

Product Information Crawler Excavator

R 954 C

Litronic®



**Operating Weight
with Backhoe Attachment**

49,550 – 51,400 kg

**Operating Weight
with Shovel Attachment**

53,700 – 54,300 kg

Engine Output

240 kW/326 ch

Bucket Capacity

1.65 – 3.30 m³

Shovel Capacity

2.50 – 3.10 m³

LIEBHERR

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Shovel Capacity 2.50 – 3.10 m³



Performance

Liebherr crawler excavators feature state-of-the-art technology and high-quality workmanship. The most important components of the drive system are all produced by Liebherr and are perfectly coordinated with one another. The engine generation, as further developed for the "C-series", assures an effective power delivery, a high degree of efficiency, long life expectancy and complies with the emission standard IIIA/Tier 3.

Reliability

High demand for performance and quality is consequently converted into landmark solutions to achieve the highest level of dependability and reliability. Liebherr has over 50 years experience in the production of hydraulic excavators and has an unparalleled competence in design and know-how.

Comfort

In the operator's station, the operator can look forward to a comfortable workstation that is designed according to the most up-to-date ergonomically know-how. The standard automatic climate control provides a pleasant working environment in all weather conditions.

Liebherr crawler excavators are particularly service-friendly: Maintenance work is simply and quickly accomplished due to well accessible service points.

Economy

Liebherr crawler excavators stand for maximum productivity. The sensitive excavator controls assure optimal efficiency in the interaction of excavator hydraulics and electronics. A wide selection of attachments, accessory tools and undercarriages with various dimensions provide the correct choice for every application.

Long Live Progress with the R 954 C

Equipment

- Cast steel elements
- Greater resistance to stresses
- Longer service life
- Safety check valves for stick and boom cylinders with integrated regeneration for less fuel consumption

Tools

- Different levels of protection to suit the different areas of application
- New Liebherr Z-type tooth system





Operator's Cab

- Comfortable and ergonomic
- Bullet-proof panels at the front and in the roof optional
- Optional FOPS and FGPS protective guards
- Rear window with extended visibility and emergency exit

Undercarriage

- Robust structure thanks to the more rigid profile
- Improved self-cleaning capacity
- 3 guiding guards per track – standard

Long Live Progress with the R 954 C Shovel

Buckets

- The front shovel is the perfect shape for digging deep into the material and for a high filling rate
- Several levels of protection for the front shovel, depending on requirements





Equipment

- Cast steel parts
- Parallel kinematics for powerful and regular digging
- Bucket cylinders positioned under the equipment for better protection against the elements
- Safety valves on boom cylinder for pipe burst protection

Operator's Cab

- Comfortable and ergonomic
- Bullet-proof panels at the front and in the roof optional
- Optional FOPS and FGPS protection guards
- Operator's cab with a fixed riser for a full view over the work area

Technical Data



Engine

Rating per ISO 9249	240 kW (326 HP) at 1,800 RPM
Torque	1,510 Nm at 1,100 RPM
Model	Liebherr D936L
Type	6 cylinder in-line
Bore	122 mm
Stroke	150 mm
Displacement	10.5 l
Engine operation	4-stroke diesel unit pump system turbo-charged and after-cooled reduced emissions
Exhaust gas treatment	emission standard stage IIIA/Tier 3
Cooling system	water-cooled and integrated motor oil cooler
Air cleaner	dry-type air cleaner with pre-cleaner, primary and safety elements, automatic dust discharge
Fuel tank	700 l
Electrical system	
Voltage	24 V
Batteries	2 x 170 Ah/ 12 V
Starter	24 V/ 7.8 kW
Alternator	three-phase current 28 V/ 80 A
Engine idling	sensor controlled



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	
Attachment and swing	proportional via joystick levers
Travel	– with proportionally functioning foot pedals or adjusted with plugable levers – speed pre-selection
Additional functions	proportional regulation via foot pedals or joystick toggle switch



