

Log Loader

A 944 C HD

Litronic®

Operating weight: 44,100 – 45,700 kg
Engine output: 190 kW / 258 HP



LIEBHERR

Courtesy of Crane Market

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Performance

Liebherr wood handling equipment is developed for the highest productivity. A high lifting capacity and rapid work cycles form the prerequisites of a powerful industrial material handling operation. Numerous attachment options optimize machine performance.

Reliability

Liebherr hydraulic excavators are designed and built to operate in the harshest material handling environments. Their rugged design, high-tensile materials and individual components ensure maximum availability and long life expectancy.

Comfort

Largely dimensioned and ergonomically designed, the Liebherr excavator cab features an operator's seat which can be individually adjusted, as well as clearly arranged control instruments and ideal all round view. Automatic air conditioning guarantees an optimum temperature in the Liebherr Feel-Good cab at all times.

Economy

The Liebherr-Litronic-System increases machine performance, reduces fuel consumption and minimises service and maintenance costs. Due to Liebherr's well-balanced range, the ideal machine can always be selected to suit every application.





Liebherr diesel engine

- Long life expectancy, expansive cylinder capacity and increased weight
- According to level IIIA / Tier 3
- Specially developed for construction and industrial machinery operation
- Oil supply even with 100 % tilt angle
- Excellent torque



Performance

The A 944 C HD Litronic has been designed for maximum production. Perfectly harmonized, the Liebherr-developed and Liebherr-manufactured components including diesel engine, hydraulic pump and motor, as well as swing gear and cylinders, guarantee maximum performance. This results in a high lifting capacity with rapid work and travel movements.

Innovative solutions

Multitude of attachments

Liebherr provide an individual, application-related range of diverse attachments. Straight industrial mono booms can be combined with various industrial sticks to suit any application.

High lifting capacities

Efficient handling of soft woods, chippings and hard woods is all part of the day's work for Liebherr wood handling equipment and is guaranteed due to optimized kinematics.

Rapid work cycles

A separate hydraulic circuit with a maximum hydraulic pressure of 380 bar makes a high swing torque possible. Rapid work cycles are achieved through an independent control system.

Performance without compromise

The intelligent electronics, interacting with the matched hydraulics, make for maximum performance and maximum power – all the time.

ReGenerationPlus

The new ReGenerationPlus system on the lifting cylinders saves energy and quickly lowers the attachment.

Robust undercarriage

- A special undercarriage concept results in a low noise level, with standard travel motor protection and secure access arrangement integrated in the undercarriage
- A stabilizer blade is part of the standard range of equipment; a second one is available as an option
- 2-range power shift transmission for stepless acceleration and creeper speed



Litronic-System

- Increases productivity of the excavator
- Reduces fuel consumption
- Reduces service costs and eases operation
- Allows maximum sensitivity and as many overlapping movements as are required



Features

- High-strength steel plates at highly-stressed points for the toughest requirements
- Stable storage of attachments and cylinders
- Maximum resistance, even when lifting heavy loads



Reliability

Liebherr log loaders prove themselves day in, day out in the most varied industrial applications all over the world. Many years of experience as the world's largest manufacturer of wheeled excavator, continuous development and the introduction of the latest technology are evident in every machine, guaranteeing absolute safety during applications. With its rugged design, and featuring Liebherr components, the A 944 C HD Litronic has been designed for extremely long life expectancy.

Quality in detail

Liebherr components

Liebherr develops, tests and manufactures components such as diesel engines, slewing gear, hydraulic cylinders and electronics specifically for industrial machinery. Parts including engines and pumps for example, are already being synchronized with each other as early as the construction phase, yielding a constant standard of quality.

Functional safety

Safety components fitted as standard, such as safety check valves, allow high availability. The operator can thus concentrate fully on the task at hand, due to the integrated on-board electronics performing a constant balancing of pre-defined set data.

