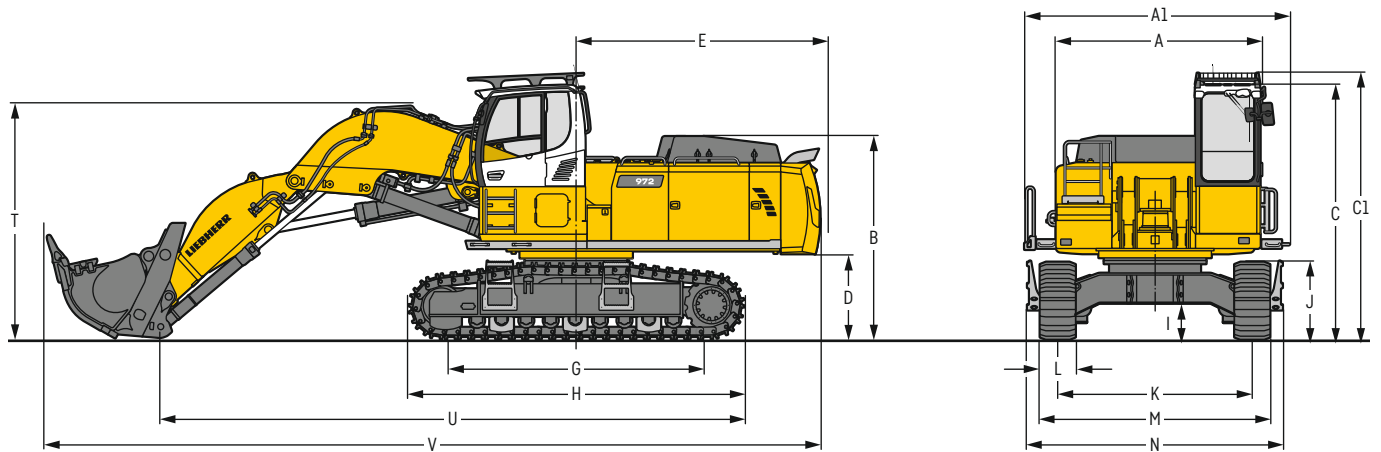
Height Can be slewed through 360° In longitudinal position of undercarriage Max. reach * Limited by hydr. capacity

The load values are quoted in tons (t) at stick end (without bucket), and may be swung 360° on firm and even ground. Adjacent values are valid for the undercarriage when in the longitudinal position. Capacities are valid for 600 mm wide track pads. Indicated loads are based on ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity (indicated via *). Without bucket cylinder, link and lever the lift capacities will increase by 1,150 kg. Lifting capacity of the excavator is limited by machine stability and hydraulic capacity.

According to European Standard, EN 474-5: In the European Union excavators have to be equipped with an overload warning device, a load diagram and automatic safety check valves on hoist cylinders and stick cylinder(s), when they are used for lifting operations which require the use of lifting accessories.

Determine maximum load lift from load lift chart displayed in the operator's cab or from load lift chart detailed in the operator's manual supplied with the machine.

Dimensions front shovel



	HD	mm		HD	mm
A	Uppercarriage width	3,515	I	Undercarriage ground clearance	610
A1	Uppercarriage width with catwalks	4,495	J	Track height	1,315
B	Uppercarriage height	3,450	K	Track gauge	3,300
C	Cab height	4,330	L	Track pad width	500 600 750
C1	Cab height with FOPS top guard	4,525	M	Width over tracks	3,920 3,920 4,050
D	Counterweight ground clearance	1,445	N	Width over steps	4,330 ¹⁾ 4,330 ¹⁾ 4,330 ¹⁾
E	Rear-end length	4,135	T	Boom height	4,000
G	Wheelbase	4,575	U	Length on ground	9,900
H	Undercarriage length	5,695	V	Overall length	13,200

