

# Crawler Excavator

**R 956**  
Litronic®

Operating Weight with Backhoe Attachment:	49,600 – 57,100 kg
Operating Weight with Shovel Attachment:	55,650 – 56,200 kg
Engine Output:	240 kW / 326 HP
Bucket Capacity:	1.25 – 3.30 m <sup>3</sup>
Shovel Capacity:	3.10 m <sup>3</sup>



# LIEBHERR

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## Performance

Responsive and precise, the R 956 crawler excavators allow you to perform a large number of mass excavation tasks in earthmoving sites or in quarries. Thanks to their tested hydraulic design and their various work modes, Liebherr excavators will always be there to satisfy your needs.

## Reliability

Engineered for difficult operating conditions, the R 956 crawler excavators were designed to meet a list of specifications resulting from our customer's requirements.

## Comfort

The new, more spacious operator's cab provides the operator with a quiet working environment. What's more, the ergonomics, visibility and soundproofing have been improved for increased comfort.

## Profitability

The raw performance amounts to maximum effective working hours. These excavators allow you to target essential operations and reduce operating costs in order to obtain the best return on investment.





#### Liebherr Engine

- New Stage 3B / Tier 4i engine
- Designed specifically for construction applications
- Liebherr Common Rail Injection system with three times less load losses than a conventional Common Rail system
- Automatic fuel-saving idling system
- Two-stage turbocharging with intercooler, for increased power at low revs and reduced fuel consumption



# Performances

Responsive and precise, the R 956 crawler excavators allow you to perform a large number of mass excavation tasks in earthmoving sites or in quarries. Thanks to their tested hydraulic design and their various work modes, Liebherr excavators will always be there to satisfy your needs.

## Technology serving productivity

### Liebherr Integration

All the major components are designed and manufactured within the Liebherr group. This includes components such as the heat engine, hydraulic pumps, electronic components (injection mapping, hydraulic control, control console) and of course the essential mechanical elements including cylinders, the slewing ring and work tools, resulting in an overall increase in productivity.

### Regeneration Plus

The „Regeneration Plus“ function allows for the accelerated lowering of the boom, reduced losses of pressure and an improved work cycle. The optimization and combination of the „zero-pressure lowering of the boom“ and „Regeneration plus“ functions, together with the increased power of the hydraulics, provide increased performance and lower consumption.

## Power and speed

### Increased break-out force

Thanks to their kinematics and hydraulic power, the R 956 crawler excavators develop increased break-out and digging forces. The generously sized cylinders allow you to increase the break-out performance in hard materials.

### Faster cycles

The mechanical link between the rotation engine and slewing ring gives the machine a high torque and swing speed, thus improving your operating cycles.



### Choice of work mode

The different work modes offered allow you to adapt the power of the excavator to the application

**E Mode** - Economy: for economical and ecologically-friendly operation. Minor restriction of power without affecting the load lifting and excavating capacities. Highly recommended for light and moderate working conditions

**P Mode** - Power: for high excavation capacities and difficult applications. Pump flow and power are not limited

**S Mode** - Sensitivity: for precision jobs and loading of materials. The pump flow and power are restricted to attain optimal sensitivity

**P+ Mode** - Full Power: especially designed for increased power; only recommended for extreme applications



### Floating Boom Function

- Increased hydraulic flow for the other cylinders (stick and/or bucket for example)
- More power available, making it easier to extract materials and reduce work cycle times
- Increased service life when a hydraulic hammer is used



#### Liebherr particle filter

- Designed and manufactured by Liebherr, it eliminates more than 99% (VERT certification) of fine particle emissions
- Active regeneration of the particle filter, causing no interruption to the operator and without reducing the machine's performance
- The central module (filter unit) is removable and easily accessible for maintenance



# Reliability

Engineered for difficult operating conditions, the R 956 crawler excavators were designed to meet a list of specifications resulting from our customer's requirements.

## Fully-tested strength

### Improved and reinforced undercarriage

With an X-shaped design and an increased slewing ring diameter, this new undercarriage is characterized by an even distribution of stresses over the whole structure. This results in increased performance, greater load properties and an increased service life.

### Safe travel

The integration of 3 guiding guards per track as standard significantly reduces the risk of tracks coming off. In addition, track pins and bearings are lubricated for life, which reduces both maintenance tasks and down time.

### Strengthened uppercarriage

The uppercarriage has been reinforced with heavier steel to ensure increased strength. The HD boom and stick are standard - improving resistance to the impact of materials. Similarly, the system of cast and welded housings on the boom allows for an improved distribution of stresses.

## Quality serving safety

### Finest details

The hydraulic, electric and lubrication lines are laid out to ensure optimum operating safety and maximum availability. The finish paint applied before assembly and the appropriate surface treatment of the components guarantee maximum protection against corrosion. The integration of the rear camera in the counter weight elegantly highlights the overall perception of quality, safety and reliability.

### ROPS cab structure

The cab is equipped with an integrated roll over protection system (ROPS), pursuant to standard ISO 12117-2.

### Undercarriage

- New design for increased life and improved distribution of forces
- Linear slope between the upper plate of the central section and the track carriers for constant cleaning
- Easy and safe transport thanks to integrated securing hooks
- 3 types of undercarriage available, including one with a variable gauge for an accurate configuration to suit the jobsite requirements



### Key components developed by Liebherr

- Perfect harmonization of the machine elements, designed specifically for earthmoving and quarry applications
- Engine, hydraulic pumps, transfer box, transmission, rotating mechanism, slewing ring, cylinders and electronic components are designed and manufactured by Liebherr
- Purpose built options such as special attachment lengths
- Specific tools and custom protection can be added at the factory



#### Control screen

- 7" color touchscreen
- Several setting, control and surveillance options
- Robust and reliable design (Ingress Protection Rating IP65)
- Compatible high resolution video for displaying the rear camera image





# Comfort

The new, more spacious operator's cab provides the operator with a tranquil working environment. What's more, the ergonomics, visibility and sound-proofing have been improved for increased comfort.

## It's just about feeling good

### A spacious and ergonomic work station

The cab offers a generous space for maximum comfort. Equipped, among other things, with a pneumatic seat with heater as standard (optional with air-conditioning), controls connected to the seat and high-performance automatic air-conditioning, the cab creates a pleasant working environment. All the controls are precisely laid out in an intuitive manner for greater responsiveness and concentration while working. The cab is mounted on viscoelastic studs for significantly lower vibration.

### Fully automatic air-conditioning

The automatic air-conditioning with touchscreen controls has several ventilation outlets for optimum ambient air in the cab.

### High resolution color touchscreen

The color touchscreen is a true human-machine interface for controlling several comfort functions, such as the radio, and more operational functions, such as work modes, tool types and even the backup camera.

### A cab that's easy to look after

The possibility of working in a clean environment was an important objective in the design of the cab. It is particularly easy to maintain thanks to elements such as a keyboard with soft touch comfort keys and an easily accessible cab air filter.



### Heightened visibility

- Rear camera integrated in the counterweight as standard, for rear visibility and heightened operating safety
- Optimized design of the whole uppercarriage providing the operator with an improved field of vision
- Retractable laminated glass roof panel



### Joystick

- Sensitive joystick with proximity switch (controlled by approach of the operator's hand) for greater responsiveness when resuming operations
- Proportional ergonomic control for heightened job precision



#### Liebherr tools

- Wide range of tools suitable for every type of application
- Tools designed for maximum productivity and durability
- Shape of buckets designed to assist the filling and stability of bulky materials during the transport stages
- Hydraulic quick coupler system



# Profitability

The raw performance amounts to maximum effective working hours. These excavators allow you to target essential operations and reduce operating costs in order to obtain the best return on investment.

## The best choice

### Low operating costs

Thanks to its high technology and its innovation, the Liebherr France Company increases the performance of its machines while reducing their fuel consumption. Examples of this are the new diesel engine, automatic idling, electronic engine speed sensing control, Regeneration Plus function and the hydrostatic cooling system (fans operate only when necessary). Consequently, the reduced fuel consumption means less pollution.

### LiDAT fleet and machine park management tool

To improve your machine management, Liebherr has developed its own data transmission system using the GPRS network. This system allows you to instantly know the position of your excavator via a web interface. Thanks to data transmission, the LiDAT system developed and manufactured by Liebherr keeps you informed about fuel consumption, number of service hours or machine faults, just to name a few. LiDAT allows you to be proactive and more responsive: organizing and maintaining your fleet for increased productivity.

## Liebherr-Service

### An excellent after-sales service

The after-sales services can be customized to suit and respond to your specific needs. Several programs, such as ReMan, ReBuilt and Repair provide the perfect, economical solution, always including the manufacturer's quality and guarantee. A team of technicians, specialized to intervene on your machines, has all the latest-generation diagnostic tools, for a reduced down time of the machine. By following your chosen maintenance program, you will also obtain a higher resale price.



### Liebherr lubricants

- Complete range of lubricants and coolants for your Liebherr engines
- Special service with product specialists available to listen to and advise you



### Maintenance

- Automatic centralized lubrication as standard for regular lubrication of critical points and reduced machine down times accurate lubrication for cutting costs and increasing the service life of the elements
- Hydraulic tank shutoff valve for easily and quickly cutting off the hydraulic circuit: complete drainage not required if it is necessary to repair the system

# R 956 Backhoe - Experience Progress

## Visibility

- Rear camera integrated in the counterweight
- Two boom-mounted lights - standard
- Optimized design of the whole uppercarriage providing the operator with a better field of vision

## Automatic centralized lubrication - standard

- Reduced maintenance time
- Longer service life thanks to better lubrication

## Undercarriage

- Robust structure thanks to the X-shaped profile
- Improved self-cleaning capacity
- Special heat treatment for low wear and tear of drive sprockets
- 3 types of undercarriage available, including a variable gauge one
- 3 guiding guards per track - standard





## Equipment

- Cast steel elements
- Greater resistance to stresses
- Longer service life

## Operator's cab

- New design
- Comfortable and ergonomic
- 7" high resolution color touchscreen for heightened readability
- Rear window with improved visibility

## Tools

- Z-type Liebherr teeth for fast replacement
- Wide range of work tools

# R 956 Shovel - Experience Progress

## Equipment

- Parallel kinematics for powerful break-out
- Bucket cylinders positioned under the equipment for better protection
- Optional boom cylinder protection

## Tools

- Different types of buckets:
- Type I: non-abrasive materials, such as limestone without flint
- Type II: Shot material, or easily breakable rock (classification 3 to 4 according to DIN 18300)
- Type III: Highly abrasive materials, such as rocks with a high silica content, sandstone, granite, etc.



### **Operator's cab**

- Operator's cab with 2' 7" elevation for improved visibility
- Optionally equipped with a FOPS and FGPS front guard
- Comfortable and quiet cab

# Technical Data



## Engine

Rating per ISO 9249	240 kW (326 HP) at 1,800 RPM
Model	Liebherr D 936 A7
Type	6 cylinder in-line
Bore/Stroke	122/150 mm
Displacement	10.52 l
Engine operation	4-stroke diesel
	Common-Rail, bi-turbo
	exhaust-gas recirculation (eagr)
Exhaust gas treatment	particle filter with active regeneration
	emission standard stage IIIB/Tier 4i
Cooling	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	800 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/100 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 System

Hydraulic pump for attachment and travel drive	two Liebherr variable flow, swash plate pumps
Max. flow	2 x 350 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	211 l/min.
Max. pressure	355 bar
Hydraulic tank	380 l
Hydraulic system	670 l
Hydraulic oil filter	2 full flow filters in return line with integrated fine filter area (5 µm)
Hydraulic oil cooler	compact cooler for water cooler, after-cooler, fuel cooler and transmission pump oil, sandwiched with cooler for oil and condenser of air-conditioning with hydro-statically 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 or for maximum digging performance and heavy-duty jobs
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



## Hydraulic Controls

The controlling is conducted via the integrated excavator system technology, input and output modules, communicated via the CAN-BUS with the electronic central unit.