The magnet bar, fitted as standard in the hydraulic system, increases the operating life of the hydraulic components and serves as a service indicator.

Rugged attachments

Working attachment

The stable attachments are designed for the harshest applications and have a long service life. All components have been optimised using the FE method. Stress-reducing two-sided cylinder bearings on mono and stick connections. Integrated large diameter torsion tube for the best possible force absorption by the attachment components. Carefully planned stick design with integrated impact protection to prevent damage.

Piping

Routing the hydraulic lines in the arm offers the best protection against damage. The electric cabling is made with high-grade materials, thus guaranteeing a reliable supply to the consumer.

Liebherr hydraulic cylinders

- Specific size for each machine
- High-grade surface coating of the piston rods
- All Liebherr cylinders feature special long-life sealing systems
- Shock absorption at both sides in the working cylinders

Functional safety

- Essential operating data is stored and can be recalled at any time
- Control and monitoring functions increase functional safety of the machine
- Four fixed working modes for output discharge facilitate an effective and efficient operation:
 - ECO-Mode: High handling and loading performance coupled with low fuel consumption
 - POWER-Mode: For maximum handling and loading performance under severe conditions
 - LIFT-Mode: for precise handling of heavy loads
 - FINE-Mode: for fine control at precision work





Large-sized cab

- Adjustable steering column
- Operator's seat, adjustable in height and can also be adapted to the individual weight of the operator
- Consoles with or without possibility of horizontal adjustment
- Large roof window
- Single-piece side screen on the right
- Sun blinds



Comfort

The excavator operator is provided with an ergonomically-arranged working area within Liebherr hydraulic excavator cabs. All switches and functions are logically laid out, and operator's seat, steering column and consoles can be adjusted individually. Conditioning and concentration can thus be maintained throughout the entire working day, guaranteeing constant, maximum productivity of the operator.

Mobile comfort

Easy access

Wide steps, ergonomically-positioned handles and adjustable steering column allow an easy access into the Liebherr operator's cab.

Optimum visibility

A well-thought-out design of the uppercarriage, featuring large glass panels and rounded edges, increase overall visibility and guarantees a safe overview of the entire working area. The best field of vision in all directions and from any cab position.

Pleasant surroundings

Reduced engine speed together with elaborate sound insulation, as well as optimised hydraulic components, allow a comfortable noise level both inside and out. The noise level is comparable with that of modern cars.

Maintenance features

Simple maintenance

Liebherr semi-automatic central lubrication system for slewing gear and main parts of the attachment.

Ease of operation

A shut-off valve, fitted to the hydraulic tank as standard, disconnects the system and guarantees ease of maintenance to the hydraulic system.

Easy access

Large, self-locking maintenance hatches allow easy and safe access to all maintenance points.

Storage compartment – Everything has its place

- Sufficient storage space for a commercially-approved cooler box behind the operator's seat
- Drinks holder and storage compartment in operator's cab
- Large storage box behind the operator's cab
- Two standard tool boxes in the undercarriage



Fully-automatic air-conditioning system

- The air-conditioning system, fitted as standard, offers the same comfort as that of a regular car
- Two sensors for precise temperature regulation
- Ventilation flaps are controlled via keys
- Reheat function for quick dehumidifying / defrosting of the windshield



Hydrostatic fan drive

- Accelerated warm-up period
- Guaranteed constant oil quality as a result of constant oil temperature
- Increased life expectancy of drive components
- The fan only runs at the output required, thus conserving fuel and reducing the noise level considerably
- Thermostatic control



Economy

Liebherr offer a wide range of models, guaranteeing optimum suitability for every application. Easy access to components, as well as the proven service offer allows maintenance tasks to be performed in the shortest of times, thus reducing operating costs considerably.

Low operating costs

Liebherr engine

Full engine power is available even at low speeds. This means that unrestricted power is available when it is really required. Therefore high levels of productivity and low fuel consumption are reached.