Hydraulic System

Hydraulic pump	two Liebherr variable flow, swashplate pumps
for attachment and travel drive	
Max. flow	2 x 350 l/min.
Max. pressure for swing drive	350 bar reversible, variable flow, swashplate pump, closed-loop circuit
Max. flow	211 l/min.
Max. pressure	384 bar
Pump regulation	electro-hydraulic with electronic engine speed sensing regulation, pressure compensation, flow compensation
Hydraulic tank	440 l
Hydraulic system	790 l
Hydraulic oil filter	2 full flow filters in return line with integrated fine filter area (5 µm)
Cooling system	cooler unit, consisting of radiator for engine coolant with after-cooler core, sandwiched with cooler for hydraulic fluid and fuel with hydrostatically controlled fan drives
MODE selection	adjustment of engine and hydraulic performance via a mode pre-selector to match application for especially economical and environmentally friendly operation
ECO	
POWER	for maximum digging power and heavy duty jobs
LIFT	for lifting
FINE	for precision work and lifting through very sensitive movements
RPM adjustment	stepless adjustment of engine output via RPM at each selected mode
Tool Control	10 preadjustable pump flows and pressures for add-on tools



Swing Drive

Drive	Liebherr swashplate motor with integrated brake valve
Transmission	Liebherr compact planetary reduction gear
Swing ring	Liebherr, sealed race ball bearing swing ring, internal teeth
Swing speed	0 – 5.6 RPM stepless
Swing torque	165 kNm
Holding brake	wet multi-disc (spring applied, pressure released)
Option	pedal controlled positioning brake



Operator's Cab

Cab	resiliently mounted, sound insulated, tinted windows, front window stores overhead, door with sliding window
Operator's seat	shock-absorbing suspension, adjustable to operator's weight and size, 6-way adjustable Liebherr seat
Control system	integrated into adjustable consoles
Operation and displays	menu driven query of current operating conditions. Automatic monitoring, display, warning (acoustical and optical signal) and saving machine malfunction data, for example, engine overheating, low engine oil pressure or low hydraulic oil level
Air-conditioning	standard air conditioning, combined cooler/heater, additional dust filter in fresh air/recirculated
Noise emission	
ISO 6396	L_{pA} (inside cab) = 77 dB(A)
2000/14/EC	L_{WA} (surround noise) = 105 dB(A)



Undercarriage

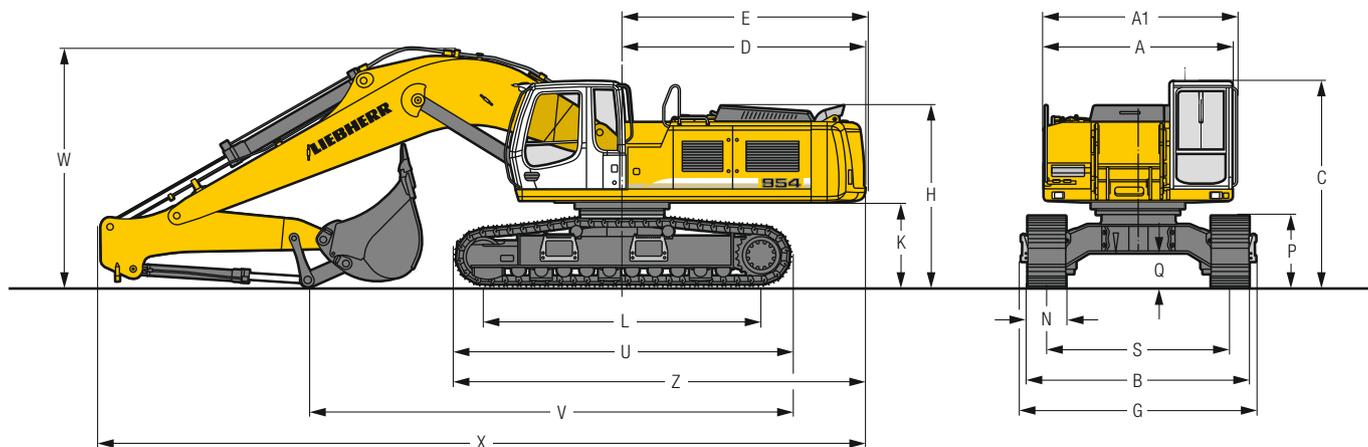
HD	heavy duty
Drive	Liebherr swashplate motors with integrated brake valves on both sides
Transmission	Liebherr compact planetary reduction gear
Maximum travel speed	low range 2.9 km/h high range 4.5 km/h
Net drawbar pull on crawler	375 kN
Track components	D7G, maintenance-free
Track rollers/Carrier rollers	10/2
Tracks	sealed and greased
Track pads	double or triple grouser
Holding brake	wet multi-discs (spring applied, pressure released)