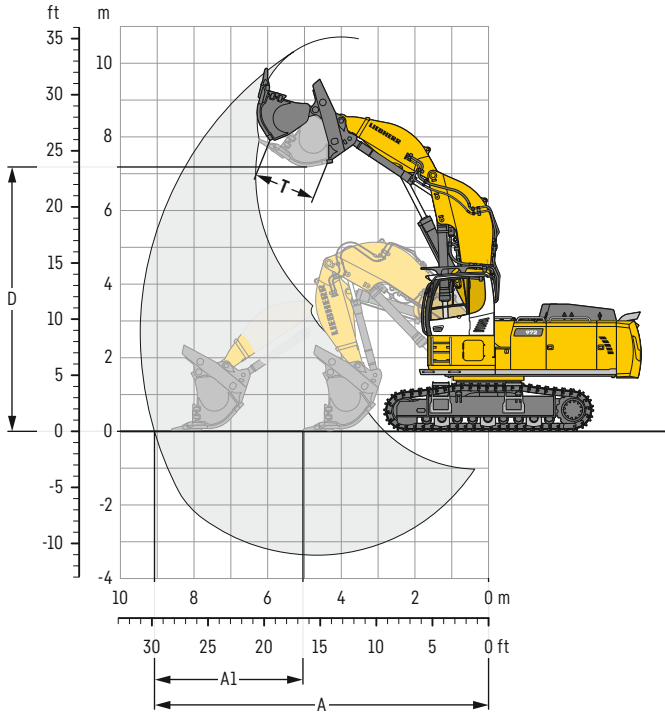
¹⁾ width with removable steps

Transport dimensions

removable elements disassembled

	Shovel equipment mm
Transport width	4,495
Transport length	13,200
Transport height	4,525
Shovel	4.00 m ³

Front shovel



Digging envelope

A	Max. reach at ground level	m	9.10
A1	Max. crowd length	m	3.60
D	Max. dumping height	m	7.15
T	Bucket opening width	mm	1,650

Forces

Max. crowd force	kN	500
Max. crowd force at ground level	kN	410
Max. breakout force	kN	370

Operating weight and ground pressure

The operating weight includes the basic machine with cab elevation 800 mm, shovel equipment and front shovel 4.00 m³ (7,000 kg), level II.

Undercarriage		HD	
Pad width	mm	500	600
Weight	kg	69,950	70,650
Ground pressure	kg/cm ²	1.41	1.18

Front shovels

Cutting width	Capacity ISO 7451	Weight	Wear kit level
mm	m ³	kg	
2,350	3.50	6,600	II
2,350	3.50	7,350	III
2,600	4.00	6,500	I
2,600	4.00	7,000	II
2,600	4.00	7,900	III
2,600	4.50	6,700	I
2,600	4.50	7,200	II
2,600	4.50	7,800	III
2,600	5.00	6,800	I
2,600	5.00	7,500	II

HD undercarriage

Shovel equipment

▲
▲
▲
■
▲
▲
■
■
▲

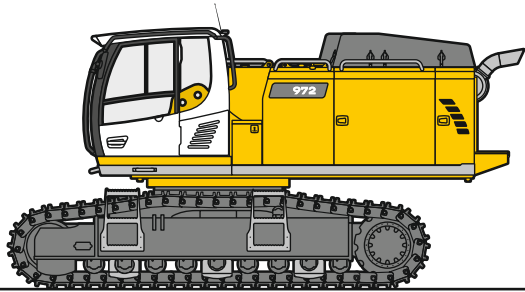
Level I: For non-abrasive materials, such as limestone without flint inclusion, shot material or easily breakable rock, i.e., deteriorated rock, soft limestone, shale, etc.

Level II: For pre-blasted heavy rock, or deteriorated, cracked material (classification 3 to 4, according to DIN 18300)

Level III: For highly-abrasive materials such as rock with a high silica content, sandstone etc.