Automatic idle

If no working or travel movements are being performed, the shiftable function reduces the engine speed to idle, which in turn reduces fuel consumption and emission levels.

Intelligent hydraulic management

The state-of-the-art hydraulic system allows conversion of the maximum engine output into high force or speed, as required. The maximum possible forces are available at all times.

Hydraulically-adjustable cab

The hydraulically-adjustable cab allows the driver to optimise his field of view to increase material-handling performance.

Investment for the future

Extensive service offer

Proven service offers assured by our service personnel trained directly at the manufacturing plants, and endorsed by our tight-knit network of dealers, provide services in all required areas. Direct contact to Liebherr is guaranteed via complete integration of all service points in our own Liebherr logistics system. Electronic access to our global spare-parts management allows a 98 % availability of spare parts 24 hours a day.

High resale values

Liebherr excavators are built with high-grade materials and quality production to provide a long term operational life-span, thus guaranteeing maximum resale values.



Service oriented

- Engine service points - such as the filter or capacity displays - easily to access and reach via a catwalk
- The magnet bar in the hydraulic oil tank acts as a service indicator and increases the service life of the oil
- Liebherr semi-automatic central lubricating systems for the slewing gear and main attachment components fitted as standard for quick and targeted maintenance



A wide range

- Comprehensive and well balanced Liebherr grab program
- A wide range of grapple shapes for the most widely differing operational situations

Technical Data



Engine

Rating per ISO 9249	190 kW (258 HP) at 1800 RPM
Model	Liebherr D 936 L according to level IIIA/Tier 3
Type	6 cylinder in-line
Bore/Stroke	122/150 mm
Displacement	10,5 l
Engine operation	4-stroke diesel unit pump system turbo-charged and after-cooled reduced emissions
Cooling	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	660 l
Standard	sensor controlled engine idling
Electrical system	
Voltage	24 V
Batteries	2 x 170 Ah/12 V
Starter	24 V/6,6 kW
Alternator	three phase current 28 V/80 A



Hydraulic System

Hydraulic pump for attachment and travel drive	two Liebherr variable flow, swash plate pumps
Max. flow	2 x 303 l/min.
Max. pressure	350 bar
Pump regulation	electro-hydraulic with electronic engine speed sensing regulation, pressure compensation, flow compensation, automatic oil flow optimizer
Hydraulic pump for swing drive	reversible, variable flow, swash plate pump, closed-loop circuit
Max. flow	205 l/min.
Max. pressure	380 bar
Hydraulic tank	460 l
Hydraulic system	740 l
Hydraulic oil filter	2 full flow filters in return line with integrated fine filter area (5 µm)
Hydraulic oil cooler	compact cooler, consisting of a water cooler, sandwiched with hydraulic oil cooler, fuel cooler and after-cooler cores and hydrostatically driven fan
MODE selection	adjustment of machine performance and the hydraulics via a mode selector to match application
ECO	for especially economical and environmentally friendly operation
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 the rpm at each selected mode
Tool Control (Option)	ten preadjustable pump flows and pressures for add on tools



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	proportional via foot pedal
Additional functions	via foot pedals or joystick push buttons



Swing Drive

Drive by	Liebherr swash plate motor with integrated brake valves
Transmission	Liebherr compact planetary reduction gear
Swing ring	Liebherr, sealed single race ball bearing swing ring, internal teeth
Swing speed	0 – 8,0 RPM stepless
Swing torque	125 kNm
Holding brake	wet multi-disc (spring applied, pressure released), 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	fully adjustable, shockabsorbing suspension, adjustable to operator's weight and size, 6-way adjustable Liebherr seat
Joysticks	integrated into adjustable consoles
Monitoring	menu driven query of current operating conditions via the LCD display. Automatic monitoring, display, warning (acoustical and optical signal) and saving machine 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) = 75 dB(A)
2000/14/EC	L _{WA} (surround noise) = 105 dB(A)