Attachment

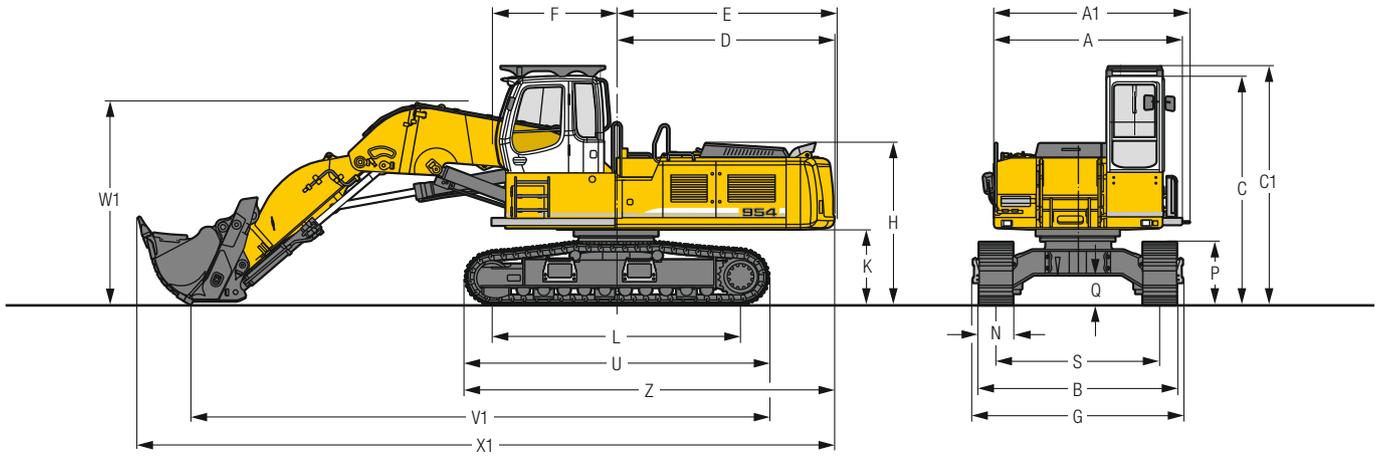
Type	combination of resistant steel plates and cast steel components
Hydraulic cylinders	Liebherr cylinders with special seal-system, shock protection
Bearings	sealed, low maintenance
Lubrication	semi-automatic central lubrication system (except link and tilt geometry)
Hydraulic connections	pipes and hoses equipped with SAE split-flange connections
Bucket	standard equipped with Liebherr tooth system

Dimensions



	mm
A	2,980
A1	3,060
C	3,305
D	3,850
E	3,850
H	2,915
K	1,370
L	4,400
P	1,150
Q	560
S	2,900
U	5,365
N	500 600 750
B	3,460 3,500 3,650
G	3,715 3,715 3,715
Z	6,550

Stick length	Mono boom 6.70 m	
	m	mm
V	2.35	7,650
	2.90	7,100
W	2.35	3,900
	2.90	3,950
X	2.35	12,150
	2.90	12,200

