

Mining Excavator

R 984 C

Operating Weight with Backhoe Attachment:

120.100 kg / 264,800 lb

Operating Weight with Shovel Attachment:

125.100 kg / 275,800 lb

Engine Output:

504 kW / 675 HP

Bucket Capacity @ 1,8 t/m³ / 3,000 lb/yd³:

7,00 m³ / 9.2 yd³

Shovel Capacity @ 1,8 t/m³ / 3,000 lb/yd³:

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LIEBHERR

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Productivity

Liebherr Mining Equipment enables superior productivity by loading and hauling maximum tonnage in the shortest amount of time.

Efficiency

Liebherr combines the proven capabilities of previous models with new features that improve operational efficiency.

Reliability

To maximize equipment reliability, Liebherr combines manufacturing expertise with monitoring and diagnostic capabilities.

Customer Support

Liebherr builds more than just mining equipment; Liebherr also builds customer partnerships.

Safety

Mining demands an ever-vigilant focus on safety, and Liebherr strictly adheres to industry standards. Liebherr equipment is designed to diminish risk even under the most extreme mining conditions.

Environment

Liebherr optimizes mining equipment for fuel economy, emission compliance, and extended service intervals.





High Digging and Breakout Forces

- Advanced attachment technology and design for optimized digging and breakout force distribution
- Strong structure design
- Liebherr heavy duty bucket solution
- Liebherr Ground Engaging Tools





Productivity



The R 984 C mining excavator is the most flexible digging and loading tool. It can be customized for all mining applications for maximum performance. Even under the hardest conditions, it achieves high productivity. Always ready for job, the R 984 C is your key tool to reach the expectations.

Engineered for Intense Mining

Optimized Cycle Times Rather than using open hydraulic circuit, the R 984 C employs a closed-loop swing circuit to enable maximum swing torque while retaining the full oil flow for the working circuit. The independent swing circuit in combination with the powerful drive system leads to fast arm motion, which contributes to faster cycle times.

Powerful Drive System The R 984 C is equipped with a Cummins diesel engine which has been specifically adapted to withstand the most extreme environments and to reach the highest uptime performance for maximum productivity.

Easy Machine Control The R 984 C's hydraulic control system is optimized in order to improve combined machine motions. The configuration and placement of operator control elements and monitoring displays are perfectly coordinated to support the productive performance.

High Digging and Lifting Capabilities

High Digging Forces Designed for the best mechanical force distribution, the production-tailored attachment delivers high digging and lifting forces. Integrating Liebherr-made cylinders and a wide range of buckets with mining-optimized GET, the R 984 C's attachment ensures the highest forces, easy bucket penetration and high fill factor to perform even in the most demanding conditions.

Power-Oriented Energy Management The R 984 C's attachment is equipped with the pressureless boom down function to enable fast cylinder retraction without the need for pump energy. Intelligent energy management diverts the pump flow during boom lowering, allowing other cylinder motions to operate unimpeded.

Compact Machine Design

Liebherr's excavator design is well-balanced and provides best machine stability enabling:

- High weight distribution towards the undercarriage
- Efficient utilization of the strong digging forces
- Favorable power to weight ratio of the uppercarriage and attachment
- Fast cycle times



Liebherr Ground Engaging Tools (GET)

Liebherr has developed a complete mining GET solution to complement Liebherr's mining backhoe and face shovel bucket design. A synergy that enables easy material penetration while extending the life of the bucket.

- Three tooth profiles and five tooth sizes
- Innovative bucket lip and side wall protection
- One single locking system that limits tooling to one unique extraction tool
- Unique hammerless locking system
- Effortless and quick tooth removal



Quick Change Adapter

The optional Liebherr quick change adapter assists in changing tools like bucket or ripper without getting out of the cab. This considerably saves time compared to changing hydraulic flexible devices:

- No nuts or pins needed
- No assembly and disassembly
- Remote control from inside cab
- No manual intervention needed





Efficiency



The R 984 C's operator cab creates a comfortable and ergonomic working environment. The ergonomically optimized machine controls assure the best operator performance throughout each shift. Furthermore, the ergonomic component access and long service intervals assist the service team to ensure maximum uptime.

Optimized for Maximum Profitability

High Hydraulic Efficiency

The high pressure level of Liebherr hydraulic system together with the optimized pipe and hose layout maximize the usable power transmission.

Cooling System Efficiency

Liebherr's large dimensioned cooling system reduces fan power consumption and ensures an ideal machine temperature. The hydrostatic fans operate only as needed.

Optimized Service Intervals

The R 984 C offers all features for extended machine service intervals. The technical layout of filtration systems with integrated bypass hydraulic oil filters and the large dimensioned grease systems are only some examples.