Undercarriage

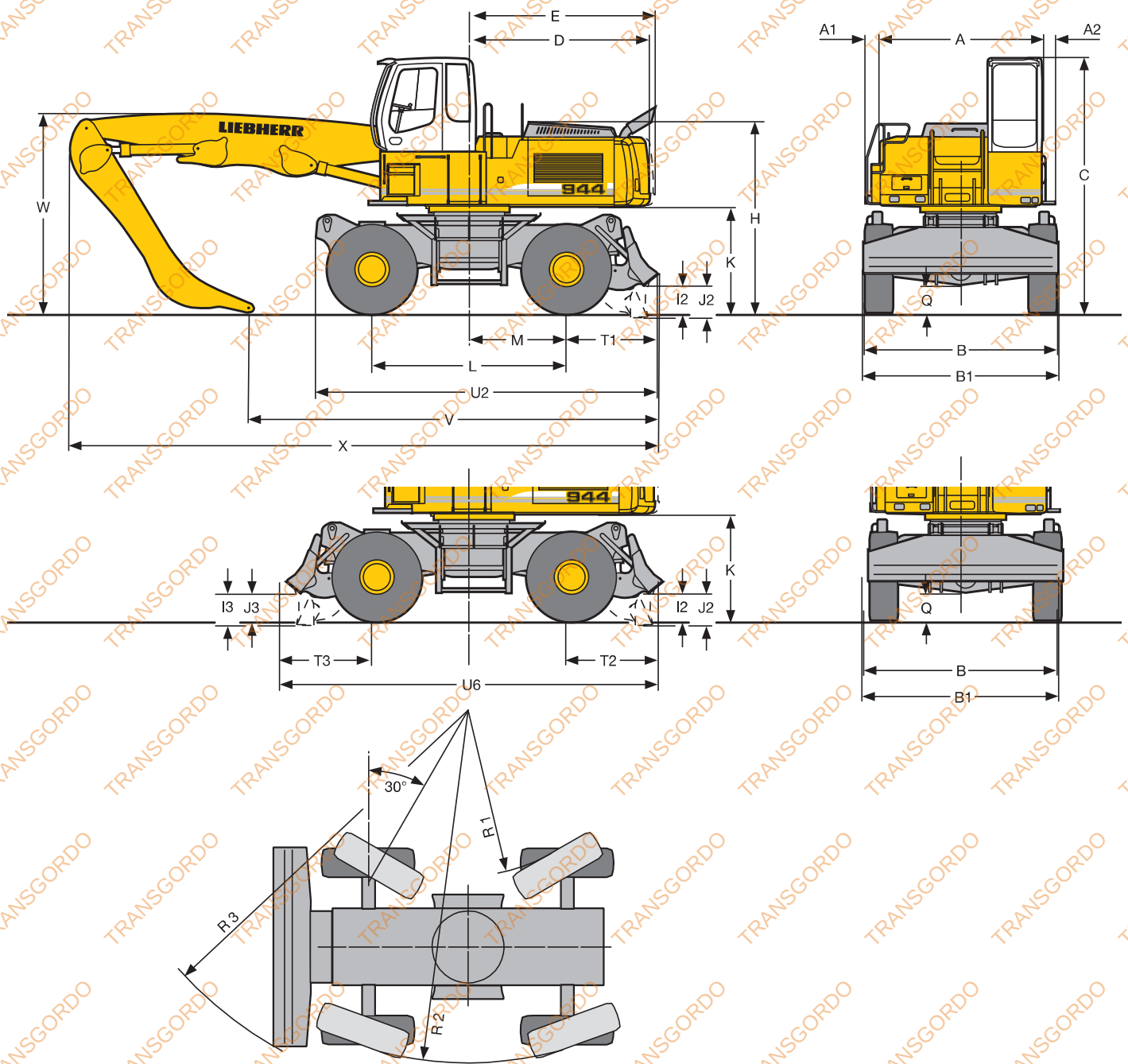
Drive	Liebherr variable flow swashplate motor with automatic brake valves
Transmission	oversized two speed power shift transmission with additional creeper speeds
Travel speed	0 – 3,0 km/h (creeper speed) 0 – 5,0 km/h (cross country) 0 – 11,5 km/h (creeper speed road) 0 – 20,0 km/h (road travel)
Axles	70 t excavator axles; automatic or operator controlled front axle oscillation lock
Brakes	discs brakes hydraulically actuated digging and parking brake
Stabilization	stabilizer blade (rigid axle) opt. stabilizer blade (steering axle)
Four wheel steering	standard
Steering reversal control	standard