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 pedals or removable hand levers
	– speed pre-selection
Additional functions	via foot pedals or joystick toggle switch



## 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 – 6.1 RPM stepless
Swing torque	165 kNm
Holding brake	wet multi-disc (spring applied, pressure released)
Option	pedal controlled positioning brake



## Operator's Cab

Cab	ROPS safety cab structure (capable of sweeping over) with individual windscreens or featuring a slide-in subpart under the ceiling, work headlights integrated in the ceiling, a door with a side window (can be opened on both sides), large stowing and depositing possibilities, shock-absorbing suspension, sounddamping insulating, tinted laminated safety glass, separate window shades for the sunroof window and windscreen, 12 V plug, storage bins, lunchbox, cup holder
Operator's seat	Liebherr-Comfort seat, airsprung with automatic weight adjustment, vertical and horizontal seat damping including consoles and joysticks. Seat and armrests adjustable separately and in combination, seat heating as standard
Control system	arm consoles, swinging with the seat
Operation and displays	large high resolution colour display with self-explanatory operation via touch screen, video, versatile adjusting, control and monitoring facilities, e.g. climate control, implement and tool parameters
Air-conditioning	standard automatic air-conditioning, ambient air function, fast de-icing and demisting at the press of a button, air vents can be operated via a menu; ambient 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	$L_{pA}$ (inside cab) = 72 dB(A)
2000/14/EC	$L_{WA}$ (surround noise) = 106 dB(A)



# Technical Data



## Undercarriage

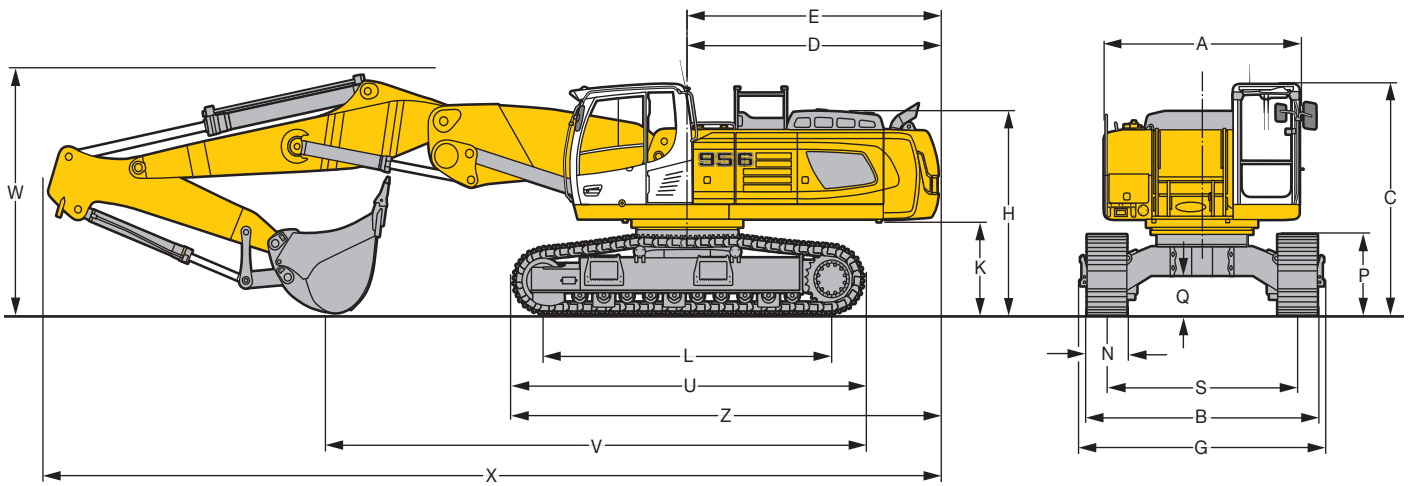
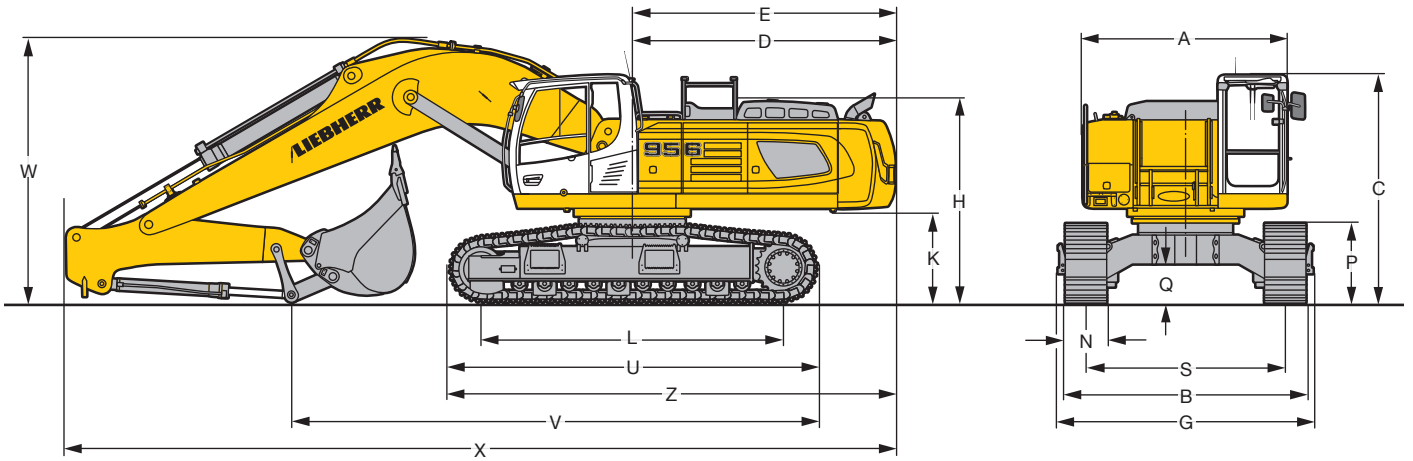
Version	
LC	gauge 2,900 mm
LC-V	gauge 2,890 mm
HD	gauge 2,900 mm
Drive	Liebherr swash plate motor with integrated brake valves
Transmission	Liebherr planetary reduction gears
Travel speed	LC/LC-V: low range – 3.3 km/h high range – 4.8 km/h HD: low range – 2.4 km/h high range – 3.5 km/h
Net drawbar pull on crawler	LC/LC-V: 363 kN HD: 414 kN
Track components	LC/LC-V: D 7 G, maintenance-free HD: D 8, maintenance-free
Track rollers/ Carrier rollers	LC: 10/2 LC-V: 10/3 HD: 9/2
Tracks	sealed and greased
Track pads	triple grouser
Digging locks	wet multi-discs (spring applied, pressure released)
Brake valves	integrated into travel motor
Lashing eyes	integrated



## Attachment

Type	combination of resistant steel plates and cast steel components
Hydraulic cylinders	Liebherr cylinders with special seal-system, shock protection
Pivots	sealed, low maintenance
Lubrication	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



# Dimensions

	LC			mm	LC-V			mm	HD	mm	
A				2,970				2,970	2,970		
C				3,315/3,510**				3,390/3,585**	3,335/3,530**		
D				3,830				3,830	3,830		
E				3,850				3,850	3,850		
H				2,925				3,000	2,945		
K				1,335				1,410	1,355		
L				4,400				4,400	4,500		
P				1,160				1,160	1,225		
Q				555				760	575		
U				5,365				5,365	5,550		
S				2,900				2,390/2,890*	2,900		
N	500	600	750		500	600	750		500	600	750
B	3,462	3,500	3,650		2,950	2,990	3,140		3,462	3,500	3,650
G	3,715	3,715	3,715		3,200	3,200	3,200		3,715	3,715	3,715
Z				6,515				6,515	6,605		

\* work position

\*\* with FOPS top guard

LC-Undercarriage					
	Stick Length	Mono Boom 6.70 m	Mono Boom 7.60 m	Mono Boom 9.20 m	Two-piece Boom 4.70 m
	m	mm	mm	mm	mm
V	2.35	7,650	7,600	–	8,200
	2.90	7,100	8,200	8,750	7,600
	3.80	9,300*	7,300	9,000	7,000
	5.00	–	–	7,750	–
W	2.35	3,900	3,900	–	3,550
	2.90	3,950	3,950	4,150	3,650
	3.80	3,950*	4,000	4,250	3,950
	5.00	–	–	4,350	–
X	2.35	12,150	13,200	–	13,650
	2.90	12,200	13,200	14,850	13,550
	3.80	12,150*	13,200	14,850	13,550
	5.00	–	–	14,850	–

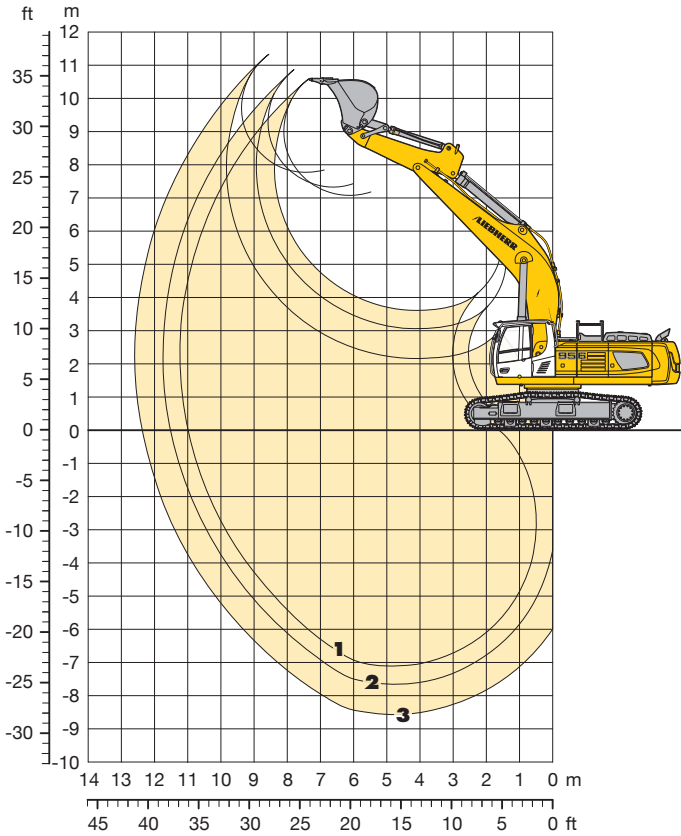
LC-V-Undercarriage					
	Stick Length	Mono Boom 6.70 m	Mono Boom 7.60 m	Mono Boom 9.20 m	Two-piece Boom 4.70 m
	m	mm	mm	mm	mm
V	2.35	7,650	7,600	–	8,050
	2.90	7,100	8,200	8,800	7,600
	3.80	9,300*	7,300	9,050	6,900
	5.00	–	–	7,800	–
W	2.35	3,950	3,950	–	3,550
	2.90	4,000	4,000	4,200	3,650
	3.80	3,950*	4,050	4,300	3,900
	5.00	–	–	4,400	–
X	2.35	12,150	13,200	–	13,650
	2.90	12,200	13,200	14,800	13,550
	3.80	12,150*	13,200	14,800	13,550
	5.00	–	–	14,800	–

HD-Undercarriage					
	Stick Length	Mono Boom 6.70 m	Mono Boom 7.60 m	Straight Mono Boom 8.00 m	Two-piece Boom 4.70 m
	m	mm	mm	mm	mm
V	2.35	7,750	7,700	8,350	8,300
	2.90	7,200	8,300	7,900	7,700
	3.80	9,400*	7,400	8,250	7,100
	5.00	–	–	–	–
W	2.35	3,900	3,900	3,550	3,550
	2.90	3,950	3,950	3,650	3,650
	3.80	3,900*	4,000	3,800	3,950
	5.00	–	–	–	–
X	2.35	12,150	13,200	13,750	13,650
	2.90	12,200	13,200	13,650	13,550
	3.80	12,150*	13,200	13,650	13,550
	5.00	–	–	–	–

\* without bucket

# Backhoe Bucket

with Mono Boom 6.70 m



## Digging Envelope

		1	2	3
Stick length	m	2.35	2.90	3.80
Max. digging depth	m	7.15	7.70	8.60
Max. reach at ground level	m	11.10	11.50	12.40
Max. dump height	m	7.05	7.30	7.70
Max. teeth height	m	10.55	10.85	11.30

## Digging Forces

		1	2	3
Digging force ISO	kN	248	217	181
	t	25.8	22.1	18.6
Breakout force ISO	kN	313	313	313
	t	31.9	31.9	31.9

Breakout force max. ISO

345 kN (35.2 t)

## Operating Weight and Ground Pressure

Operating weight includes basic machine with mono boom 6.70 m, stick 2.35 m and bucket 2.35 m<sup>3</sup>.