Comfortable Working Environment

Comfortable Cab

The large R 984 C's spacious cab offers ideal working conditions and first-class comfort. The fully adjustable seat and control fits to individual needs. The position of the operator station together with the large windows allow an outstanding visibility over the whole working environment. The cab's effective insulation creates a quiet working environment for maximum productivity.

Ergonomic Control Elements

The configuration and placement of operator control elements and monitoring displays are perfectly coordinated to support the productive performance. The electronic control is easy and intuitive to use. The dashboard and machine control panel are easy to access and arranged for fast overview on major machine functions.

Ergonomic Service Access

Safe and efficient service through:

- Large catwalk and platform
- All service points on engine, fan drive and hydraulic valve blocks are accessed from one large central platform
- Hinged louvers for easy cleaning and maintenance tasks
- Optional fast filling connections



Operator Comfort

- Excellent visibility over the whole working area
- Pressurized cab to prevent dust penetration (optional)
- Tinted safety glass all-around
- Armored front window
- A/C and filtration
- Suspended cab ensuring low vibration and soundproof
- Adjustable seat



Liebherr Vertical Integration

Liebherr-made integrated parts are:

- Hydraulic pumps and motors
- Splitter box
- Electronic and control technology
- Hydraulic cylinders
- Large diameter bearing (swing ring)
- Swing and travel drives
- Ground Engaging Tools





Reliability



More than 50 years of hydraulic excavator design and manufacturing experience is the basis for the R 984 C's outstanding reliability. The machine combines innovative technologies, design optimization and Liebherr components. Customers experience durable performance from the R 984 C throughout the machine's life.

Quality: the Liebherr Trademark

Liebherr Vertical Integration

As an OEM, Liebherr has built a solid reputation for its development and production of high quality strategic mining components. The R 984 C integrates robust and reliable mining optimized components that are developed, manufactured and controlled by Liebherr ensuring reliability and high performance for the entire machine.

Machine Reliability Survey

Based on years of experience and the systematic measurement of key performance indicators of the machine behavior in the field, the Liebherr Mining Reliability Engineering Group is constantly seeking new ways to enhance reliability.

Quality Management Continuous Improvement

Liebherr quality begins during machine design and simulations. Liebherr meets the highest standards for special selections of steels and casting materials. Based on the expertise of certified internal auditors and a highly qualified workforce, all manufacturing process steps are devised to provide the most comprehensive control, monitoring and traceability. Liebherr-Mining Equipment Colmar SAS is ISO 9001 certified.

Long-lasting Job Performances

Maximized Components Lifetime

The R 984 C is equipped with a single line centralized automatic lubrication system for the entire attachment and swing ring. All greasing points are suitably protected against external damages. This extends component life and ensures constant performance over the excavators' operational life.

Heavy Duty Excavator

The R 984 C is mounted on a heavy duty fatigue-resistant undercarriage and is equipped with first-class components and machine steel structures ensuring a high machine stability, even in harsh mining conditions.

Automatic Lubrication System

All attachment and swing ring lubrication points are connected to the automatic lubrication system

- Robust single line central lubrication system
- Adjustable injectors
- Greasing points are protected against external damages
- Grease control in operator's reach in the cab



Cold / Hot Temperature Kits

Designed for maximum reliability in regions with temperatures of down to -40°C / -40°F or up to +55°C / 131°F.

- Integrated into machine structure
- Maximum efficiency
- Increases machine and component lifetime
- Optimum operator comfort even in harsh temperature conditions



Liebherr Service Tools

Liebherr delivers a wide range of service tools for excavator-specific maintenance ensuring optimal working conditions no matter the size of the component.

- An OEM-certified solution
- Maximized machine uptime
- Cost-efficient maintenance
- Easy machine serviceability
- Uncompromising operational safety





Customer Support



As a global mining solutions provider, Liebherr is more than a mining equipment manufacturer. Ensuring a permanent dialogue with each machine owner, Liebherr provides tailored assistance to customer specific projects and site requirements.

Proactive Service Supplying

Liebherr Mining Network

With a truly global network composed of Liebherr affiliates and exclusive representatives, Liebherr's worldwide presence enables the highest level of service support irrespective of equipment location. Using advanced forecasting techniques and in-depth knowledge of regional populations, Liebherr service centers ensure that customers always have timely access to spare parts.

Customized Service Support

Liebherr tailored support solutions integrate components exchange and management agreements, service and maintenance on site or maintenance management agreements. Liebherr's highly-trained service personnel ensures preventive and scheduled maintenance tasks and provides emergency service.