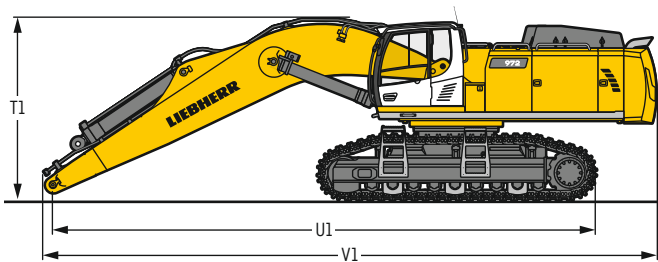
Max. material weight ▲ = ≤ 2.0t/m³, ■ = ≤ 1.8t/m³, ▲ = ≤ 1.65t/m³, ■ = ≤ 1.5t/m³, ▲ = ≤ 1.2t/m³

Dimensions and weights



Basic machine

Track pads	mm	500	600	750
Weight with backhoe equipment and HD undercarriage without counterweight	kg	40,750	41,450	42,400
Weight with shovel equipment and HD undercarriage without counterweight	kg	40,750	41,450	42,400
Weight with backhoe equipment and LC-V undercarriage without counterweight	kg	43,450	44,150	45,250



Machine without stick

		HD	LC-V
T1	mm	3,400	3,550
U1	mm	9,950	9,900
V1	mm	11,450	11,450



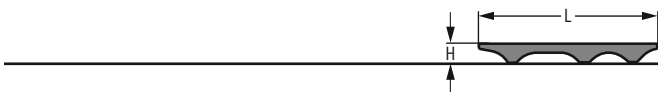
Cab elevation

		800 mm
L Length	mm	1,890
H Height	mm	930
Width	mm	1,370
Weight	kg	600



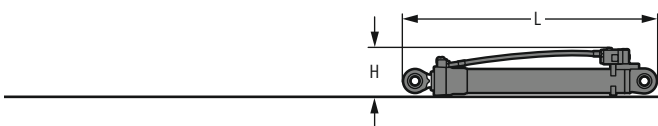
Counterweight

		Std	heavy
L Length	mm	770	770
H Height	mm	1,550	1,550
Width	mm	3,360	3,360
Weight	kg	11,000	14,500



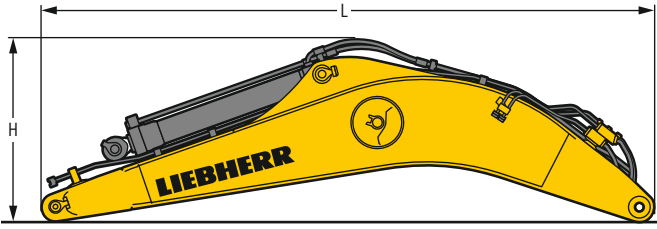
Upper protection screen

L Length	mm	1,960
H Height	mm	190
Width	mm	1,110
Weight	kg	75



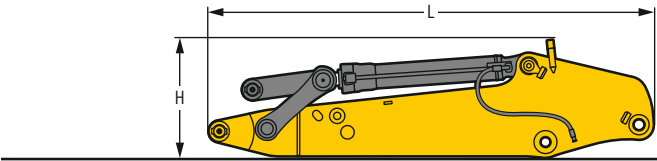
Hoist cylinders (two)

L Length	mm	2,650
H Height	mm	490
Width	mm	360
Weight	kg	2 x 750



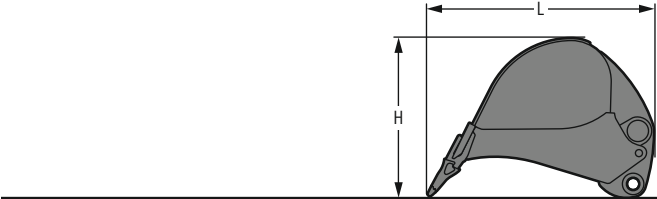
Mono boom with stick cylinder

Boom length	m	7,00
L Length	mm	7,350
H Height	mm	2,200
Width	mm	1,450
Weight	kg	7,200