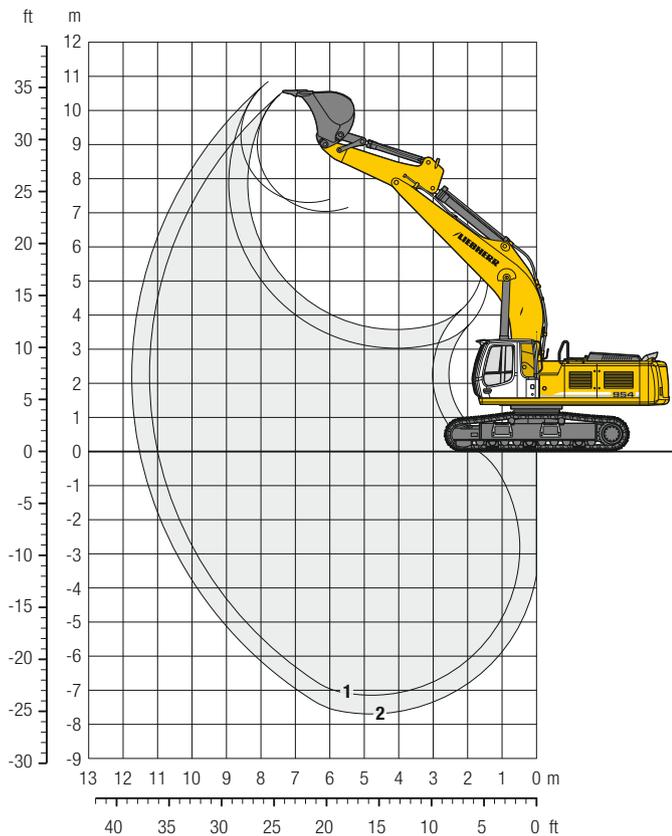


	mm
A	3,325
A1	3,460
C	4,100
C1	4,275
D	3,850
E	3,850
F	2,200
H	2,900
K	1,360
L	4,400
P	1,150

	mm
Q	560
S	2,900
U	5,365
N	500 600
B	3,462 3,500
G	3,715 3,715
Z	6,550
V1	10,250
W1	3,650
X1	12,350

Backhoe Bucket

with Mono Boom 6.70 m and Counterweight 9.0 t



Digging Envelope

		1	2
Stick length	m	2.35	2.90
Max. digging depth	m	7.15	7.70
Max. reach at ground level	m	11.10	11.50
Max. dumping height	m	7.05	7.30
Max. teeth height	m	10.55	10.85

Forces

		1	2
Digging force ISO	kN	248	217
Breakout force ISO	kN	313	313
Breakout force max. ISO		345 kN	

Operating Weight and Ground Pressure

The operating weight includes the basic machine with counterweight 9.0 t, mono boom 6.70 m, stick 2.35 m and bucket 2.70 m³ (2,650 kg).

Undercarriage		HD		
		500	600	750
Pad width	mm	500	600	750
Weight	kg	49,550	50,150	51,400
Ground pressure	kg/cm ²	1.05	0.88	0.72

Optional: counterweight 11.0 t
(counterweight 11.0 t increases the operating weight by 2,000 kg and ground pressure by 0.04 kg/cm²)

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

	Cutting width mm	Capacity ISO 7451 m ³	Weight kg	HD-Undercarriage	
				Stick length (m)	
				2.35	2.90
STD ¹⁾	1,350	1.65	2,100	▲	▲
	1,550	2.00	2,250	▲	▲
	1,750	2.35	2,400	▲	▲
	1,950	2.70	2,650	▲	■
	1,950	3.00	2,750	■	■
	2,100	3.30	2,850	■	■
HD ²⁾	1,350	1.65	2,350	▲	▲
	1,550	2.00	2,650	▲	▲
	1,750	2.35	2,850	▲	■
	1,950	2.70	3,100	■	■
	2,100	3.00	3,200	■	■
HDV ³⁾	1,650	2.35	3,300	▲	■

* 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 (appropriate for materials up to classification 5, according to VOB, Section C, DIN 18300)

²⁾ HD bucket with Liebherr teeth Z 70 (appropriate for materials above classification 6, according to VOB, Section C, DIN 18300)

³⁾ HDV bucket with Liebherr teeth Z 70 (appropriate for materials above classification 6, according to VOB, Section C, DIN 18300)