Service Engineering Support

Machines and components reliability data are collected and monitored through the Liebherr maintenance management system. Liebherr's sales and service organization and product engineering groups provide fast and proactive support over the lifetime of the machine and promote mutual benefit for all involved.

Customer Value Management

Liebherr Mining Exchange Components

The Liebherr Mining Exchange Components program enables customers to minimize the total machine's Owning and Operating Cost while maintaining peak productivity and reliability. Through 15 Liebherr-certified component rebuild facilities worldwide, customers can take advantage of this program regardless of the equipment location or fleet size.

Complete Training Programs

The Liebherr Mining Training System provides operator and maintenance staff blended training sessions that encourage productive, cost-effective and safe mining operation. The Liebherr Mining Training System employs online learning programs, factory and on-site sessions and simulator training.

Liebherr Mining Exchange Components

Exchange and repair programs for components are conducted by Liebherr-certified rebuild facilities using the latest OEM rebuild specifications and the complete range of genuine Liebherr parts to ensure:

- Value: significantly reduce total cost of ownership
- Quality: guaranteed as-new performance and reliability
- Availability: global network of components rebuild facilities



From-Cradle-To-Grave Support

- Customer specific requirement study
- Collaborative solution development
- On-site machine assembly
- On-site machine settings
- Training program on / off site
- Machine performance monitoring
- Spare parts supply
- Parts remanufacturing facilities



Machine Access

- Optional uppercarriage mounted sliding access ladder
- Access ladders and catwalks feature handrails and slip-resistant surfaces
- Optional wide catwalk with railings





Safety



The Liebherr R 984 C provides uncompromising safety for operators and maintenance crew. The R 984 C allows effortless access facilities to the major service points for quick and safe maintenance.

Service-Friendly Machine Design

Safe Service Access

The R 984 C provides ergonomic component access for fast and efficient service. All service points are within reach through large catwalks and walkways. The optional ground fast filling connections give easy and safe refilling of service fluids, saving time, preventing spillage and reducing contamination by dust.

Secure Maintenance

The R 984 C eliminates hazards to ensure a safe environment for the service staff during maintenance. Emergency stops are strategically located in the cab and optionally in the engine compartment for service crew accessibility. The battery switches are manually operated to safely isolate the battery power. The attachment can safely be lowered to the ground even if the engine is off.

Safety First Working Conditions

Safety-First Cab Design

In addition to its ergonomic design, the R 984 C's cab provides maximum protection for the operator. The structure is composed of strong, low stress tubing and safety glass. The laminated windows create a safe working environment. The Falling Object Protection System (FOPS) and the front guard are available as an option for even more safety.

Protected Operator and Service Crew

Safety standards are achieved by a separated engine and pump compartment, heat insulation on turbochargers and on the exhaust system as well as by the use of heavy duty high resistant hydraulic hoses.

Optional Safety Features

- Kit for Mining and Quarry Application including: additional emergency stop button, fire extinguisher and protective grid on the top of the cab
- Cab protection FOPS
- Protective grid for front cab window



Rear and Side Vision System

The machine ergonomically integrates a rear and side vision system composed of:

- One camera on counterweight
- One camera on right-hand side of uppercarriage
- Two LCD color screens to display cameras view



Eco-Mode

The Eco-Mode can be manually selected by the operator when maximal power is not required according to job need for:

- An improved fuel efficiency
- Less load on the engine
- Less noise pollution
- Less dioxide carbon emissions





Environment



Liebherr considers the preservation of the environment as a major challenge for the present and future. Sustainability underpins Liebherr’s machines; from raw materials selection to manufacturing process employed. Liebherr provides solutions that allow customers to balance high performance with environmental consciousness.

Minimized Impact on Life

Low Fuel Consumption Constant power regulation of the hydraulic system and engine output optimizes machine fuel efficiency, depending on the application. The automatic idling system reduces the engine speed when the machine is at rest. When less power is required, “Eco-Mode” can be selected via the machine dashboard to reduce engine load, improve fuel efficiency and reduce carbon emissions.

Controlled Emission Rejections Powered by the Cummins QSK 19 diesel engine EPA Tier 2 or 3, the R 984 C offers fuel-efficient operations meeting the latest emission standards.

Sustainable Design and Manufacturing Process

Extended Components and Fluids Lifetime Liebherr is constantly working on ways to extend component life. Through the Exchange Components program, superior lubrication systems, and the reinforcement of parts under stress, Liebherr can reduce frequency of part replacement. The result minimizes environmental impact and lowers the overall cost of ownership.