Undercarriage		LC			LC-V		
Pad width	mm	500	600	750	500	600	750
Weight	kg	49,550	50,150	51,400	51,650	52,250	53,500
Ground pressure	kg/cm <sup>2</sup>	1.05	0.88	0.72	1.09	0.92	0.75

Undercarriage		HD		
Pad width	mm	500	600	750
Weight	kg	51,650	52,200	53,000
Ground pressure	kg/cm <sup>2</sup>	1.06	0.89	0.72

Optional: heavy counterweight

(heavy counterweight increases the operating weight by 2,000 kg and ground pressure by 0.04 kg/cm<sup>2</sup>)

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

	Cutting width mm	Capacity ISO 7451 m <sup>3</sup>	Weight kg	LC-Undercarriage			LC-V-Undercarriage			HD-Undercarriage		
				Stick length (m)			Stick length (m)			Stick length (m)		
				2.35	2.90	3.80	2.35	2.90	3.80	2.35	2.90	3.80
STD <sup>1)</sup>	1,350	1.65	2,100	○	○	○	○	○	○	○	○	○
	1,550	2.00	2,250	○	○	○	○	○	○	○	○	○
	1,750	2.35	2,450	○	○	□	○	○	□	○	○	□
	1,950	2.70	2,650	○	□	△	○	○	△	○	○	△
	1,950	3.00	2,750	□	△	■	□	□	■	□	□	■
HD <sup>2)</sup>	2,100	3.30	3,000	△	■	▲	△	△	▲	△	△	▲
	1,350	1.65	2,450	○	○	○	○	○	○	○	○	○
	1,550	2.00	2,650	○	○	□	○	○	□	○	○	□
	1,750	2.35	2,850	○	○	△	○	○	△	○	○	△
	1,950	2.70	3,100	□	□	■	□	□	■	□	□	■
	2,100	3.00	3,250	△	△	▲	△	△	▲	△	△	▲

\* Indicated loads are based on ISO 10567 max. stick length, lifted 360° on firm

<sup>1)</sup> Standard bucket with Liebherr teeth Z 70 (appropriate for materials up to classification 5, according to VOB, Section C, DIN 18300)

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

Other backhoes available on request

Max. material weight ○ = ≤ 2.2 t/m<sup>3</sup>, □ = ≤ 1.8 t/m<sup>3</sup>, △ = ≤ 1.5 t/m<sup>3</sup>, ■ = ≤ 1.2 t/m<sup>3</sup>, ▲ = not authorized

# Lift Capacities

with Mono Boom 6.70 m

## Stick 2.35 m

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	
12.0	LC LC-V HD													
10.5	LC LC-V HD													
9.0	LC LC-V HD											10.3*	10.3*	6.2
7.5	LC LC-V HD								10.2*	10.2*		9.3*	9.3*	7.6
6.0	LC LC-V HD					13.0*	13.0*	11.0	11.7*			8.9*	8.9*	8.4
4.5	LC LC-V HD			21.2*	21.2*	14.7	15.0*	10.6	12.5*			7.9	8.9*	9.0
3.0	LC LC-V HD			21.5*	21.5*	15.1	15.1*	10.9	12.6*	8.2	9.0*	8.2	8.9*	9.0
1.5	LC LC-V HD			21.3*	21.3*	15.1*	15.1*	11.0	12.5*			8.3	8.9*	9.0
0	LC LC-V HD			14.5*	14.5*	12.6	18.9*	9.4	14.8*			7.4	10.8*	9.0
-1.5	LC LC-V HD	13.7*	13.7*	19.6	23.7*	12.6	18.3*	9.3	14.4*			8.1	12.4*	8.4
-3.0	LC LC-V HD	14.0*	14.0*	20.3	23.6*	13.1	18.3*	9.7	14.4*			8.4	12.4*	8.4
-4.5	LC LC-V HD	26.2*	26.2*	20.0	21.2*	12.8	16.6*	9.6	12.5*			9.5	12.4*	7.5
-6.0	LC LC-V HD	26.0*	26.0*	20.7	21.0*	13.4	16.5*					10.0	12.4*	7.5

## Stick 2.90 m

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	
12.0	LC LC-V HD													
10.5	LC LC-V HD													
9.0	LC LC-V HD													7.8*
7.5	LC LC-V HD													7.8*
6.0	LC LC-V HD													7.8*
4.5	LC LC-V HD													6.9
3.0	LC LC-V HD													7.1*
1.5	LC LC-V HD													7.1*
0	LC LC-V HD													7.1*
-1.5	LC LC-V HD													7.1*
-3.0	LC LC-V HD													7.1*
-4.5	LC LC-V HD													7.1*
-6.0	LC LC-V HD													7.1*

## Stick 3.80 m

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	
12.0	LC LC-V HD													
10.5	LC LC-V HD													
9.0	LC LC-V HD													5.4*
7.5	LC LC-V HD													5.4*
6.0	LC LC-V HD													5.4*
4.5	LC LC-V HD													5.0*
3.0	LC LC-V HD													5.0*
1.5	LC LC-V HD													5.0*
0	LC LC-V HD													5.0*
-1.5	LC LC-V HD													5.0*
-3.0	LC LC-V HD													5.0*
-4.5	LC LC-V HD													5.0*
-6.0	LC LC-V HD													5.0*

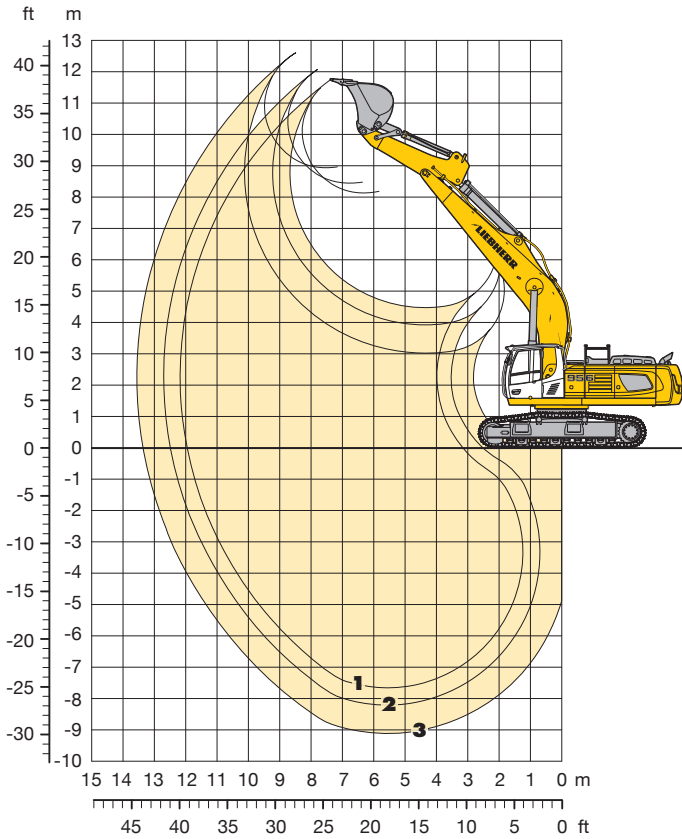
Height  
 Can be slewed through 360°  
 In longitudinal position of undercarriage  
 Max. reach  
 \* Limited by hydr. capacity

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 triple grouser 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 800 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.

# Backhoe Bucket

with Mono Boom 7.60 m



## Digging Envelope

		1	2	3
Stick length	m	2.35	2.90	3.80
Max. digging depth	m	7.65	8.20	9.10
Max. reach at ground level	m	11.95	12.50	13.35
Max. dump height	m	8.10	8.40	8.90
Max. teeth height	m	11.70	12.05	12.60

## Digging Forces

		1	2	3
Digging force ISO	kN	248	217	181
	t	25.8	22.1	18.6
Breakout force ISO	kN	313	313	313
	t	31.9	31.9	31.9

Breakout force max. ISO

345 kN (35.2 t)

## Operating Weight and Ground Pressure

Operating weight includes basic machine with mono boom 7.60 m, stick 2.90 m and bucket 2.00 m<sup>3</sup>.

Undercarriage		LC			LC-V		
Pad width	mm	500	600	750	500	600	750
Weight	kg	49 950	50 550	51 800	52 050	52 650	53 900
Ground pressure	kg/cm <sup>2</sup>	1,06	0,89	0,73	1,10	0,93	0,76

Undercarriage		HD		
Pad width	mm	500	600	750
Weight	kg	52 050	52 600	53 400
Ground pressure	kg/cm <sup>2</sup>	1,07	0,90	0,73

Optional: heavy counterweight

(heavy counterweight increases the operating weight by 2,000 kg and ground pressure by 0.04 kg/cm<sup>2</sup>)

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

	Cutting width mm	Capacity ISO 7451 m <sup>3</sup>	Weight kg	LC-Undercarriage			LC-V-Undercarriage			HD-Undercarriage		
				Stick length (m)			Stick length (m)			Stick length (m)		
				2.35	2.90	3.80	2.35	2.90	3.80	2.35	2.90	3.80
STD <sup>1)</sup>	1,350	1.65	2,100	○	○	□	○	○	□	○	○	□
	1,550	2.00	2,250	○	□	△	○	□	△	○	○	△
	1,750	2.35	2,450	□	△	■	□	△	■	□	□	■
	1,950	2.70	2,650	△	■	▲	△	■	▲	△	△	▲
HD <sup>2)</sup>	1,950	3.00	2,750	■	▲	▲	■	▲	▲	■	■	▲
	1,350	1.65	2,450	○	□	△	○	○	□	○	○	□
	1,550	2.00	2,650	□	△	■	□	□	△	□	□	△
	1,750	2.35	2,850	△	■	▲	△	△	■	△	△	■
	1,950	2.70	3,100	■	▲	▲	■	■	▲	■	■	▲

\* Indicated loads are based on ISO 10567 max. stick length, lifted 360° on firm

<sup>1)</sup> Standard bucket with Liebherr teeth Z 70 (appropriate for materials up to classification 5, according to VOB, Section C, DIN 18300)

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

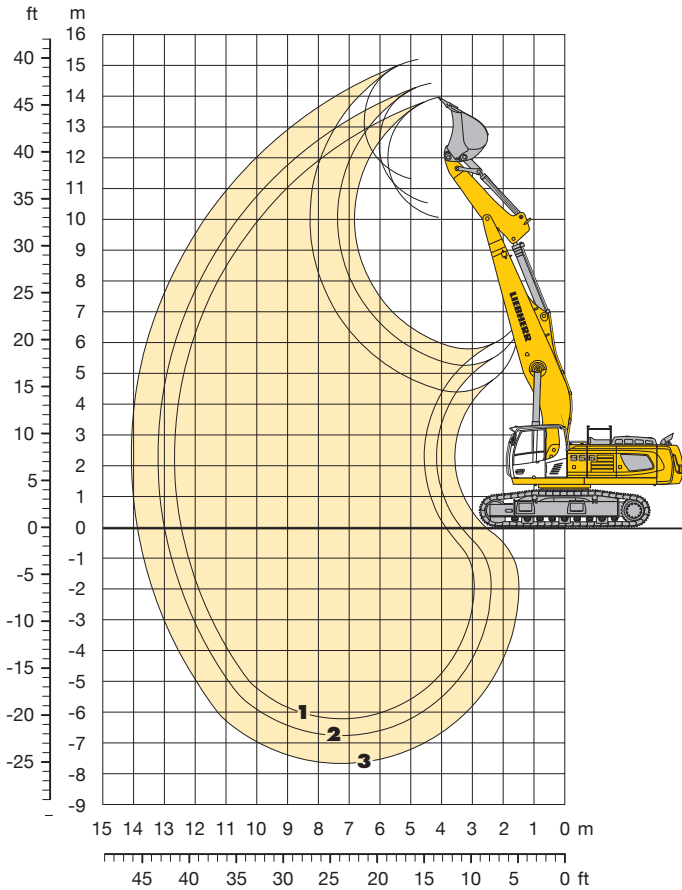
Other backhoes available on request

Max. material weight ○ = ≤ 2.2 t/m<sup>3</sup>, □ = ≤ 1.8 t/m<sup>3</sup>, △ = ≤ 1.5 t/m<sup>3</sup>, ■ = ≤ 1.2 t/m<sup>3</sup>, ▲ = not authorized



# Backhoe Bucket

with Straight Mono Boom 8.00 m



## Digging Envelope

		1	2	3
Stick length	m	2.35	2.90	3.80
Max. digging depth	m	6.20	6.75	7.65
Max. reach at ground level	m	12.45	13.00	13.90
Max. dump height	m	10.05	10.55	12.30
Max. teeth height	m	13.95	14.40	15.20

## Digging Forces

		1	2	3
Digging force ISO	kN	248	217	181
	t	25.8	22.1	18.6
Breakout force ISO	kN	313	313	313
	t	31.9	31.9	31.9

Breakout force max. ISO

345 kN (35.2 t)

## Operating Weight and Ground Pressure

Operating weight includes basic machine with straight mono boom 8.00 m, stick 2.90 m and bucket 2.00 m<sup>3</sup>.