Stick with bucket cylinder

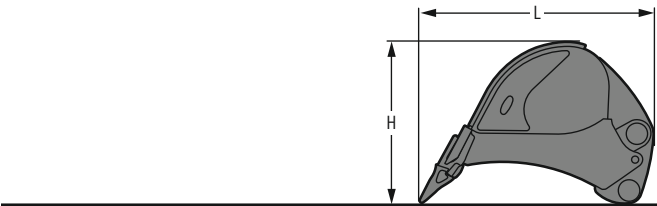
Stick length	m	2.60	3.00
L Length	mm	3,950	4,250
H Height	mm	1,250	1,250
Width	mm	950	950
Weight	kg	3,500	3,650



Backhoe buckets

Std

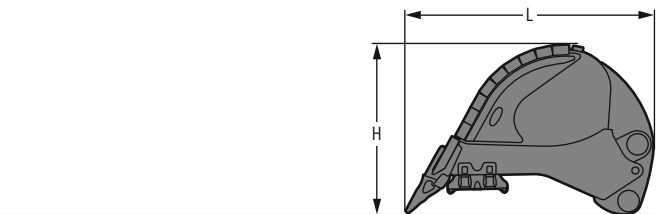
Cutting width	mm	1,950	2,150	1,950	2,150	2,250	2,450
Capacity	m ³	3.00	3.50	4.00	4.50	5.00	5.50
L Length	mm	2,300	2,300	2,500	2,500	2,500	2,500
H Height	mm	1,550	1,550	1,800	1,800	1,800	1,800
Width	mm	2,000	2,200	2,000	2,200	2,300	2,500
Weight	kg	3,100	3,350	3,600	3,800	3,950	4,200



Backhoe buckets

HD

Cutting width	mm	2,000	2,200	2,000	2,200	2,300
Capacity	m ³	3.00	3.50	4.00	4.50	5.00
L Length	mm	2,400	2,400	2,650	2,650	2,650
H Height	mm	1,600	1,600	1,800	1,800	1,800
Width	mm	2,050	2,250	2,050	2,250	2,350
Weight	kg	3,900	4,300	4,500	4,850	5,050

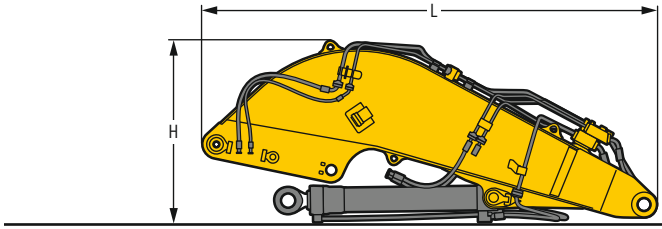


Backhoe buckets

HDV

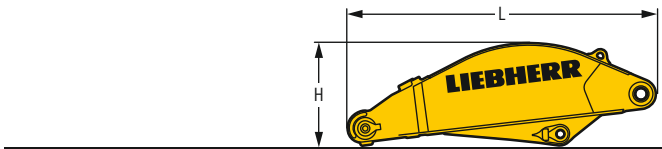
Cutting width	mm	2,000	2,200	2,000	2,200	2,300
Capacity	m ³	3.00	3.50	4.00	4.50	5.00
L Length	mm	2,400	2,400	2,650	2,650	2,650
H Height	mm	1,600	1,600	1,800	1,800	1,800
Width	mm	2,050	2,250	2,050	2,250	2,350
Weight	kg	4,350	4,750	5,000	5,350	5,600

Dimensions and weights



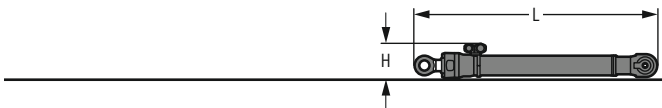
Shovel boom

L Length	mm	4,750
H Height	mm	1,950
Width	mm	1,900
Weight without crowd cylinder	kg	5,050
Weight crowd cylinder	kg	650