Product Life-Cycle Management Subject to the stringent European Program for the regulation of the use of chemical substances in the manufacturing process REACH*, Liebherr undertakes a global evaluation to minimize the impacts of hazardous materials.

*REACH is the European Community Regulation on chemicals and their safe use (EC1907/2006). It deals with the Registration, Evaluation, Authorisation and Restriction of Chemical Substances.

Automatic Idle Control

Electronic idle control of the engine results in:

- Less fuel consumption
- Less load on the engine
- Reduced emissions
- More comfort to the operator (reduced noise pollution)



Sustainable Manufacturing Process

With an ever-present green focus, Liebherr contributes to the sustainable development:

- Systematic risk analysis for new materials qualification
- Promoted recovery waste management
- Controlled non-recyclable waste elimination
- Eco-friendly material selection (95% of material used on machine is recyclable)

Technical Data



Engine

1 Cummins diesel engine	
Rating per ISO 9249	523 kW/710 HP at 2,100 rpm reduced to 504 kW/675 HP at 1,800 rpm
Model	Cummins QSK-19 C 750 (USA/EPA Tier 2 or Tier 3)
Type	6 cylinder in-line engine
Bore/Stroke	159/159 mm/6.26/6.26 in
Displacement	18,9 l/1,153 in ³
Engine operation	4-stroke diesel direct injection turbo-charged reduced emissions
Cooling	water-cooled
Air cleaner	dry-type air cleaner with pre-cleaner, primary and safety elements, automatic dust discharge
Fuel tank	1.585 l/419 gal
Standard	sensor controlled engine idling
Electrical system	
Voltage	24 V
Batteries	2 x 170 Ah/12 V
Starter	24 V/9.0 kW
Alternator	three phase current 24 V/100 A



Hydraulic System

Hydraulic pump for attachment and travel drive	3 Liebherr variable flow, swash plate pumps
Max. flow	3 x 472 l/min./3 x 125 gpm
Max. pressure	320 bar/4,640 psi
Pump regulation	electro-hydraulic with electronic engine speed sensing regulation, pressure com- pensation, automatic oil flow optimizer
Hydraulic pump for swing drive	reversible, variable flow, swash plate pump, closed-loop circuit
Max. flow	403 l/min./106 gpm
Max. pressure	340 bar/4,931 psi
Hydraulic tank	880 l/232 gal
Hydraulic system	1.660 l/438 gal
Hydraulic oil filter	2 full flow filters in return line with inte- grated fine filter area (15/5 µm), 1 high pressure filter for each main pump
Cooler	compact cooler, consisting of a water cooler, sandwiched with hydraulic oil cooler, aftercooler cores and air condi- tioning, hydrostatically driven fan
MODE selection	adjustment of machine performance and the hydraulics via a mode selector to match application
LIFT	for lifting
FINE	for precision work and lifting with sensitive movements
ECO	for economical operation
POWER	for maximum digging power and heavy duty jobs
RPM adjustment	stepless adjustment of engine output via rpm at each selected mode



Hydraulic Controls

Power distribution	via monoblock control valves with integrated safety valves
Flow summation	to boom stick and bucket cylinders
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
Additional functions	via foot pedals or joystick toggle switch



Electric System

Electric isolation	easy accessible battery isolations
Working lights	high brightness halogen lights: - 2 on working attachment - 2 on RHS of uppercarriage - 1 on LHS of uppercarriage Xenon lights in option
Emergency stop switches	in the cab/in option in engine compartment
Electrical wiring	heavy duty execution in IP 65 standard for operating conditions of - 50 °C to 100 °C/ - 58 °F to 212 °F



Swing Drive

Drive by	Liebherr swash plate motor
Transmission	Liebherr compact planetary reduction gear
Swing ring	Liebherr, sealed single race ball bearing swing ring, internal teeth
Swing speed	0 - 5.2 rpm
Holding brake	wet multi-disc (spring applied, pressure released)
Option	pedal controlled positioning brake



Uppercarriage

Design	torque resistant modular design upper frame
Attachment mounting	parallel length girders
Catwalks	on both sides (large catwalks with handrails and access ladder available in option)

Technical Data



Operator's Cab

Cab	profiles and deep drawn technology, resiliently mounted, sound insulated, tinted windows. Front window armored glass, door with sliding window
Operator's seat	shock absorbing suspension, adjustable to operator's weight, 6-way adjustable seat with mountable head rest
Joysticks	joystick levers integrated into armrest of seat
Monitoring	menu driven query of current operating conditions via the LCD display. Automatic monitoring, display, warning (acoustical and optical signal) and saving machine malfunction data, for example, engine overheating, low engine oil pressure or low hydraulic oil level
Rear vision system	camera installation on counterweight and right-hand side of the uppercarriage displayed over two LCD-display
Heating system	standard automatic air conditioning, combined cooler/heater, additional dust filter in fresh air/recirculated
Noise level (ISO 6396)	L_{pA} (inside cab) = 74 dB(A) with oil/water fans at 70 % and AC fan at 65 %