Undercarriage		HD		
Pad width	mm	500	600	750
Weight	kg	52,100	52,650	53,450
Ground pressure	kg/cm <sup>2</sup>	1.07	0.90	0.73

Optional: heavy counterweight  
(heavy counterweight increases the operating weight by 2,000 kg and ground pressure by 0.04 kg/cm<sup>2</sup>)

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

	Cutting width mm	Capacity ISO 7451 m <sup>3</sup>	Weight kg	HD-Undercarriage		
				2.35	2.90	3.80
STD <sup>1)</sup>	1,350	1.65	2,100	○	○	□
	1,550	2.00	2,250	□	□	△
	1,750	2.35	2,450	△	△	■
	1,950	2.70	2,650	■	■	▲
HD <sup>2)</sup>	1,350	1.65	2,450	○	□	△
	1,550	2.00	2,650	□	△	■
	1,750	2.35	2,850	△	■	▲
	1,950	2.70	3,100	■	▲	▲

\* Indicated loads are based on ISO 10567 max. stick length, lifted 360° on firm

<sup>1)</sup> Standard bucket with Liebherr teeth Z 70 (appropriate for materials up to classification 5, according to VOB, Section C, DIN 18300)

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

Other backhoes available on request

Max. material weight ○ = ≤ 2.2 t/m<sup>3</sup>, □ = ≤ 1.8 t/m<sup>3</sup>, △ = ≤ 1.5 t/m<sup>3</sup>, ■ = ≤ 1.2 t/m<sup>3</sup>, ▲ = not authorized



# Lift Capacities

## with Straight Mono Boom 8.00 m

### Stick 2.35 m

↑ m	Under-carriage	4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12.0 m		m	
12.0	HD														
10.5	HD			15.0*	15.0*								11.9*	11.9*	6.6
9.0	HD			14.7*	14.7*	11.4	12.8*						9.6	10.2*	8.2
7.5	HD			15.4*	15.4*	11.1	12.9*	8.2	11.3*				7.7	9.4*	9.3
6.0	HD			14.7	16.7*	10.6	13.4*	8.0	11.4*				6.6	9.0*	10.0
4.5	HD					9.9	13.9*	7.6	11.5*				6.0	8.8*	10.5
3.0	HD					9.3	14.1*	7.3	11.6*	5.9	9.4		5.7	8.9*	10.7
1.5	HD					9.0	13.8*	7.1	11.3*	5.8	9.2*		5.7	8.8*	10.7
0	HD					8.8	12.8*	7.0	10.6*				5.8	8.2*	10.4
-1.5	HD			12.3	12.5*	8.9	11.3*	7.0	9.2*				6.3	7.3*	10.0
-3.0	HD			9.8*	9.8*	8.9*	8.9*	6.7*	6.7*				5.9*	5.9*	9.2
-4.5	HD														
-6.0	HD														

### Stick 2.90 m

↑ m	Under-carriage	4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12.0 m		m			
12.0	HD												11.7*	11.7*	5.2		
10.5	HD					14.0*	14.0*							8.9*	8.9*	7.5	
9.0	HD					14.0*	14.0*	11.6	12.1*					7.8*	7.8*	8.9	
7.5	HD			15.3*	15.3*	14.7*	14.7*	11.3	12.4*	8.3	10.8*			6.9	7.2*	9.9	
6.0	HD					15.1	16.0*	10.7	12.9*	8.0	11.0*	6.1	8.6*	6.0	6.9*	10.6	
4.5	HD					13.7	17.4*	10.0	13.6*	7.7	11.3*	6.0	9.5		5.5	6.8*	11.0
3.0	HD							9.4	14.0*	7.3	11.4*	5.8	9.3		5.3	6.9*	11.2
1.5	HD							9.0	13.9*	7.0	11.3*	5.7	9.2		5.2	7.1*	11.2
0	HD					11.9	15.4*	8.8	13.2*	6.9	10.8*	5.6	8.7*		5.3	7.5*	11.0
-1.5	HD			12.0	13.8*	8.7	11.8*	6.8	9.7*	5.7	7.1*				5.7	7.0*	10.6
-3.0	HD			11.2*	11.2*	8.9	9.8*	7.0	7.8*						5.9*	5.9*	9.9
-4.5	HD					7.7*	7.7*	6.7*	6.7*						5.0*	5.0*	8.6
-6.0	HD																

### Stick 3.80 m

↑ m	Under-carriage	4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12.0 m		m		
12.0	HD			10.9*	10.9*								7.3*	7.3*	6.9	
10.5	HD					10.3*	10.3*						6.0*	6.0*	8.7	
9.0	HD					10.6*	10.6*	8.7	9.8*				5.4*	5.4*	10.0	
7.5	HD					10.6*	10.6*	11.2*	11.2*	8.5	10.2*	6.4	8.2*	5.1*	5.1*	10.9
6.0	HD			17.9*	17.9*	14.6*	14.6*	11.1	12.2*	8.2	10.5*	6.3	9.3*	4.9*	4.9*	11.5
4.5	HD					14.4	16.4*	10.4	13.0*	7.8	10.9*	6.1	9.4*	4.8*	4.8*	11.9
3.0	HD					13.1	17.6*	9.7	13.6*	7.4	11.2*	5.9	9.4	4.7	6.3*	12.1
1.5	HD					12.3	17.8*	9.1	13.9*	7.1	11.3*	5.7	9.2	4.6	6.5*	12.1
0	HD					11.9	17.0*	8.8	13.6*	6.8	11.0*	5.5	9.0	4.7	5.2*	11.9
-1.5	HD			9.9*	9.9*	11.9	15.4*	8.6	12.6*	6.7	10.3*	5.5	8.3*	4.9	5.6*	11.5
-3.0	HD			14.7*	14.7*	12.0	13.2*	8.7	11.0*	6.8	9.0*	5.6	6.6*	5.4	5.7*	10.9
-4.5	HD			10.8*	10.8*	10.2*	10.2*	8.6*	8.6*	6.6*	6.6*			4.5*	4.5*	9.9
-6.0	HD															

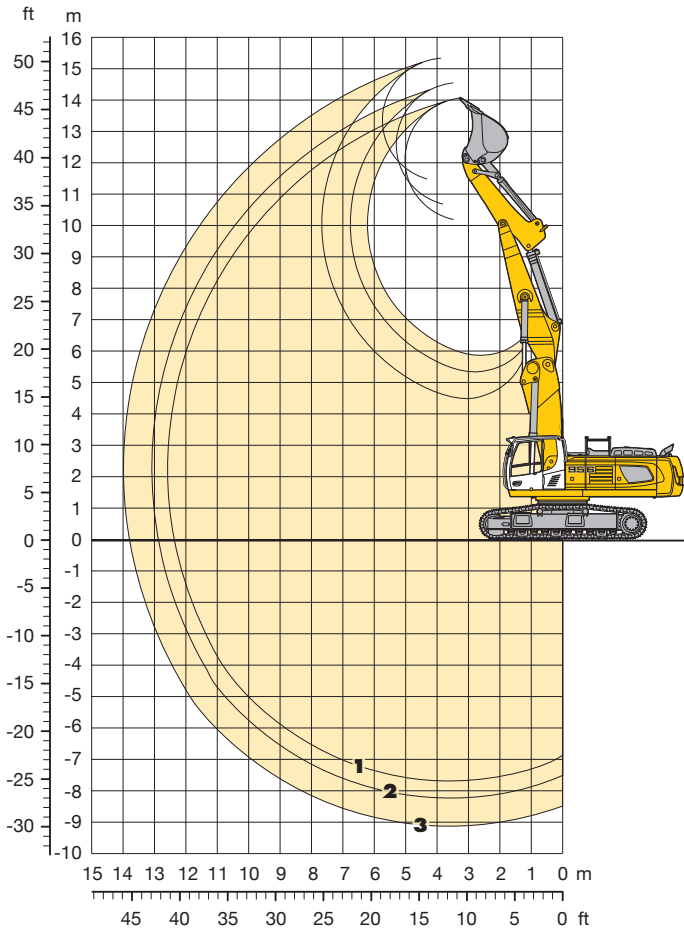
Height  
 Can be slewed through 360°  
 In longitudinal position of undercarriage  
 Max. reach  
 \* Limited by hydr. capacity

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 triple grouser 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 800 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.

# Backhoe Bucket

with Two-piece Boom 4.70 m



## Digging Envelope

		1	2	3
Stick length	m	2.35	2.90	3.80
Max. digging depth	m	7.70	8.25	9.15
Max. reach at ground level	m	12.35	12.90	13.80
Max. dump height	m	10.15	10.65	11.45
Max. teeth height	m	14.05	14.50	15.30

## Digging Forces

		1	2	3
Digging force ISO	kN	248	217	181
	t	25.8	22.1	18.6
Breakout force ISO	kN	313	313	313
	t	31.9	31.9	31.9

Breakout force max. ISO

345 kN (35.2 t)

## Operating Weight and Ground Pressure

Operating weight includes basic machine with two-piece boom 4.70 m, stick 2.90 m and bucket 2.00 m<sup>3</sup>.

Undercarriage		LC			LC-V		
Pad width	mm	500	600	750	500	600	750
Weight	kg	53,150	53,750	55,000	55,250	55,850	57,100
Ground pressure	kg/cm <sup>2</sup>	1.12	0.95	0.77	1.17	0.98	0.80

Undercarriage		HD		
Pad width	mm	500	600	750
Weight	kg	55,250	55,800	56,600
Ground pressure	kg/cm <sup>2</sup>	1.14	0.96	0.76

Optional: heavy counterweight

(heavy counterweight increases the operating weight by 2,000 kg and ground pressure by 0.04 kg/cm<sup>2</sup>)

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

	Cutting width mm	Capacity ISO 7451 m <sup>3</sup>	Weight kg	LC-Undercarriage			LC-V-Undercarriage			HD-Undercarriage		
				Stick length (m)			Stick length (m)			Stick length (m)		
				2.35	2.90	3.80	2.35	2.90	3.80	2.35	2.90	3.80
STD <sup>1)</sup>	1,350	1.65	2,100	□	□	△	○	□	△	○	○	□
	1,550	2.00	2,250	△	△	■	□	△	■	□	□	△
	1,750	2.35	2,450	■	■	▲	△	■	▲	△	△	■
	1,950	2.70	2,650	▲	▲	▲	■	▲	▲	■	■	▲
HD <sup>2)</sup>	1,350	1.65	2,450	□	△	△	□	□	△	□	□	△
	1,550	2.00	2,650	△	■	■	△	△	■	△	△	■
	1,750	2.35	2,850	■	▲	▲	■	■	▲	■	■	▲
	1,950	2.70	3,100	▲	▲	▲	▲	▲	▲	▲	▲	▲

\* Indicated loads are based on ISO 10567 max. stick length, lifted 360° on firm

<sup>1)</sup> Standard bucket with Liebherr teeth Z 70 (appropriate for materials up to classification 5, according to VOB, Section C, DIN 18300)

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

Other backhoes available on request

Max. material weight ○ = ≤ 2.2 t/m<sup>3</sup>, □ = ≤ 1.8 t/m<sup>3</sup>, △ = ≤ 1.5 t/m<sup>3</sup>, ■ = ≤ 1.2 t/m<sup>3</sup>, ▲ = not authorized