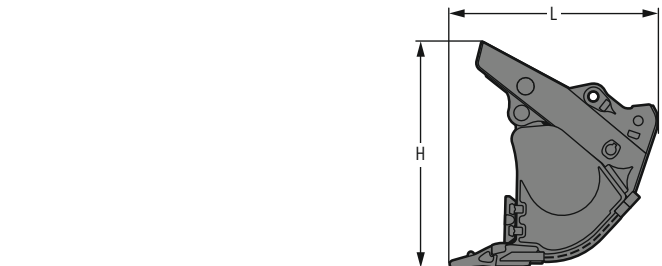
Shovel stick

L Length	mm	3,250
H Height	mm	1,100
Width	mm	1,500
Weight	kg	2,500



Shovel bucket cylinders (two)

L Length	mm	2,550
H Height	mm	350
Width	mm	500
Weight	kg	2 x 400



Front shovels

Cutting width	mm	2,350	2,600	2,600	2,600
Capacity	m ³	3.50	4.00	4.50	5.00
L Length	mm	2,200	2,200	2,200	2,300
H Height	mm	2,400	2,400	2,400	2,500
Width	mm	2,400	2,650	2,650	2,650
Weight					
Level I	kg	-	6,500	6,700	6,800
Level II	kg	6,600	7,000	7,200	7,500
Level III	kg	7,350	7,900	7,800	-

Serial equipment



Undercarriage

- Lashing eyes
- Sprocket with dirt ejector
- Track and carrier rollers, sealed and lifetime-lubricated
- Travel motor housing protection



Uppercarriage

- Access platforms without protruding parts
- Anti-skid surfaces
- Automatic swing brake lock
- Centralised lubrication system (automatic)
- Engine hood with gas spring opening
- Extended tool set including tool box
- Handrails
- Lockable fuel tank cap with padlock
- Lockable service doors
- Lockable storage box
- Main switch, accessible from ground level
- Pre-heating system for fuel
- Protection grid on radiator fan
- Sound insulation
- Swing-out radiators
- Windshield washer fluid tank



Hydraulic system

- Dedicated swing circuit
- Filter with integrated fine filters
- Hydraulic pressure measuring ports
- Hydraulic tank shut-off valve
- Magnetic rod
- Pressure accumulator for controlled lowering of equipment with engine turned off



Engine

- Air filter with automatic dust ejector
- Automatic engine idling / speed increase, controlled via joystick sensors
- Common-Rail injection system
- Exhaust gas after-treatment system - EGR
- Fixed geometry turbocharger
- Fuel fine filter
- Fuel pre-filter and water separator
- Fuel priming pump
- Intercooler
- Power Pack EU Stage IIIA (for select markets)
- Stepless adjustable engine speed



Cab

- 9" multifunction colour touchscreen
- Air conditioning, automatic, tri-zone, controlled via display
- Armrests adjustable in length, height and inclination
- Bottle holder
- Cab door sliding windows
- Cigarette lighter
- Coat hook
- Electric socket in cabin (12V)
- Electric socket in cabin (24V)
- Emergency hammer
- Engine oil level on touchscreen
- Footrest
- Fuel consumption on touchscreen
- Fuel level on touchscreen
- Impact resistant roof window
- Impact resistant two-piece windscreen
- Interior lighting
- Laminated right hand side window
- LiDAT Plus (Liebherr data transfer system)*
- Mobile phone storage net
- Modetronic
- Movement priority between swing and boom, adjustable via touchscreen
- Rain hood over front window opening
- Rearview mirror
- Rear view monitoring camera
- Rear view monitoring camera distance gauge
- Rear window emergency exit
- Roll-down sun blinds for windscreen and roof window
- Rubber floor mat, fixed on floor and removable
- Storage box
- Storage nets
- Storage spaces
- Tilttable console left
- Tinted windows
- Visco-elastic damping
- Windscreen wiper and washer
- Work mode selector



Equipment

- Anti-drift system boom cylinders
- Anti-drift system stick cylinder
- Boom cylinders regeneration
- Pipe fracture safety valve for stick cylinder
- Pipe fracture safety valves for boom cylinders
- Pivot points made of cast steel
- SAE split flanges on high pressure lines
- Stick bottom protection
- Stick cylinder regeneration