Undercarriage

Version HD	heavy duty
Drive	Liebherr swash plate motors
Transmission	Liebherr planetary reduction gears
Travel speed	0 – 2,9 km/h/0 – 1.8 mph
Track components	track pitch 280 mm/11.02 in, maintenance-free
Track rollers/ Carrier rollers	9/2 per side frame
Track pads	double grouser
Track tensioner	spring with grease tensioner
Parking brake	wet multi-discs (spring applied, pressure released)
Brake valves	integrated in main valve block



Central Lubrication System

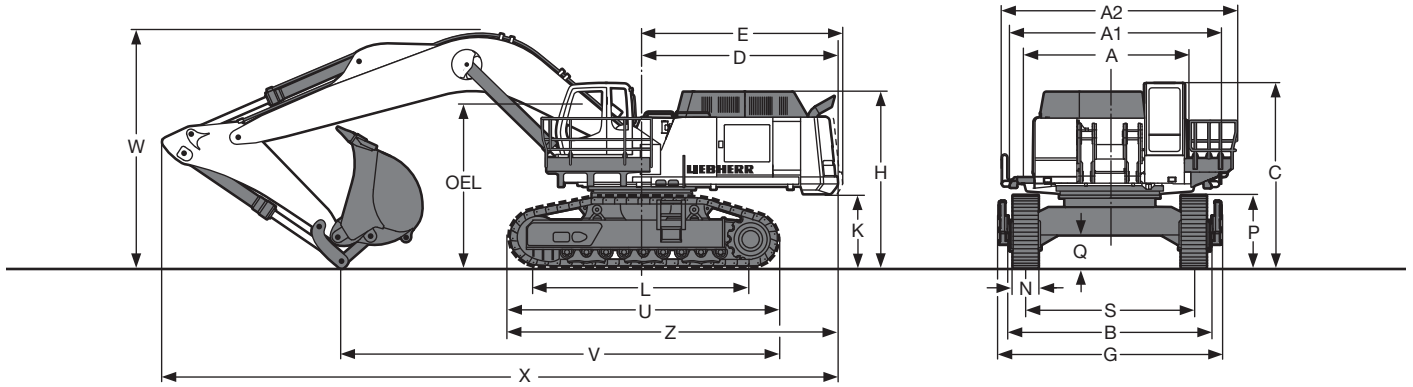
Type	Lincoln Centromatic lubrication system, for the entire attachment/swing ring bearing and teeth
Grease pumps	1 Lincoln Lubrigun (pneumatic) pump for attachment/swing ring bearing lubrication (Lincoln Flowmaster hydraulic pump in option) 1 Lincoln P203 (electric) pump for swing teeth lubrication
Capacity	30 l/7.9 gal bulk container for attachment/swing ring bearing, separated 8 l/2.1 gal container for swing ring teeth
Refill	via quick connections and grease filters for both containers



Attachment

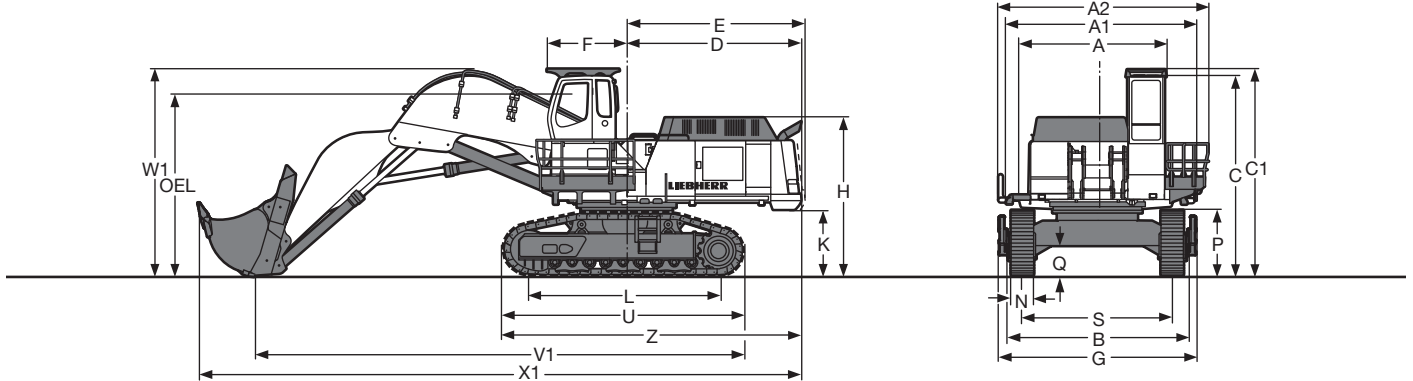
Type	box-type, combination of resistant steel plates and cast steel components
Hydraulic cylinders	Liebherr design
Pivots	sealed, low maintenance
Pivots bucket-to-stick bucket-to-link	O-ring sealed and completely enclosed
Hydraulic connections	pipes and hoses equipped with SAE split-flange connections