# Lift Capacities

## with Two-piece Boom 4.70 m

### Stick 2.35 m

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	
12.0	LC LC-V HD													
10.5	LC LC-V HD											11.6*	11.6*	6.0
9.0	LC LC-V HD					13.9*	13.9*	10.8	12.1*			9.9	10.0*	7.8
7.5	LC LC-V HD			18.4*	18.4*	14.3*	14.3*	11.0	12.0*			7.6	9.3*	8.9
6.0	LC LC-V HD			20.3*	20.3*	14.5	15.3*	10.8	12.4*	7.6	10.6*	6.3	8.9*	9.7
4.5	LC LC-V HD			19.6*	19.6*	14.1*	16.4*	10.6	12.8*	7.6	10.7*	5.6	8.9*	10.1
3.0	LC LC-V HD			20.5	20.8*	13.9*	16.7*	10.6	13.1*	7.3	10.7*	5.2	8.6*	10.4
1.5	LC LC-V HD			20.8*	23.0*	14.1	16.8*	10.3	13.0*	7.0	10.7*	5.1	8.5*	10.4
0	LC LC-V HD	29.3*	29.3*	20.9	24.1*	13.8	17.0*	9.5	13.2*	6.6	10.8*	5.2	8.0*	10.1
-1.5	LC LC-V HD	40.8*	40.8*	20.0	24.7*	13.1	17.8*	8.8	13.8*	6.3	9.9*	5.5	7.3*	9.7
-3.0	LC LC-V HD	40.8*	40.8*	20.5	25.7*	12.2	17.6*	8.8	12.0*	6.0*	6.1*	6.1*	6.1*	8.9
-4.5	LC LC-V HD	35.0*	35.0*	19.3	21.0*	12.0	13.7*	5.6*	5.6*	5.1*	5.1*	5.2*	5.2*	7.6
-6.0	LC LC-V HD	34.8*	34.8*	20.3	20.9*	12.6	12.9*	5.4*	5.4*			5.1*	5.1*	

### Stick 2.90 m

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	
12.0	LC LC-V HD													
10.5	LC LC-V HD											13.4*	13.4*	6.9
9.0	LC LC-V HD											13.2*	13.2*	8.5
7.5	LC LC-V HD											13.7*	13.7*	9.5
6.0	LC LC-V HD											19.9*	19.9*	10.2
4.5	LC LC-V HD											20.2*	20.2*	10.7
3.0	LC LC-V HD											20.2*	20.2*	10.9
1.5	LC LC-V HD											20.8*	20.8*	10.9
0	LC LC-V HD	28.3*	28.3*	21.0	23.7*	14.1	16.8*	9.9	13.0*	6.8	10.8*	5.3	8.6*	10.7
-1.5	LC LC-V HD	38.4*	38.4*	20.9	24.3*	13.7	17.3*	9.4	13.6*	6.7	10.6*	5.3	7.0*	10.2
-3.0	LC LC-V HD	40.8*	41.0*	20.4	25.4*	12.5	18.1*	8.5	13.1*	6.2	8.4*	5.7	6.0*	9.5
-4.5	LC LC-V HD	39.0*	39.0*	19.3	23.5*	11.9	15.4*	8.3	9.3*			4.4*	4.4*	8.4
-6.0	LC LC-V HD	23.0*	23.0*	13.3*	13.3*							7.9*	7.9*	5.6

### Stick 3.80 m

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	
12.0	LC LC-V HD					8.6*	8.6*							
10.5	LC LC-V HD							9.2*	9.2*			5.9*	5.9*	8.2
9.0	LC LC-V HD							10.5*	10.5*	8.2	8.4*	5.3*	5.3*	9.6
7.5	LC LC-V HD							11.1*	11.1*	8.4	9.5*	5.0*	5.0*	10.5
6.0	LC LC-V HD							13.7*	13.7*	10.9	11.3*	5.9	8.6*	11.1
4.5	LC LC-V HD							21.1*	21.1*	14.3	15.1*	5.9	8.7*	11.6
3.0	LC LC-V HD	19.4*	19.4*	20.4	20.7*	13.8	16.2*	10.3*	12.6*	8.2*	10.3*	5.7	8.7	11.8
1.5	LC LC-V HD	26.2*	26.2*	20.3*	21.6*	13.7*	16.5*	10.3*	12.8*	7.8	10.4*	5.4	8.7*	11.8
0	LC LC-V HD	28.6*	28.6*	20.5	23.1*	13.8	16.5*	10.4	12.8*	7.3	10.4*	5.1	8.4	11.5
-1.5	LC LC-V HD	32.8*	32.8*	20.8	23.7*	13.6	16.8*	9.7	13.0*	6.7	10.7*	4.9	8.2	11.1
-3.0	LC LC-V HD	40.2*	40.2*	19.8	24.4*	12.9	17.5*	8.8	13.6*	6.3	10.3*	4.8	5.9*	10.5
-4.5	LC LC-V HD	40.7*	40.7*	20.3	25.4*	12.6	17.5*	8.7	12.2*	6.5	7.1*	4.7*	4.7*	9.5
-6.0	LC LC-V HD	34.0*	34.0*	19.0	20.4*	11.9	12.9*	6.6*	6.6*			4.6*	4.6*	7.9

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 triple grouser pads with adjusting cylinder in optimal position. 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 800 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.

# Lift Capacities

with Mono Boom 6.70 m and Heavy Counterweight

## Stick 2.35 m



Stick m	Under- carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	
12.0	LC													
	LC-V													
10.5	LC													
	LC-V													
9.0	LC												10.3*	10.3*
	LC-V												10.2*	10.2*
7.5	LC												10.3*	10.3*
	LC-V												9.3*	9.3*
6.0	LC												10.2*	10.2*
	LC-V												9.2*	9.2*
4.5	LC												9.3*	9.3*
	LC-V												8.9*	8.9*
3.0	LC												10.3*	10.3*
	LC-V												10.2*	10.2*
1.5	LC												9.3*	9.3*
	LC-V												8.9*	8.9*
0	LC												10.3*	10.3*
	LC-V												10.2*	10.2*
-1.5	LC	13.7*	13.7*										9.2*	9.2*
	LC-V	14.7*	14.7*										8.6*	8.6*
-3.0	LC	26.2*	26.2*										10.8*	10.8*
	LC-V	26.0*	26.0*										11.3*	11.3*
-4.5	LC												11.9*	11.9*
	LC-V												11.8*	11.8*
-6.0	LC												11.9*	11.9*
	LC-V												11.8*	11.8*

## Stick 2.90 m

Stick m	Under- carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m	
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD		
12.0	LC														
	LC-V														
10.5	LC														
	LC-V														
9.0	LC													7.8*	7.8*
	LC-V													7.8*	7.8*
7.5	LC													7.1*	7.1*
	LC-V													7.1*	7.1*
6.0	LC													6.9*	6.9*
	LC-V													6.9*	6.9*
4.5	LC													6.9*	6.9*
	LC-V													6.9*	6.9*
3.0	LC													7.0*	7.0*
	LC-V													7.0*	7.0*
1.5	LC													7.5*	7.5*
	LC-V													7.5*	7.5*
0	LC													7.7*	7.7*
	LC-V													8.0*	8.0*
-1.5	LC	14.6*	14.6*											8.3*	8.3*
	LC-V	15.1*	15.1*											8.6*	8.6*
-3.0	LC	25.0*	25.0*											9.5*	9.5*
	LC-V	25.6*	25.6*											10.0*	10.0*
-4.5	LC													11.7*	11.7*
	LC-V													11.6*	11.6*
-6.0	LC													11.6*	11.6*
	LC-V													11.6*	11.6*

## Stick 3.80 m

Stick m	Under- carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m	
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD		
12.0	LC														
	LC-V														
10.5	LC														
	LC-V														
9.0	LC													5.4*	5.4*
	LC-V													5.4*	5.4*
7.5	LC													5.0*	5.0*
	LC-V													5.0*	5.0*
6.0	LC													4.8*	4.8*
	LC-V													4.8*	4.8*
4.5	LC													4.8*	4.8*
	LC-V													4.8*	4.8*
3.0	LC													4.9*	4.9*
	LC-V													4.9*	4.9*
1.5	LC													5.2*	5.2*
	LC-V													5.2*	5.2*
0	LC													5.7*	5.7*
	LC-V													5.7*	5.7*
-1.5	LC	13.4*	13.4*											6.4*	6.4*
	LC-V	13.8*	13.8*											6.4*	6.4*
-3.0	LC	20.2*	20.2*											7.7*	7.7*
	LC-V	20.6*	20.6*											7.8*	7.8*
-4.5	LC													9.6*	9.6*
	LC-V													10.1*	10.1*
-6.0	LC													10.6*	10.6*
	LC-V													10.6*	10.6*

 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 triple grouser 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 800 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.

# Lift Capacities

with Mono Boom 7.60 m and Heavy Counterweight

## Stick 2.35 m

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	
12.0	LC LC-V HD													
10.5	LC LC-V HD													
9.0	LC LC-V HD							10.4*	10.4*			9.9*	9.9*	7.5
7.5	LC LC-V HD							10.6*	10.6*			9.2*	9.2*	8.7
6.0	LC LC-V HD		18.2*	18.2*	13.3*	13.3*	11.2*	11.2*	8.9	10.2*		8.1	8.9*	9.5
4.5	LC LC-V HD				15.2	15.5*	11.2	12.2*	8.6	10.6*		7.3	8.9*	10.0
3.0	LC LC-V HD				14.0	17.4*	10.6	13.2*	8.3	11.1*		6.9	9.1*	10.2
1.5	LC LC-V HD				14.5	17.5*	10.9	13.3*	8.5	11.1*		7.1	9.1*	10.2
0	LC LC-V HD				14.7	17.4*	11.1	13.2*	8.6	11.1*		7.2	9.1*	9.9
-1.5	LC LC-V HD		12.9*	12.9*	13.5	17.0*	9.9	13.7*	7.8	11.1*		7.4	10.3*	9.5
-3.0	LC LC-V HD		18.4*	18.4*	13.7	15.5*	10.0	12.5*				8.4	10.2*	8.7
-4.5	LC LC-V HD		18.3*	18.3*	14.2	15.4*	10.4	12.4*				8.8	10.2*	7.5
-6.0	LC LC-V HD		18.4*	18.4*	14.4	15.4*	10.5	12.5*				8.9	10.2*	

## Stick 2.90 m

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m	
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD		
12.0	LC LC-V HD														
10.5	LC LC-V HD														
9.0	LC LC-V HD								9.7*	9.7*			7.6*	7.6*	8.2
7.5	LC LC-V HD								9.7*	9.7*			7.6*	7.6*	9.3
6.0	LC LC-V HD								9.8*	9.8*	9.1	9.4*	7.1*	7.1*	10.0
4.5	LC LC-V HD								9.8*	9.8*	9.4*	9.4*	7.1*	7.1*	10.5
3.0	LC LC-V HD								9.8*	9.8*	9.4*	9.4*	7.1*	7.1*	10.7
1.5	LC LC-V HD								14.6*	14.6*	11.3	11.6*	8.6	10.1*	10.7
0	LC LC-V HD								14.6*	14.6*	11.6*	11.6*	9.0	10.1*	10.7
-1.5	LC LC-V HD								14.4	16.6*	10.7	12.7*	8.3	10.7*	10.5
-3.0	LC LC-V HD								14.8	16.7*	11.0	12.8*	8.6	10.7*	10.5
-4.5	LC LC-V HD								15.0	16.6*	11.2	12.8*	8.7	10.7*	10.5
-6.0	LC LC-V HD								14.3	17.8*	10.7	13.6*	8.3	11.2*	10.5

## Stick 3.80 m

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m			
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD				
12.0	LC LC-V HD																
10.5	LC LC-V HD																
9.0	LC LC-V HD									7.5*	7.5*		5.9*	5.9*	8.0		
7.5	LC LC-V HD									7.7*	7.7*		5.3*	5.3*	9.3		
6.0	LC LC-V HD									7.5*	7.5*		5.0*	5.0*	10.3		
4.5	LC LC-V HD									8.3*	8.3*		5.0*	5.0*	11.0		
3.0	LC LC-V HD									8.3*	8.3*		5.0*	5.0*	11.4		
1.5	LC LC-V HD									9.5*	9.5*	8.7*	8.7*	7.0	8.1*	11.6	
0	LC LC-V HD									9.5*	9.5*	8.7*	8.7*	7.3	8.3*	11.4	
-1.5	LC LC-V HD									9.5*	9.5*	8.7*	8.7*	7.3	8.2*	11.4	
-3.0	LC LC-V HD		8.1*	8.1*	14.8*	14.8*	13.2	17.8*	9.7	13.8*	7.6	11.2*	6.2	9.3*	5.9	6.1*	10.9
-4.5	LC LC-V HD		8.4*	8.4*	15.1*	15.1*	13.7	17.7*	10.1	13.8*	7.9	11.2*	6.4	9.3*	6.1*	6.1*	10.3
-6.0	LC LC-V HD		8.2*	8.2*	14.8*	14.8*	13.9	17.7*	10.2	13.8*	8.0	11.2*	6.5	9.3*	6.1*	6.1*	10.3

↑ 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 triple grouser 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 800 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.