* optionally extendable after one year

Equipment standard / option

Undercarriage

Chain guide 3 pieces	●
Chain guide 4 pieces	+
Chain guide full length	+
Reinforced cover and base plate for undercarriage centre section	+
Reinforced cover plate for centre section (LC-V undercarriage)	+
Screws protection for sideframe (LC-V undercarriage)	+
Steps	●
Track pads double grouser 500 mm, chamfered	+
Track pads double grouser 600 mm, chamfered	●
Track pads double grouser 750 mm, chamfered	+
Travel drive gearbox protection	+
Undercarriage HD	+
Undercarriage LC-V	+
Undercarriage protection plate for drop-ball application	+

Upper carriage

Air pre-filter with cyclonic dust trap	+
Boxing ring	+
Catwalks left and right	●
Catwalk wide with railing	+
Counterweight heavy 14.5 t	+
Counterweight standard 11.0 t	●
Filter for hydraulic hammer return flow	+
Fixed cab riser 800 mm	+
Front right rearview mirror	●
Headlight on uppercarriage, lateral right, LED+, 1 piece	+ ¹⁾
Headlights on uppercarriage, front, LED, 2 pieces, protections included	● ¹⁾
Headlights on uppercarriage, front, LED+, 2 pieces, protections included	+ ¹⁾
Headlights on uppercarriage, rear, LED+, 2 pieces	+ ¹⁾
Liebherr Power Efficiency – Engine Control	●
Lighting for tank area	+ ¹⁾
Lighting for uppercarriage access	+ ¹⁾
Radiator fine mesh protection grid	+
Reversible fan drive	+
Skyview 360°	+
Special painting	+
Swing ring and lubrication hoses protection	+
Tank refilling pump fuel	+
Wiggins coupling for fuel	+

Hydraulic system

Bypass filter for hydraulic oil	+
Liebherr hydraulic oil	●
Liebherr hydraulic oil, adapted for extreme climate conditions	+
Liebherr hydraulic oil, biodegradable	+

Engine

Engine shut-down with overrun	+
Lighting for engine compartment	+ ¹⁾

● = Standard, + = Option

¹⁾ Equipment not individually available, but only as predefined packages

Non-exhaustive list, please contact us for further information.

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

Liebherr-France SAS

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Cab

2" seat belt with retractor	●
Acoustic travel alarm deactivatable	+
Auxiliary heater programmable	+
Bottom windscreen wiper	+
Coming / Leaving Home	+ ¹⁾
Cool box (12V)	+
Dark tinted windows	+
Electrically adjustable and heated outside rear-view mirrors	+
Emergency stop in cab	+
FGPS front guard tiltable	+
Fire extinguisher	+
FOPS top guard	+
Handrests elevated for joysticks	+
Headlights on cab, front, LED, 2 pieces	● ¹⁾
Headlights on cab, front, LED+, 2 pieces	+ ¹⁾
Headlights on cab roof, front, LED+, 2 pieces	+ ¹⁾
High pressure circuit switchable on pedals or mini-joystick	+
High pressure circuit with Tool Control (20 attachment adjustments on display)	+
Lighting for cabin access	+ ¹⁾
Luminosity control (LED+ headlights)	+ ¹⁾
Medium pressure circuit	+
Operator seat Comfort	●
Operator seat Premium	+
Overload warning system	+
Radio Comfort	+
Radio pre-installation	●
Right hand side view monitoring camera	+
Roof sun shield	+
Roof window wiper	+
Rotating buttons on cabin, LED, 1 piece	+
Shortcut buttons on joystick configurable	●
Sun visor	+

Equipment

Boom bottom protection	+
Boom cylinders rod protection	+
Bucket cylinder rod protection	+
Bucket Fill Assist	+
Floating boom	+
Headlights on boom, LED, 2 pieces, protections included	● ¹⁾
Headlights on boom, LED+, 2 pieces, protections included	+ ¹⁾
Mono boom 7.00 m	+
Preparation for ripper tooth	+
Quick coupler SWA 92 hydraulic	+
Shovel boom 4.50 m	+
Shovel stick 2.90 m	+
Special painting	+
Stick 2.60 m	+
Stick 3.00 m	+