Dimensions



		mm/ft in
A		4.050/13' 3"
A1		5.275/17' 3"
A2		5.760/18'10"
B		4.942/16' 2"
C		4.465/14' 7"
D		4.690/15' 4"
E		4.805/15' 9"
G		5.290/17' 4"
H		4.295/14' 1"
K		1.840/ 6'
L		5.055/16' 6"
N	500/1'7" 600/1'11"	750/ 2' 5"
P		1.750/ 5' 8"
Q		863/ 2' 9"
S		4.000/13' 1"
U		6.471/21' 2"
Z		7.985/26' 2"
OEL	Operator's Eye Level	3.960/12'11"

	Stick Length m/ft in	Gooseneck Boom	Gooseneck Boom	Gooseneck Boom
		7,80 m/ 25'7"	9,20 m/ 30'2"	11,00 m/ 36'
		mm/ft in	mm/ft in	mm/ft in
V	3,40/11'1"	8.800/28'10"	10.550/34'7"	-/-
	4,50/14'9"	8.500/27'10"	10.250/33'7"	12.150/39'10"
	5,60/18'4"	-/-	10.150/33'3"	11.900/39'
	6,80/22'3"	-/-	8.350/27'4"	10.000/32' 9"
W	3,40/11'1"	5.650/18' 6"	5.850/19'2"	-/-
	4,50/14'9"	6.300/20' 7"	6.250/20'6"	6.650/21' 9"
	5,60/18'4"	-/-	6.950/22'9"	7.000/22'11"
	6,80/22'3"	-/-	7.950/26'	7.750/25' 5"
X	3,40/11'1"	14.850/48' 8"	16.250/53'3"	-/-
	4,50/14'9"	14.300/46'10"	15.650/51'3"	17.400/57'
	5,60/18'4"	-/-	15.400/50'6"	17.200/56' 4"
	6,80/22'3"	-/-	14.700/48'2"	16.750/54'11"

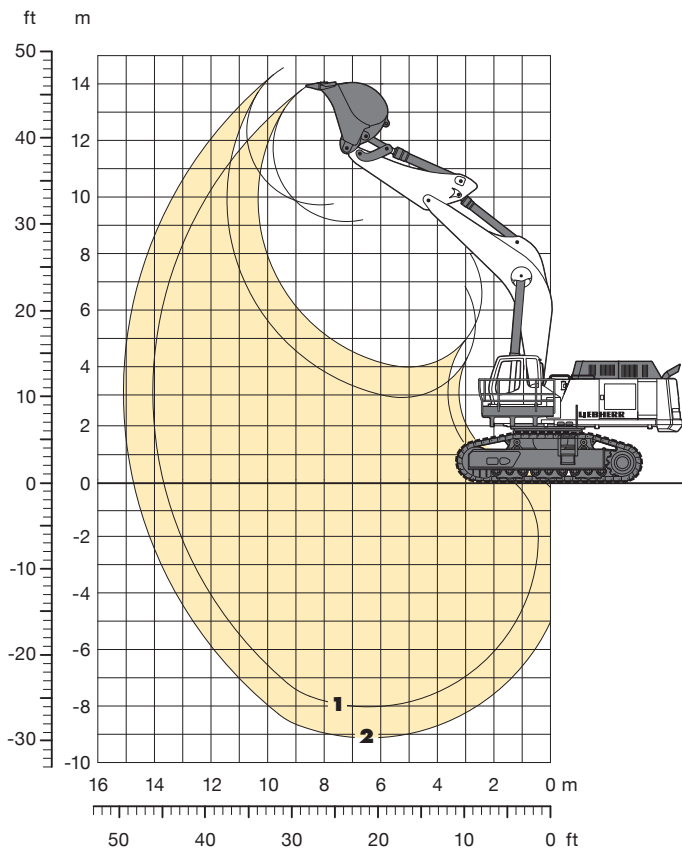


		mm/ft in
A		4.050/13' 3"
A1		5.275/17' 3"
A2		5.760/18'10"
B		4.942/16' 2"
C		5.265/17' 3"
C1		5.430/17' 9"
D		4.690/15' 4"
E		4.805/15' 9"
F		2.075/ 6' 9"
G		5.290/17' 4"
H		4.295/14' 1"
K		1.840/ 6'