# Lift Capacities

with Straight Mono Boom 8.00 m and Heavy Counterweight

## Stick 2.35 m

m	Châssis	4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12.0 m		m	
		↕	↔	↕	↔	↕	↔	↕	↔	↕	↔	↕	↔		
12.0	HD														
10.5	HD			15.0*	15.0*								11.9*	11.9*	6.6
9.0	HD			14.7*	14.7*	12.6	12.8*						10.2*	10.2*	8.2
7.5	HD			15.4*	15.4*	12.4	12.9*	9.2	11.3*				8.6	9.4*	9.3
6.0	HD			16.3	16.7*	11.8	13.4*	9.0	11.4*				7.5	9.0*	10.0
4.5	HD					11.2	13.9*	8.6	11.5*				6.9	8.8*	10.5
3.0	HD					10.6	14.1*	8.3	11.6*	6.7	9.6*		6.5	8.9*	10.7
1.5	HD					10.2	13.8*	8.1	11.3*	6.6	9.2*		6.5	8.8*	10.7
0	HD					10.1	12.8*	8.0	10.6*				6.7	8.2*	10.4
-1.5	HD			12.5*	12.5*	10.1	11.3*	8.0	9.2*				7.1	7.3*	10.0
-3.0	HD			9.8*	9.8*	8.9*	8.9*	6.7*	6.7*				5.9*	5.9*	9.2
-4.5	HD														
-6.0	HD														

## Stick 2.90 m

m	Châssis	4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12.0 m		m		
		↕	↔	↕	↔	↕	↔	↕	↔	↕	↔	↕	↔			
12.0	HD													11.7*	11.7*	5.2
10.5	HD					14.0*	14.0*							8.9*	8.9*	7.5
9.0	HD					14.0*	14.0*	12.1*	12.1*					7.8*	7.8*	8.9
7.5	HD			15.3*	15.3*	14.7*	14.7*	12.4*	12.4*	9.3	10.8*			7.2*	7.2*	9.9
6.0	HD					16.0*	16.0*	12.0	12.9*	9.0	11.0*	7.0	8.6*	6.8	6.9*	10.6
4.5	HD					15.3	17.4*	11.3	13.6*	8.7	11.3*	6.8	9.7*	6.3	6.8*	11.0
3.0	HD							10.7	14.0*	8.3	11.4*	6.7	9.6*	6.0	6.9*	11.2
1.5	HD							10.2	13.9*	8.0	11.3*	6.5	9.3*	6.0	7.1*	11.2
0	HD					13.6	15.4*	10.0	13.2*	7.9	10.8*	6.4	8.7*	6.1	7.5*	11.0
-1.5	HD			13.7	13.8*	10.0	11.8*	7.8	9.7*	6.5	7.1*			6.5	7.0*	10.6
-3.0	HD			11.2*	11.2*	9.8*	9.8*	7.8*	7.8*					5.9*	5.9*	9.9
-4.5	HD					7.7*	7.7*	6.7*	6.7*					5.0*	5.0*	8.6
-6.0	HD															

## Stick 3.80 m

m	Châssis	4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12.0 m		m		
		↕	↔	↕	↔	↕	↔	↕	↔	↕	↔	↕	↔			
12.0	HD			10.9*	10.9*								7.3*	7.3*	6.9	
10.5	HD					10.3*	10.3*						6.0*	6.0*	8.7	
9.0	HD					10.6*	10.6*	9.6	9.8*				5.4*	5.4*	10.0	
7.5	HD					10.6*	10.6*	11.2*	11.2*	9.5	10.2*	7.2	8.2*	5.1*	5.1*	10.9
6.0	HD	17.9*	17.9*	14.6*	14.6*	12.2*	12.2*	9.2	10.5*	7.1	9.3*		4.9*	4.9*	11.5	
4.5	HD			16.1	16.4*	11.6	13.0*	8.8	10.9*	6.9	9.4*		4.8*	4.8*	11.9	
3.0	HD			14.8	17.6*	10.9	13.6*	8.4	11.2*	6.7	9.5*	5.4	6.3*	4.8*	4.8*	12.1
1.5	HD			13.9	17.8*	10.4	13.9*	8.1	11.3*	6.5	9.4*	5.3	6.5*	5.0*	5.0*	12.1
0	HD			13.6	17.0*	10.0	13.6*	7.8	11.0*	6.3	9.1*		5.2*	5.2*	11.9	
-1.5	HD	9.9*	9.9*	13.5	15.4*	9.9	12.6*	7.7	10.3*	6.3	8.3*		5.6*	5.6*	11.5	
-3.0	HD	14.7*	14.7*	13.2*	13.2*	9.9	11.0*	7.8	9.0*	6.4	6.6*		5.7*	5.7*	10.9	
-4.5	HD	10.8*	10.8*	10.2*	10.2*	8.6*	8.6*	6.6*	6.6*				4.5*	4.5*	9.9	
-6.0	HD															

↕ 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 triple grouser 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 800 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.

# Lift Capacities

with Two-piece Boom 4.70 m and Heavy Counterweight

## Stick 2.35 m

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	
12.0	LC													
10.5	LC-V													
	HD												11.6*	11.6*
9.0	LC													
	HD												10.0*	10.0*
7.5	LC													
	HD												8.6	9.3*
6.0	LC													
	HD												7.2	8.9*
4.5	LC													
	HD												6.5	8.9*
3.0	LC													
	HD												6.0	9.0*
1.5	LC													
	HD												5.9	8.6*
0	LC													
	HD												6.3	8.0*
-1.5	LC													
	HD												6.5	7.3*
-3.0	LC													
	HD												6.8	7.2*
-4.5	LC													
	HD												6.1*	6.1*
-6.0	LC													
	HD												5.1*	5.1*

## Stick 2.90 m

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	
12.0	LC													
10.5	LC-V													
	HD													8.7*
9.0	LC													
	HD													13.4*
7.5	LC													
	HD													13.2*
6.0	LC													
	HD													13.2*
4.5	LC													
	HD													13.7*
3.0	LC													
	HD													13.7*
1.5	LC													
	HD													13.7*
0	LC													
	HD													13.7*
-1.5	LC													
	HD													13.7*
-3.0	LC													
	HD													13.7*
-4.5	LC													
	HD													13.7*
-6.0	LC													
	HD													13.7*

## Stick 3.80 m

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m
		LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	LC	HD	
12.0	LC													
10.5	LC-V													
	HD													8.6*
9.0	LC													
	HD													8.7*
7.5	LC													
	HD													9.2*
6.0	LC													
	HD													9.3*
4.5	LC													
	HD													9.2*
3.0	LC													
	HD													10.5*
1.5	LC													
	HD													10.5*
0	LC													
	HD													8.5*
-1.5	LC													
	HD													8.5*
-3.0	LC													
	HD													8.5*
-4.5	LC													
	HD													8.5*
-6.0	LC													
	HD													8.5*

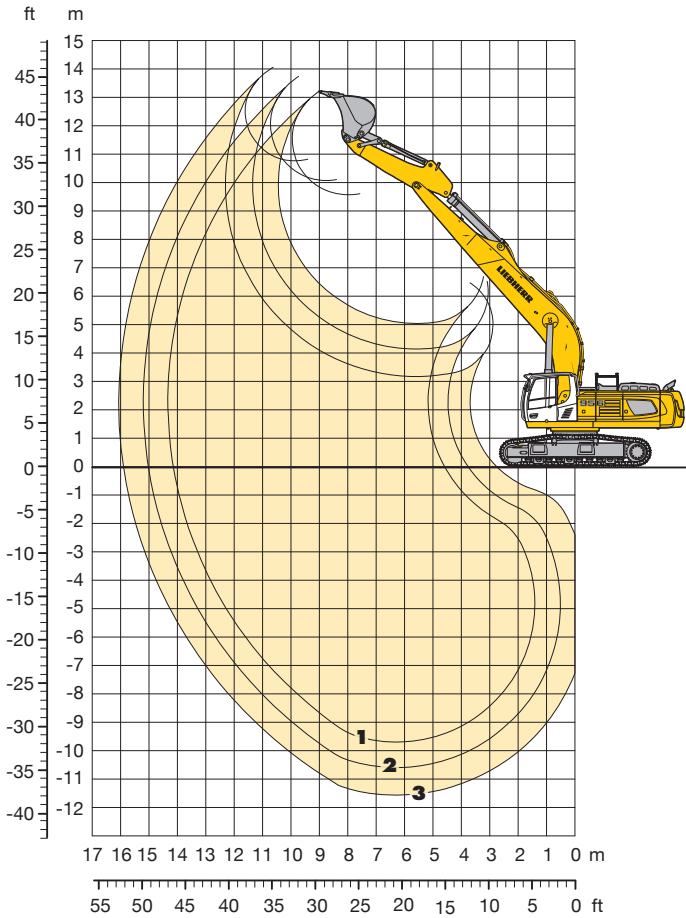
↑ Height    ↻ Can be slewed though 360°    📏 In longitudinal position of undercarriage    🏗️ Max. reach    \* Limited by hydr. capacity

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 triple grouser pads with adjusting cylinder in optimal position. 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 800 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.

# Backhoe Bucket

with Mono Boom 9.20 m and Heavy Counterweight



## Digging Envelope

		1	2	3*
Stick length	m	2.90	3.80	5.00
Max. digging depth	m	9.70	10.60	11.60
Max. reach at ground level	m	14.10	15.00	15.90
Max. dump height	m	9.55	10.05	10.75
Max. teeth height	m	13.15	13.70	14.00

## Digging Forces

		1	2	3*
Digging force ISO	kN	217	181	150*
	t	22.1	18.6	15.3
Breakout force ISO	kN	313	313	236
	t	31.9	31.9	24.1

\* with bucket R 946 Litronic

## Operating Weight and Ground Pressure

Operating weight includes basic machine with heavy counterweight and mono boom 9.20 m, stick 3.80 m and bucket 1.65 m<sup>3</sup>.