Other buckets available upon request

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

Lift Capacities

with Mono Boom 6.70 m, Counterweight 9.0 t and Track Pads 600 m

Stick 2.35 m

Under-carriage m	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		m
	HD										
9.0											10.3* 10.3* 6.2
7.5							10.2*	10.2*			9.3* 9.3* 7.6
6.0					13.0*	13.0*	11.0	11.7*			8.9* 8.9* 8.4
4.5			21.2*	21.2*	14.6	15.0*	10.5	12.5*			7.9 8.9* 9.0
3.0					13.5	17.2*	10.0	13.6*	7.6	11.7	7.3 9.1* 9.2
1.5					12.8	18.6*	9.5	14.4*	7.4	11.5	7.2 9.7* 9.2
0			14.5*	14.5*	12.5	18.9*	9.3	14.7			7.4 10.8* 9.0
-1.5	13.7*	13.7*	19.5	23.7*	12.5	18.3*	9.2	14.4*			8.0 12.4* 8.4
-3.0	26.2*	26.2*	19.8	21.2*	12.7	16.6*	9.5	12.5*			9.5 12.4* 7.5
-4.5			16.6*	16.6*	12.3*	12.3*					11.9* 11.9* 6.1

Stick 2.90 m

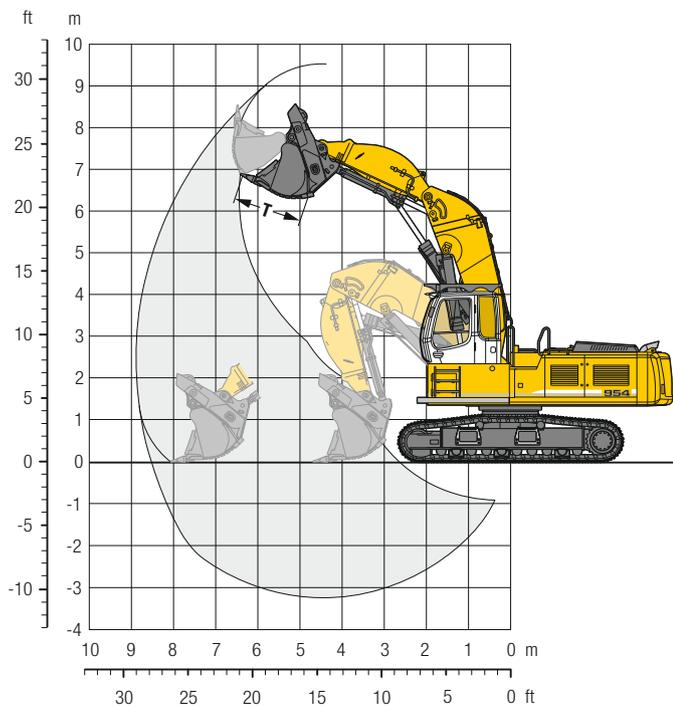
Under-carriage m	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		m
	HD										
9.0											7.8* 7.8* 6.9
7.5							10.4*	10.4*			7.1* 7.1* 8.2
6.0							10.8*	10.8*	7.0*	7.0*	6.9* 6.9* 9.0
4.5			18.9*	18.9*	14.0*	14.0*	10.6	11.8*	7.9	10.7*	6.9* 6.9* 9.5
3.0			15.3*	15.3*	13.8	16.3*	10.0	13.0*	7.7	11.3*	6.7 7.0* 9.8
1.5			11.6*	11.6*	13.0	18.0*	9.6	14.0*	7.4	11.5	6.6 7.5* 9.8
0			17.6*	17.6*	12.5	18.8*	9.2	14.6*	7.2	11.3	6.7 8.2* 9.5
-1.5	14.6*	14.6*	19.2	24.7*	12.4	18.6*	9.1	14.5*			7.2 9.5* 9.0
-3.0	25.0*	25.0*	19.5	22.6*	12.5	17.3*	9.2	13.4*			8.3 11.8* 8.2
-4.5	24.6*	24.6*	18.8*	18.8*	13.0	14.3*					10.8 11.7* 6.9

 **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 825 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.

Front Shovel



Digging Envelope

Max. reach at ground level	m	8.50
Max. dumping height	m	6.30
Max. crowd length	m	3.38
Bucket opening width T	mm	1,640

Forces

Max. crowd force	kN	435
Max. crowd force at ground level	kN	275
Max. breakout force	kN	355

Operating Weight and Ground Pressure

The operating weight includes the basic machine with cab elevation, shovel attachment and front shovel 3.10 m³ (5,650 kg), level II.