		mm/ft in
L		5.055/16' 6"
N	500/1'7" 600/1'11"	750/ 2' 5"
P		1.750/ 5' 8"
Q		863/ 2' 9"
S		4.000/13' 1"
U		6.471/21' 2"
V1		12.600/41' 3"
W1		5.400/17' 8"
X1		15.500/50'10"
Z		7.985/26' 2"
OEL	Operator's Eye Level	4.760/15' 7"

Backhoe Attachment

with Gooseneck Boom 7,80 m/25'7"



Digging Envelope

		1	2
Stick length	m	3,40	4,50
	ft in	11' 1"	14'9"
Max. digging depth	m	7,95	9,05
	ft in	26'	29'8"
Max. reach at ground level	m	13,70	14,75
	ft in	44'11"	48'4"
Max. dump height	m	9,20	9,80
	ft in	30'2"	32'1"
Max. teeth height	m	14,00	14,65
	ft in	45'11"	48'
Max. digging force (ISO 6015)	kN	435	345
	lbf	97,792	77,559
Max. breakout force (ISO 6015)	kN	610	560
	lbf	137,133	125,893

Operating Weight and Ground Pressure

The operating weight includes the basic machine with gooseneck boom 7,80 m/25'7", stick 3,40 m/11'1" and bucket 7,00 m³/9.2 yd³.

Undercarriage		HD	
Pad width	mm/ft in	600/1'11"	750/2'5"
Weight	kg/lb	120.100/264,800	121.300/267,400
Ground pressure*	kg/cm ² /psi	1,80/25.62	1,46/20.77

* according to ISO 16754

Buckets

For materials classe according to VOB, Section C, DIN 18300		< 5	< 5	< 5	5 – 6	5 – 6	5 – 6	7 – 8	7 – 8	7 – 8
Typical operation according to VOB, Section C, DIN 18300		GP	GP	GP	HD	HD	HD	XHD	XHD	XHD
Capacity ISO 7451	m ³	8,00	7,30	6,70	7,70	7,00	6,40	6,70	6,20	5,80
	yd ³	10.5	9.6	8.8	10.1	9.2	8.4	8.8	8.1	7.6
Suitable for material up to a specific weight of										
with stick 3,40 m	t/m ³	1,6	1,8	2,0	1,6	1,8	2,0	1,6	1,8	2,0
with stick 11'1"	lb/yd ³	2,698	3,035	3,373	2,698	3,035	3,373	2,698	3,035	3,373
with stick 4,50 m	t/m ³	–	1,5	1,65	–	1,5	1,65	–	–	1,65
with stick 14'9"	lb/yd ³	–	2,530	2,782	–	2,530	2,782	–	–	2,782
Cutting width	mm	2.600	2.400	2.250	2.550	2.400	2.250	2.600	2.500	2.500
	ft in	8'6"	7'10"	7'4"	8'4"	7'10"	7'4"	8'6"	8'2"	8'2"
Weight	kg	7.200	6.800	6.600	7.700	7.500	7.200	9.300	9.000	8.200
	lb	15,873	14,991	14,550	16,976	16,535	15,873	20,503	19,842	18,078

GP: General purpose bucket with Liebherr Z90 teeth

HD: Heavy-duty bucket with Liebherr Z100 teeth

XHD: Heavy-duty rock bucket with Liebherr Z100 teeth

Lift Capacities

with Gooseneck Boom 7,80 m/25'7"