Attachment

Type	high-strength steel plates at highly-stressed points for the toughest requirements. Complex and stable mountings of attachment and cylinders. Unrivalled strength, even at high loads
Hydraulic cylinders	Liebherr cylinders with special seal system. Shock absorption
Pivots	sealed, low maintenance
Lubrication	Liebherr semi-automatic central lubrication system

Dimensions



	mm
A	2995
A1	270
A2	250
B	3545
B1	3600
C	4700
D	3345
E	3355
H	3510
I2	505
I3	505
J2	550
J3	550
K	1970

E = Tail radius

	mm
L	3600
M	1800
Q	520
R1	3000
R2	6390
R3	7030
T1	1690
T2	1690
T3	1690
U2	6320
U6	6980
V	7570
W	3800
X	11000

Dimensions are with attachment over steering axle

Tires 18.00-25

Industrial Attachment

with Industrial-Type Straight Boom 7,00 m

Attachment Envelope

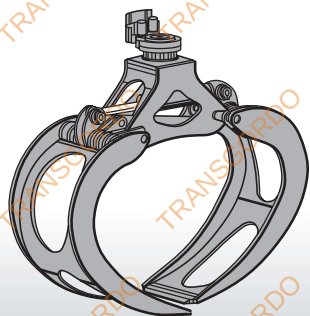
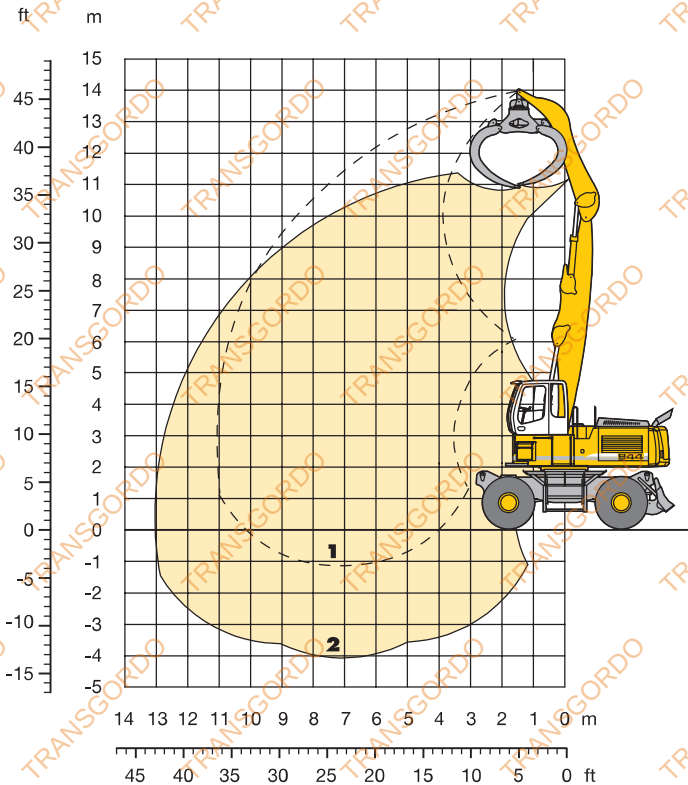
Industrial-type straight boom pinned in rear bearing of boom foot bracket

- 1 with industrial stick 4,50 m
- 2 with industrial stick 4,50 m and wood grapple