Undercarriage		LC			LC-V		
Pad width	mm	500	600	750	500	600	750
Weight	kg	52,150	52,750	54,000	54,250	54,850	56,100
Ground pressure	kg/cm <sup>2</sup>	1.10	0.93	0.76	1.15	0.97	0.79

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

Cutting width mm	Capacity ISO 7451 m <sup>3</sup>	Weight kg	LC-Undercarriage			LC-V-Undercarriage			
			Stick length (m)			Stick length (m)			
			2.90	3.80	5.00	2.90	3.80	5.00	
STD <sup>1)</sup>	1,350	1.65	2,100	□	△	▲	□	△	▲
	1,550	2.00	2,250	△	■	▲	△	■	▲
	1,750	2.35	2,450	■	▲	▲	■	▲	▲
	1,200	1.25	1,280	▲	▲	○	▲	▲	○
STD <sup>2)</sup>	1,350	1.50	1,370	▲	▲	□	▲	▲	□
	1,500	1.75	1,460	▲	▲	△	▲	▲	△
	1,650	2.00	1,580	▲	▲	■	▲	▲	■

\* Indicated loads are based on ISO 10567 max. stick length, lifted 360° on firm

<sup>1)</sup> Standard bucket with Liebherr teeth Z 70 (appropriate for materials up to classification 5, according to VOB, Section C, DIN 18300)

<sup>2)</sup> Standard bucket from R 946 Litronic with Liebherr teeth Z 50

Other backhoes available on request

Max. material weight ○ = ≤ 2.2 t/m<sup>3</sup>, □ = ≤ 1.8 t/m<sup>3</sup>, △ = ≤ 1.5 t/m<sup>3</sup>, ■ = ≤ 1.2 t/m<sup>3</sup>, ▲ = not authorized



# Lift Capacities

with Mono Boom 9.20 m and Heavy Counterweight

## Stick 2.90 m

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12.0 m		13.5 m		m		
12.0	LC																			
12.0	LC-V																			
10.5	LC									7.6*	7.6*								7.6*	7.6*
10.5	LC-V									7.5*	7.5*								7.6*	7.6*
9.0	LC									7.3*	7.3*								7.1*	7.3*
9.0	LC-V									7.3*	7.3*								7.3*	7.3*
7.5	LC								8.6*	8.6*	7.7*	7.7*	6.8	7.2*					6.0	7.0*
7.5	LC-V								8.6*	8.6*	7.7*	7.7*	7.0	7.2*					6.2	7.0*
6.0	LC								9.7*	9.7*	8.2*	8.2*	6.6	7.4*					5.3	6.8*
6.0	LC-V								9.7*	9.7*	8.3*	8.3*	6.8	7.4*					5.5	6.8*
4.5	LC								10.1	10.9*	7.9	8.9*	6.3	7.8*	5.1	7.2*			4.9	6.8*
4.5	LC-V								10.4	11.0*	8.2	9.0*	6.5	7.8*	5.3	7.2*			5.1	6.9*
3.0	LC								9.3	12.1*	7.4	9.6*	6.0	8.2*	4.9	7.4*			4.7	7.0*
3.0	LC-V								9.7	12.1*	7.7	9.6*	6.3	8.2*	5.1	7.4*			4.9	7.0*
1.5	LC								8.9	12.7*	7.1	10.1*	5.8	8.6*	4.8	7.5*			4.6	7.2*
1.5	LC-V								9.3	12.7*	7.4	10.2*	6.0	8.6*	5.0	7.6*			4.8	7.3*
0	LC								8.7	12.9*	6.9	10.4*	5.6	8.8*	4.7	7.5			4.6	7.4
0	LC-V								9.1	12.9*	7.2	10.4*	5.9	8.8*	4.9	7.6*			4.9	7.5*
-1.5	LC					9.7*	9.7*		8.7	12.7*	6.8	10.4*	5.6	8.8*					4.9	7.6*
-1.5	LC-V					10.2*	10.2*		9.1	12.7*	7.1	10.4*	5.8	8.8*					5.1	7.6*
-3.0	LC					12.4	14.7*		8.8	12.2*	6.9	10.1*	5.6	8.5*					5.3	7.7*
-3.0	LC-V			9.9*	9.9*	12.9	14.6*		9.2	12.2*	7.2	10.1*	5.9	8.4*					5.6	7.7*
-4.5	LC			15.6*	15.6*	12.7	13.6*		9.1	11.4*	7.1	9.4*							6.1	7.7*
-4.5	LC-V			15.6*	15.6*	13.2	13.5*		9.5	11.3*	7.4	9.4*							6.4	7.7*
-6.0	LC			13.7*	13.7*	11.8*	11.8*		9.5	9.8*									7.5*	7.5*
-6.0	LC-V			13.6*	13.6*	11.7*	11.7*		9.7*	9.7*									7.5*	7.5*
-7.5	LC					8.7*	8.7*												6.6*	6.6*
-7.5	LC-V					8.5*	8.5*												6.6*	6.6*
-9.0	LC																			
-9.0	LC-V																			

## Stick 3.80 m

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12.0 m		13.5 m		m		
12.0	LC																		6.1*	6.1*
12.0	LC-V																		6.1*	6.1*
10.5	LC																		5.5*	5.5*
10.5	LC-V																		5.4*	5.4*
9.0	LC											6.4*	6.4*						5.1*	5.1*
9.0	LC-V											6.4*	6.4*						5.1*	5.1*
7.5	LC									6.9*	6.9*	6.5*	6.5*	5.4	6.0*				4.9*	4.9*
7.5	LC-V									7.0*	7.0*	6.5*	6.5*	5.6	6.3*				4.9*	4.9*
6.0	LC					10.9*	10.9*	8.8*	8.8*	7.6*	7.6*	6.7	6.8*	5.3	6.4*				4.7	4.8*
6.0	LC-V					11.0*	11.0*	8.8*	8.8*	7.6*	7.6*	6.9*	6.9*	5.5	6.4*				4.8*	4.8*
4.5	LC							10.0*	10.0*	8.1	8.3*	6.4	7.3*	5.1	6.7*				4.4	4.8*
4.5	LC-V							10.1*	10.1*	8.4*	8.4*	6.6	7.3*	5.3	6.7*				4.5	4.8*
3.0	LC							9.7	11.3*	7.6	9.1*	6.1	7.8*	4.9	6.9*				4.2	4.9*
3.0	LC-V							10.0	11.3*	7.9	9.1*	6.3	7.8*	5.1	7.0*				4.3	4.9*
1.5	LC							9.1	12.2*	7.2	9.7*	5.8	8.2*	4.8	7.2*				4.1	5.1*
1.5	LC-V							9.4	12.2*	7.5	9.8*	6.0	8.2*	5.0	7.2*				4.3	5.1*
0	LC					7.4*	7.4*	8.8	12.7*	6.9	10.2*	5.6	8.5*	4.6	7.4*				4.1	5.3*
0	LC-V					7.6*	7.6*	9.1	12.7*	7.2	10.2*	5.8	8.5*	4.8	7.4*				4.3	5.4*
-1.5	LC					11.9	12.1*	8.6	12.8*	6.7	10.4*	5.5	8.7*	4.6	7.4				4.3	5.8*
-1.5	LC-V					12.4*	12.4*	9.0	12.8*	7.0	10.4*	5.7	8.7*	4.8	7.4*				4.5	5.8*
-3.0	LC			10.5*	10.5*	12.1	15.5*	8.7	12.5*	6.7	10.3*	5.5	8.6*	4.6	7.1*				4.6	6.4*
-3.0	LC-V			10.8*	10.8*	12.6	15.5*	9.0	12.5*	7.0	10.2*	5.7	8.6*	4.8	7.1*				4.8	6.4*
-4.5	LC	12.9*	12.9*	16.8*	16.8*	12.3	14.6*	8.8	11.9*	6.8	9.8*	5.6	8.1*						5.2	7.1*
-4.5	LC-V	13.2*	13.2*	17.1*	17.1*	12.8	14.6*	9.2	11.9*	7.1	9.8*	5.8	8.0*						5.4	7.1*
-6.0	LC	19.0*	19.0*	16.1*	16.1*	12.7	13.1*	9.1	10.8*	7.1	8.8*								6.1	7.1*
-6.0	LC-V	19.4*	19.4*	16.0*	16.0*	13.0*	13.0*	9.5	10.7*	7.4	8.7*								6.4	7.1*
-7.5	LC			13.1*	13.1*	10.8*	10.8*	8.7*	8.7*										6.7*	6.7*
-7.5	LC-V			12.9*	12.9*	10.7*	10.7*	8.6*	8.6*										6.7*	6.7*
-9.0	LC																			
-9.0	LC-V																			

Height Can be slewed though 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 triple grouser 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 800 kg/600 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.

\* just for stick 5.00 m

# Lift Capacities

with Mono Boom 9.20 m and Heavy Counterweight

## Stick 5.00 m

↑ m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		12.0 m		13.5 m		m						
12.0	LC																		4.1*	4.1*	10.4			
	LC-V																		4.1*	4.1*				
10.5	LC																		3.8*	3.8*	11.6			
	LC-V																		3.8*	3.8*				
9.0	LC														5.7*	5.7*			3.6*	3.6*	12.6			
	LC-V														5.7*	5.7*			3.6*	3.6*				
7.5	LC													5.7*	5.7*				3.5*	3.5*	13.3			
	LC-V														5.8*	5.8*			3.5*	3.5*				
6.0	LC										6.9*	6.9*			6.0*	6.0*		4.6	5.2*	3.4*	3.4*	13.8		
	LC-V										7.0*	7.0*			6.4*	6.4*		4.7	5.3*	3.4*	3.4*			
4.5	LC					11.6*	11.6*	9.1*	9.1*	7.7*	7.7*				6.9	6.9*		5.5	6.3*	4.5	6.0*	3.5*	3.5*	14.2
	LC-V					11.7*	11.7*	9.2*	9.2*	7.8*	7.8*				6.9*	6.9*		5.7	6.3*	4.6	6.0*	3.5*	3.5*	
3.0	LC					14.0*	14.0*	10.5*	10.5*	8.2	8.6*				6.5	7.4*		5.3	6.7*	4.3	6.2*	3.5*	3.5*	14.3
	LC-V					14.1*	14.1*	10.6*	10.6*	8.4	8.7*				6.7	7.5*		5.5	6.7*	4.5	6.2*	3.5*	3.5*	
1.5	LC					11.9*	11.9*	9.8	11.7*	7.7	9.4*				6.2	8.0*		5.1	7.1*	4.2	6.4*	3.7*	3.7*	14.3
	LC-V					11.8*	11.8*	10.1	11.7*	7.9	9.4*				6.4	8.0*		5.3	7.1*	4.4	6.4*	3.7*	3.7*	
0	LC					11.6*	11.6*	9.2	12.5*	7.3	10.0*				5.9	8.4*		4.9	7.4*	4.1	6.5	3.8	3.9*	14.1
	LC-V					11.7*	11.7*	9.6	12.5*	7.6	10.1*				6.1	8.5*		5.1	7.4*	4.3	6.6*	3.9*	3.9*	
-1.5	LC			7.0*	7.0*	12.2	13.7*	9.0	12.9*	7.0	10.4*				5.7	8.7*		4.7	7.5	4.0	6.4	3.9	4.1*	13.8
	LC-V			7.2*	7.2*	12.6	13.8*	9.3	12.9*	7.3	10.4*				6.0	8.8*		5.0	7.6*	4.2	6.6*	4.1	4.2*	
-3.0	LC	7.5*	7.5*	10.5*	10.5*	12.1	16.6*	8.8	13.0*	6.9	10.6*				5.6	8.8*		4.7	7.5			4.1	4.6*	13.3
	LC-V	7.7*	7.7*	10.7*	10.7*	12.6	16.6*	9.2	13.0*	7.2	10.6*				5.9	8.8*		4.9	7.6*			4.3	4.6*	
-4.5	LC	11.1*	11.1*	14.5*	14.5*	12.3	16.0*	8.9	12.7*	6.9	10.4*				5.6	8.7*		4.7	7.3*			4.5	5.2*	12.6
	LC-V	11.3*	11.3*	14.7*	14.7*	12.8	15.9*	9.3	12.7*	7.2	10.4*				5.9	8.7*		5.0	7.3*			4.7	5.2*	
-6.0	LC	15.1*	15.1*	19.1*	19.1*	12.5	14.9*	9.0	12.0*	7.0	9.8*				5.8	8.1*						5.1	6.1*	11.6
	LC-V	15.3*	15.3*	19.0*	19.0*	13.0	14.8*	9.4	11.9*	7.3	9.8*				6.0	8.1*						5.4	6.2*	
-7.5	LC	20.1*	20.1*	16.7*	16.7*	13.0	13.2*	9.4	10.7*	7.3	8.7*											6.2	6.8*	10.3
	LC-V	20.4*	20.4*	16.6*	16.6*	13.1*	13.1*	9.8	10.6*	7.6	8.6*											6.6	6.8*	
-9.0	LC			13.1*	13.1*	10.5*	10.5*	8.3*	8.3*													6.5*	6.5*	8.6
	LC-V			12.9*	12.9*	10.3*	10.3*	8.1*	8.1*													6.5*	6.5*	