Undercarriage	HD	
Pad width	mm	500 600
Weight	kg	53,700 54,300
Ground pressure	kg/cm ²	1.13 0.96

Front Shovels

Cutting width mm	Capacity ISO 7451 m ³	Weight kg	Wear kit level	HD-Undercarriage	Shovel attachment
1,850	2.50	4,700	II		▲
1,850	2.50	5,050	III		▲
2,150	3.10	5,050	I		■
2,150	3.10	5,650	II		■
2,150	3.10	5,750	III		■

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 ▲ = ≤ 2.0 t/m³, ■ = ≤ 1.8 t/m³

Standard Equipment

Undercarriage

- Chain guide 3 pieces
- Idler protection
- Track pads 600 mm
- Track rollers, lifetime-lubricated
- Tracks, sealed and greased
- Two-stage travel motors

Uppercarriage

- Handrails
- Main switch for electric circuit
- Maintenance-free HD-batteries
- Non slip surfaces
- Sound insulation
- Storage space, lockable
- Swing brake lock, maintenance-free
- Tool kit

Hydraulic System

- Additional hydraulic circuits
- Electronic pump regulation
- Filter with integrated fine filter area
- Minimum flow adjustment
- Pressure compensation
- Pressure storage for controlled lowering of equipment with engine turned off
- Pressure test ports for hydraulic
- Return filter
- Shut-off valve between hydraulic tank and pumps
- Work mode selector

Engine

- Air filter with automatic dust ejector
- Conform with stage IIIA/Tier 3 emission standard
- Dry-type air cleaner with pre-cleaner, main and safety elements
- Engine idling, automatic, sensor-controlled
- Fuel water separator
- Intercooler
- Turbo charger
- Two hydrostatic fans
- Unit pump system

Operator's Cab

- Automatic air conditioning with defroster
- Cigarette lighter and ashtray
- Coat hook
- Impact-resistant front window and roof window
- Interior light
- Load bearing sectional profile structure, covered with deep-drawn panels
- Mechanical hour meters, readable from outside the cab
- Multifunction display
- Operator seat Comfort with longitudinal and vertical damping
- Preparation for radio installation
- Rear window emergency exit
- Rearview mirrors
- Removable handles for travel pedals
- Right window made of one piece (without post)
- Roll-down sun blinds (front and roof windows)
- Rubber floor mat
- Seat belt
- Sliding windows in cab door
- Storage bin
- Storage space
- Tinted windows
- Wiper/washer for front and roof window

Attachment

- Cylinders with shock absorber
- Liebherr central lubrication system, semi-automatic (except connecting link for bucket kinematics)
- ReGeneration plus
- SAE split flanges on all high pressure lines
- Tool Control, 10 tool adjustments selectable over the display
- Working lights on boom

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

Options

Undercarriage

- Chain guide 4 pieces
- Reinforced base panel for centre section
- Reinforced cover and base plate for undercarriage centre section
- Track pads 500 mm
- Track pads 750 mm
- Undercarriage, variants

Uppercarriage

- Counterweight 11.0 t
- Foot pedal swing positioning brake
- Tank refilling pump fuel

Hydraulic System

- Liebherr hydraulic oil, adapted for extreme climate conditions
- Preheating for hydraulic oil (240 V)

Engine

- Air pre-filter with dust trap
- Engine cold starting aid

Operator's Cab

- Additional headlights cab, front
- Additional headlights cab, rear
- Amber beacon on cabin
- Auxiliary heater (programmable)
- Bottom windscreen wiper
- Camera for side area monitoring
- Cool box (12 V)
- Electronic immobilizer
- Falling objects protection structure FOPS
- Fire extinguisher
- Front guard protection structure FGPS swivelable or fixed
- Operator seat Premium with integrated ventilation
- Radio Comfort
- Rear view monitoring camera
- Sun visor

Attachment

- 27 t load lug on quick coupler
- Hydraulic lines for additional tools
- Liebherr bucket range
- Liebherr central lubrication system, fully-automatic (except connecting link for bucket kinematics)
- Liebherr quick coupler, hydraulic or mechanical
- Overload warning device
- Protection for piston rod, bucket cylinder
- Special application buckets

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

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

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