Operating Weight

Operating weight includes basic machine A 944 C HD Litronic with prop-up blade, industrial application for wood with industrial-type straight boom 7,00 m and industrial stick 4,50 m.

with wood grapple and mechanism with 2 hydr. motors	Weight
industrial stick 4,50 m	44150 kg



Lift Capacities

with Industrial-Type Straight Boom 7,00 m

Industrial Stick 4,50 m

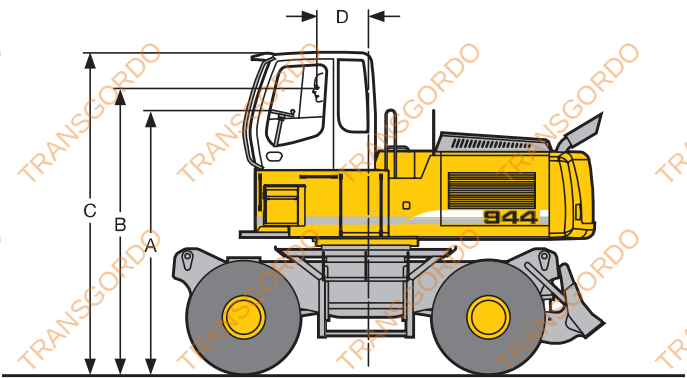
		 3,0 m		 4,5 m		 6,0 m		 7,5 m		 9,0 m		 10,5 m				
m	Undercarriage															m
13,5	Stabilizers raised	12,9*	12,9*											12,3*	12,3*	3,29
	Stabil. blade down	12,9*	12,9*											12,3*	12,3*	
	Stabil. blades down	12,9*	12,9*											12,3*	12,3*	
12,0	Stabilizers raised			12,2*	12,2*	9,9*	9,9*							9,0*	9,0*	6,39
	Stabil. blade down			12,2*	12,2*	9,9*	9,9*							9,0*	9,0*	
	Stabil. blades down			12,2*	12,2*	9,9*	9,9*							9,0*	9,0*	
10,5	Stabilizers raised			12,9*	12,9*	11,9*	11,9*	9,7*	9,7*					7,9*	7,9*	8,12
	Stabil. blade down			12,9*	12,9*	11,9*	11,9*	9,7*	9,7*					7,9*	7,9*	
	Stabil. blades down			12,9*	12,9*	11,9*	11,9*	9,7*	9,7*					7,9*	7,9*	
9,0	Stabilizers raised			13,3*	13,3*	13,2*	13,2*	10,0	11,8*	7,4	8,6*			7,0	7,5*	9,30
	Stabil. blade down			13,3*	13,3*	13,2*	13,2*	10,5	11,8*	7,8	8,6*			7,3	7,5*	
	Stabil. blades down			13,3*	13,3*	13,2*	13,2*	11,7	11,8*	8,6*	8,6*			7,5*	7,5*	
7,5	Stabilizers raised			14,4*	14,4*	14,0	14,2*	9,9	12,2*	7,4	9,2			6,1	7,3*	10,13
	Stabil. blade down			14,4*	14,4*	14,2*	14,2*	10,3	12,2*	7,7	10,7*			6,3	7,3*	
	Stabil. blades down			14,4*	14,4*	14,2*	14,2*	11,5	12,2*	8,6	10,7*			7,1	7,3*	
6,0	Stabilizers raised	15,2*	15,2*	18,6*	18,6*	13,5	15,1*	9,6	11,9	7,2	9,0	5,7	7,1	5,5	6,9	10,68
	Stabil. blade down	15,2*	15,2*	18,6*	18,6*	14,1	15,1*	10,0	12,6*	7,6	10,8*	5,9	8,2*	5,8	7,3*	
	Stabil. blades down	15,2*	15,2*	18,6*	18,6*	15,1*	15,1*	11,2	12,6*	8,5	10,8*	6,7	8,2*	6,5	7,3*	
4,5	Stabilizers raised			19,7	21,2*	12,7	16,0*	9,2	11,5	7,0	8,8	5,6	7,0	5,2	6,5	11,00
	Stabil. blade down			20,9	21,2*	13,4	16,0*	9,6	13,0*	7,4	10,9*	5,8	9,2*	5,4	7,5*	
	Stabil. blades down			21,2*	21,2*	15,1	16,0*	10,8	13,0*	8,3	10,9*	6,6	9,2*	6,1	7,5*	
3,0	Stabilizers raised			18,2	21,9*	12,0	15,4	8,8	11,1	6,8	8,6	5,5	6,9	5,0	6,4	11,11
	Stabil. blade down			19,4	21,9*	12,7	16,7*	9,2	13,2*	7,2	10,9*	5,7	8,9*	5,3	7,8*	
	Stabil. blades down			21,9*	21,9*	14,3	16,7*	10,4	13,2*	8,0	10,9*	6,5	8,9*	6,0	7,8*	
1,5	Stabilizers raised			11,2*	11,2*	11,5	14,8	8,5	10,8	6,6	8,4	5,4	6,8	5,1	6,4	11,01
	Stabil. blade down			11,2*	11,2*	12,1	16,5*	8,9	13,0*	7,0	10,5*	5,7	8,3*	5,3	7,4*	
	Stabil. blades down			11,2*	11,2*	13,8	16,5*	10,1	13,0*	7,9	10,5*	6,4	8,3*	6,0	7,4*	
0	Stabilizers raised			11,0*	11,0*	11,2	14,5	8,3	10,6	6,5	8,3			5,6	7,1	10,07
	Stabil. blade down			11,0*	11,0*	11,8	15,2*	8,7	12,1*	6,9	9,6*			5,9	7,9*	
	Stabil. blades down			11,0*	11,0*	13,5	15,2*	9,9	12,1*	7,7	9,6*			6,7	7,9*	