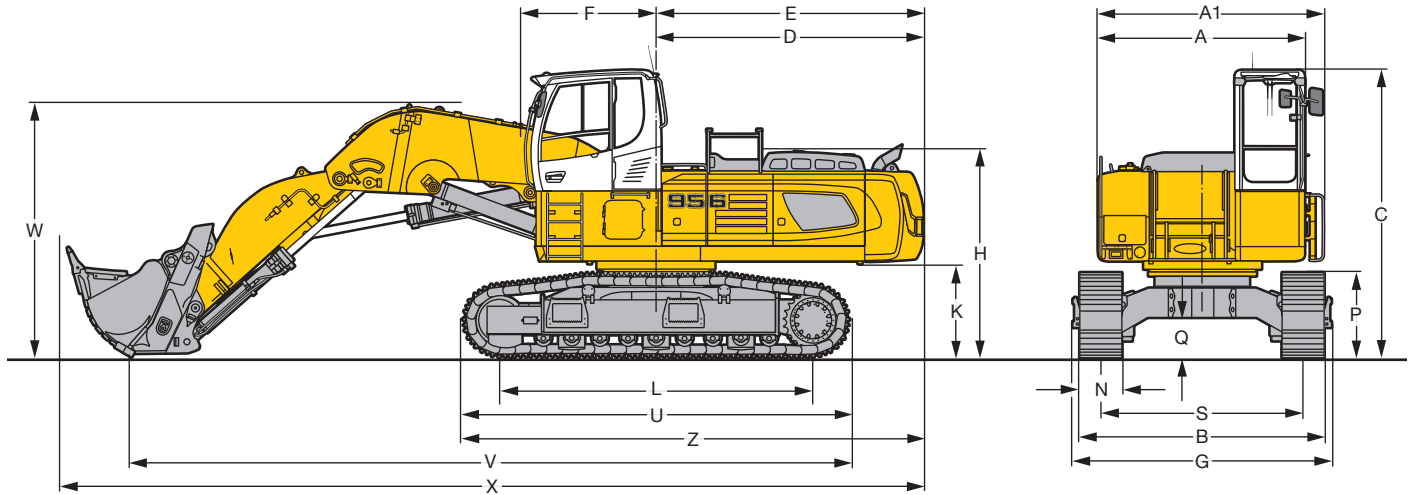
↑ Height Can be slewed though 360° In longitudinal position of undercarriage Max. reach \* Limited by hydr. capacity

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 triple grouser 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 800 kg/600 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.

\* just for stick 5.00 m

# Dimensions Front Shovel

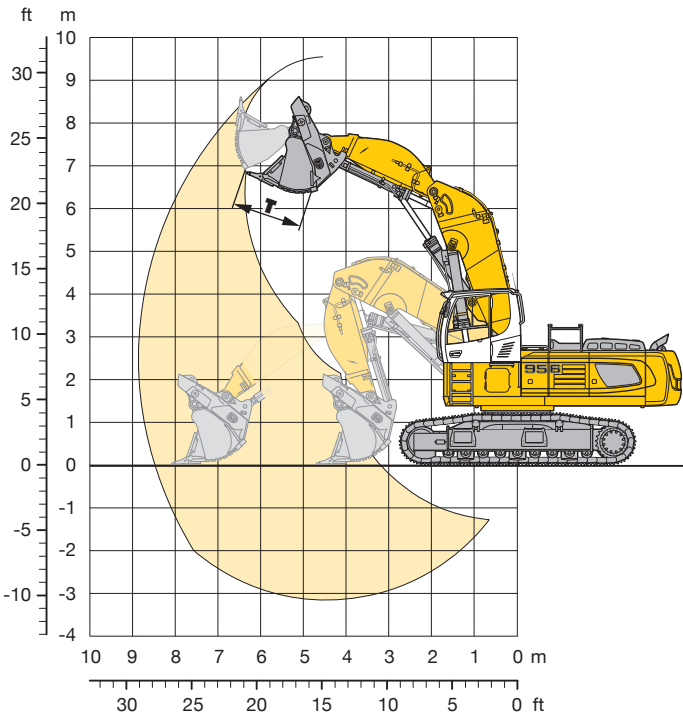


	HD	mm
A		2,970
A1		3,240
C		4,135/4,330*
D		3,830
E		3,850
F		1,920
H		2,945
K		1,355
L		4,500
P		1,225

	HD	mm
Q		575
S		2,900
U		5,550
N	500 600 750	
B	3,462 3,500 3,650	
G	3,715 3,715 3,715	
Z		6,605
V1		10,350
W1		3,650
X1		12,400

\* with FOPS top guard

# Front Shovel



## Digging Envelope

Max. reach at ground level	8.50 m
Max. dump height	6.30 m
Max. crowd length	3.40 m
Bucket opening width T	1,640 mm
Max. crowd force	435 kN/44.3 t
Max. crowd force at ground level	275 kN/28.0 t
Max. breakout force	355 kN/36.2 t

## Operating Weight and Ground Pressure

Operating weight includes basic machine with cab elevation, shovel attachment and front shovel 3.10 m<sup>3</sup>, level II.

Undercarriage	HD	
Pad width	mm	500 600
Weight	kg	55,650 56,200
Ground pressure	kg/cm <sup>2</sup>	1.14 0.96

## Front Shovels

Cutting width	Capacity ISO 7451	Weight	Wear kit level	HD-Undercarriage	Shovel Attachment
mm	m <sup>3</sup>	kg			
2,150	3.10	5,000	I		<input type="checkbox"/>
2,150	3.10	5,600	II		<input type="checkbox"/>
2,150	3.10	5,900	III		<input type="checkbox"/>

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, accord. to DIN 18300)

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

Max. material weight  = ≤ 1.8 t/m<sup>3</sup>

# Available Buckets

## Sticks 2.35 m/2.90 m/3.80 m

Mounting	Execution	Width (mm)	Capacity (m <sup>3</sup> )	Teeth	Number of teeth	Weight (kg)
Direct	STD	1,350	1.65	Z 70	3	2,100
Direct	STD	1,550	2.00	Z 70	4	2,250
Direct	STD	1,750	2.35	Z 70	4	2,450
Direct	STD	1,950	2.70	Z 70	5	2,650
Direct	STD	1,950	3.00	Z 70	5	2,750
Direct	STD	2,100	3.30	Z 70	5	3,000
Direct	HD	1,350	1.65	Z 70	3	2,450
Direct	HD	1,550	2.00	Z 70	4	2,650
Direct	HD	1,750	2.35	Z 70	4	2,850
Direct	HD	1,950	2.70	Z 70	5	3,100
Direct	HD	2,100	3.00	Z 70	5	3,250
SW 77	STD	1,350	1.65	Z 70	3	2,250
SW 77	STD	1,550	2.00	Z 70	4	2,400
SW 77	STD	1,750	2.35	Z 70	4	2,550
SW 77	STD	1,950	2.70	Z 70	5	2,800
SW 77	STD	1,950	3.00	Z 70	5	2,900
SW 77	HD	1,350	1.65	Z 70	3	2,450
SW 77	HD	1,550	2.00	Z 70	4	2,700
SW 77	HD	1,750	2.35	Z 70	4	2,900
SW 77	HD	1,950	2.70	Z 70	5	3,150

## Stick 5.00 m (Buckets R 946 Litronic)

Mounting	Execution	Width (mm)	Capacity (m <sup>3</sup> )	Teeth	Number of teeth	Weight (kg)
Direct	STD	1,200	1.25	Z 50	4	1,280
Direct	STD	1,350	1.50	Z 50	4	1,370
Direct	STD	1,500	1.75	Z 50	4	1,460
Direct	STD	1,650	2.00	Z 50	4	1,580

# Available Front Shovels

Mounting	Execution	Width (mm)	Capacity (m <sup>3</sup> )	Teeth	Number of teeth	Weight (kg)
Direct	1	2,150	3.10	Z 70	5	5,000
Direct	2	2,150	3.10	Z 70	5	5,600
Direct	3	2,150	3.10	Z 70	5	5,900

# Standard Equipment



## Undercarriage

Lashing eyelets  
Lifetime-lubricated track rollers  
Sprocket with dirt ejector (with LC- and LC-V-Undercarriage)  
Track guide at each track frame (three pieces)  
Tracks sealed and greased



## Uppercarriage

Engine hood with lift help  
Extended tool kit  
Fuel tank cap, lockable  
Handrails, non slip surfaces  
Liebherr full-automatic central lubrication system  
(except connecting link for bucket kinematics)  
Maintenance-free swing brake lock  
Sound insulation  
Toolbox lockable



## Hydraulics

Filter with integrated fine filter area  
Hydraulic tank shut-off valve and pumps  
Liebherr hydraulic oil  
Pressure storage for controlled lowering of equipment with engine turned off  
Pressure test ports for hydraulic  
Stepless work mode selector



## Engine

After-cooled  
Common-Rail system injection  
Conform with stage IIIB/Tier 4i emission standard  
Fuel filter and water separator  
Liebherr particle filter  
Sensor-controlled automatic engine idling  
Turbo charger



## Operator's Cab

7" colour multifunction display with touchscreen  
All tinted windows  
Automatic air conditioning  
Cigarette lighter and ashtray  
Coat hook  
Completely retractable windscreen  
Cup holder  
Dome light  
Door with sliding windows  
Emergency exit rear window  
Front windscreen (bottom) retractable  
Fuel consumption indicator  
Headlights (two pieces, Halogen)  
Hydro mounts  
LiDAT Plus (enhanced Liebherr data transfer system)\*  
Mechanical hour meters, readable from outside the cab  
Operator seat Liebherr-Comfort  
Preparation for radio installation  
Rain hood over front window opening  
Rear space monitoring with camera  
Roll-down sun blind  
Rubber floor mat  
ROPS safety cab structure (capable of sweeping over)  
Seat belt  
Storage bin  
Storage space  
Sunroof, right window and windshield with safety glass  
Wiper/washer



## Attachment

Headlights on boom (both-sided, halogen)  
Safety check valves hoist cylinder

\* optionally extendable after one year

# Individual Options



## Undercarriage

Protection plate for wrecking ball operation  
Reinforced cover plate and base plate for centre section  
Track guide at each track frame (four pieces)



## Uppercarriage

Customized colors  
Heavy counterweight  
Refuelling pump (electrical)  
Reversible fan drive  
Rock protection (swing gear and lubrication pipes)



## Hydraulics

Bypass filter  
Liebherr hydraulic oil, biodegradable  
Liebherr hydraulic oil, specially for warm and cold regions



## Engine

Air pre-filter with dust trap  
Automatic engine shut-down (adjustable time-period)  
Fuel pre-heating system



## Operator's Cab

Additional headlights front or/and rear (Halogen or Xenon)  
Amber beacon  
Auxiliary heater with weekly timer  
Electric cool box (12 V)  
Electronic drive away lock  
Engine shut-down (emergency stop) in cab  
FGPS front guard  
Fire extinguisher  
Footrest  
FOPS top guard  
Headlights (two pieces, Xenon)  
Impact resistant front window (one piece, fixed installation – can not be opened)  
Impact resistant front window (two pieces, fixed installation – can not be opened)  
Impact resistant glass panel in roof  
Operator seat Liebherr-Premium  
Proportional controls Liebherr  
Radio Comfort  
Roof wiper  
Sun visor  
Travel alarm system



## Attachment

Bottom boom protection for mono boom or stick  
Headlights on boom (Xenon)  
High pressure circuit  
Hydraulic or mechanical quick coupler  
Liebherr automatic lubrication system for link geometry  
Liebherr line of buckets  
Liebherr tooth system  
LIKUFIX  
Middle pressure circuit  
Overload warning device  
Piston rod guard for bucket cylinders  
Safety check valves stick cylinder  
Security for hoist cylinder in grab or hammer operation  
Straight mono boom  
Tool Control  
Two-piece boom

**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.**

# 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. 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 130 companies with over 38,000 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](http://www.liebherr.com)

## Liebherr-France SAS

2 avenue Joseph Rey, B.P. 90287, FR-68005 Colmar Cedex  
☎ +33 389 21 30 30, Fax +33 389 21 37 93  
[www.liebherr.com](http://www.liebherr.com), E-Mail: [info.lfr@liebherr.com](mailto:info.lfr@liebherr.com)  
[www.facebook.com/LiebherrConstruction](https://www.facebook.com/LiebherrConstruction)