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

The lift capacities on the stick end without 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. Indicated loads comply with the ISO 10567 standard and do not exceed 75 % of tipping or 87 % of hydraulic capacity.

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.

Choice of Cab Elevations and Cab Protections

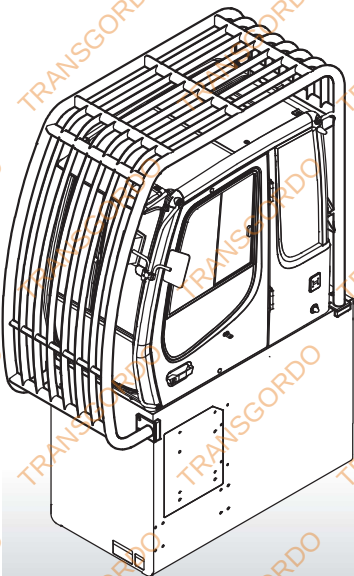


Rigid Cab Elevation

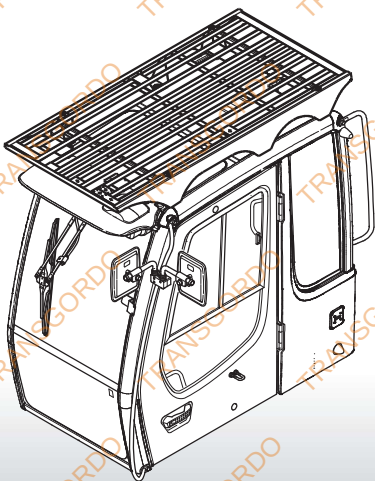
Height	800 mm
A	3865 mm
B	4205 mm
C	4700 mm
D	755 mm

A rigid cab elevation has a fixed eye level height. For a lower transport height the shell of the cab can be removed. The overall height is then dimension A.

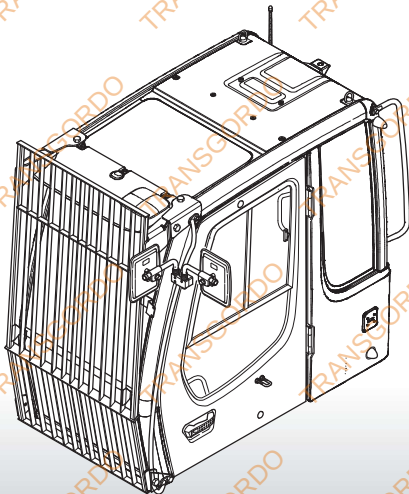
Cab guard for cab with elevation



Grille above



Grilles in front



Equipment



Undercarriage

Two circuit travel brake with accumulator	•
Four wheel steering	•
Travel motor protection	•
Outrigger cylinder rod guards	•
Creeper speed electrically switchable from cab	•
Steering reversal control	•
Service free parking brake	•
Choice of tires	•
Auto check valve directly on each stabilizer cylinder	•
Proportional power steering	•
Customized colors	+
Two lockable storage boxes	•
Two-speed power shift transmission	•



Uppercarriage

Electric fuel tank filler pump	+
Maintenance-free swing brake lock	•
Handrails, Non slip surfaces	•
Main switch for electric circuit	•
Engine hood with lift help	•
Pedal controlled positioning swing brake	•
Reverse travel warning system	+
Sound insulation	•
Customized colors	+
Pin lock upper/lower	•
Maintenance-free HD-batteries	•
Extended tool kit	•
Lockable tool box	•
Tool kit	•



Hydraulics

Hydraulic tank shut-off valve	•
Extra hydr. control for hydr. swivel	+
Pressure compensation	•
Hook up for pressure checks	•
Pressure storage for controlled lowering of attachments with engine turned off	•
Filter with partial micro filtration (5 µm)	•
Electronic pump regulation	•
Stepless mode system (ECO)	•
Flow compensation	•
Four mixed modes, can also be adjusted	•
Full flow micro filtration	+
Bio degradable hydraulic oil	+
Tool Control	+
Additional hydraulic circuits	+



Engine

Turbo charger	•
After-cooled	•
Sensor controlled engine idling	•
Unit pump system	•
Air filter with pre-cleaner main- and safety element	•

• = Standard, + = Option

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.



Operator's Cab

Storage tray	•
Displays for engine operating condition	•
Mechanical hour meters, readable from outside the cab	•
Roof hatch	•
All-round adjustable roof vent	•
6-way adjustable seat	•
Airpressure operator seat with heating and head-rest	+
Seat and consoles independently adjustable	•
Extinguisher	+
Removable customized foot mat	•
Dome light	•
Rigid cab elevation	+
Cab heater with defroster	•
Cloth hook	•
Air conditioning	•
Electric cool box	+
Steering wheel adjustable	•
Bullet proof window (fixed installation – can not be opened)	+
Stereo radio	+
Preparation for radio installation	+
Rain hood over front window opening	•
Beacon	+
All tinted windows	•
Door with sliding window	•
Auxiliary heating	+
Sun shade	+
Sun roller blind	•
Electronic drive away lock	+
Wiper/washer	•
Cigarette lighter and ashtray	•
Additional flood lights	+



Attachment

Flood lights	•
Hydr. lines for clam operation in sticks	•
Industrial-type gooseneck sticks with remote hydraulic pin puller	+
Sealed pivots	•
Safety lift hook	+
Liebherr line of clams	+
Liebherr semi-automatic central lubrication system	•
Liebherr fully-automatic central lubrication system	+
Likufix	+
Safety check valves on hoist cylinder	•
Safety check valves on stick cylinder	•
Hose quick connection	•
Hydraulic or manual quick change tool adapter	+
Customized colors	+
Special buckets and other tools	+
Overload warning device	+
Two way valves for bucket/clam use	+
Locking of connections for clam operation	+
Cylinders with shock absorber	•

Courtesy of Crane.Market