Stick 3,40 m

Height (m)	Radius of load from centerline of machine (m)									
	3,0	4,5	6,0	7,5	9,0	10,5	12,0	13,5	15,0	16,5
12,0										
10,5										
9,0						13,1# (13,1#)				
7,5					14,8# (14,8#)	13,4# (13,4#)				
6,0				19,0# (19,0#)	16,1# (16,1#)	14,1# (14,1#)	12,7# (12,7#)			
4,5			28,2# (28,2#)	21,6# (21,6#)	17,6# (17,6#)	14,9# (14,9#)	12,9# (12,9#)			
3,0			32,3# (32,3#)	23,9# (23,9#)	19,0# (19,0#)	15,8# (15,8#)	12,4# (12,4#)			
1,5			34,7# (34,7#)	25,7# (25,7#)	20,1# (20,1#)	15,6# (15,6#)	11,9# (11,9#)			
0		25,7# (25,7#)	35,4# (35,4#)	26,4# (26,4#)	19,6# (19,6#)	14,9# (14,9#)	11,6# (11,6#)			
- 1,5	21,4# (21,4#)	34,6# (34,6#)	34,4# (34,4#)	25,8# (25,8#)	19,0# (19,0#)	14,6# (14,6#)				
- 3,0	31,8# (31,8#)	42,5# (42,5#)	31,8# (31,8#)	24,4# (24,4#)	18,8# (18,8#)	14,4# (14,4#)				
- 4,5	44,3# (44,3#)	35,7# (35,7#)	27,3# (27,3#)	21,0# (21,0#)	15,8# (15,8#)					
- 6,0		25,8# (25,8#)	20,1# (20,1#)	14,9# (14,9#)						
- 7,5										
- 9,0										
- 10,5										
- 12,0										

Stick 4,50 m

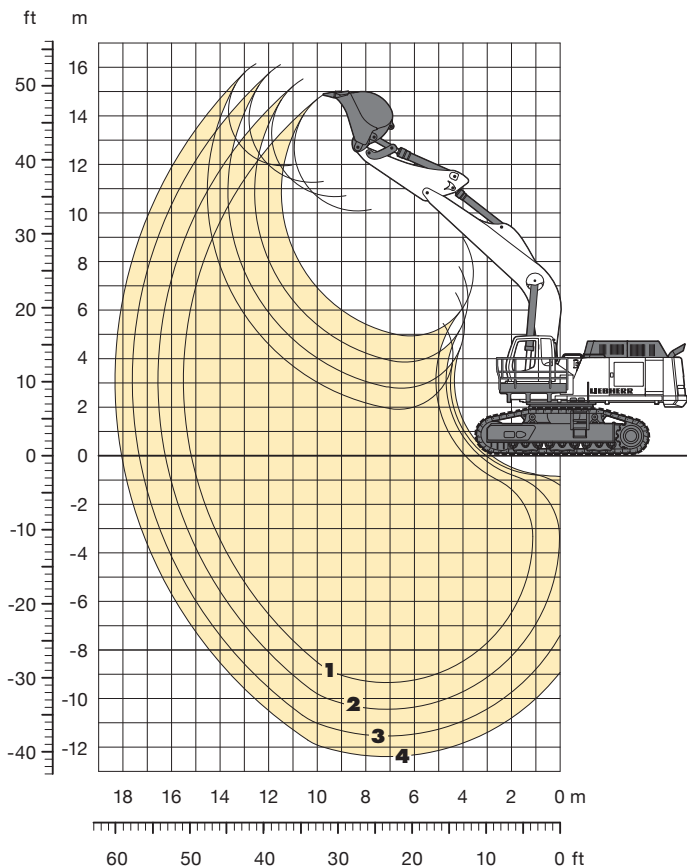
Height (m)	Radius of load from centerline of machine (m)									
	3,0	4,5	6,0	7,5	9,0	10,5	12,0	13,5	15,0	16,5
12,0										
10,5						10,7# (10,7#)				
9,0						10,7# (10,7#)	8,8# (8,8#)			
7,5						11,2# (11,2#)	10,5# (10,5#)			
6,0						13,6# (13,6#)	12,1# (12,1#)	10,9# (10,9#)		
4,5						18,6# (18,6#)	15,4# (15,4#)	13,1# (13,1#)	11,5# (11,5#)	8,3# (8,3#)
3,0						28,7# (28,7#)	21,5# (21,5#)	17,1# (17,1#)	14,2# (14,2#)	12,2# (12,2#)
1,5						32,5# (32,5#)	23,9# (23,9#)	18,6# (18,6#)	15,2# (15,2#)	11,9# (11,9#)
0						25,4# (25,4#)	34,6# (34,6#)	25,4# (25,4#)	19,7# (19,7#)	14,9# (14,9#)
- 1,5	17,0# (17,0#)	30,2# (30,2#)	34,9# (34,9#)	25,9# (25,9#)	18,9# (18,9#)	14,3# (14,3#)	11,0# (11,0#)			
- 3,0	24,6# (24,6#)	38,2# (38,2#)	33,6# (33,6#)	25,2# (25,2#)	20,0# (20,0#)	15,9# (15,9#)	12,7# (12,7#)			
- 4,5	33,8# (33,8#)	42,0# (42,0#)	30,6# (30,6#)	23,2# (23,2#)	17,8# (17,8#)	13,3# (13,3#)				
- 6,0	45,5# (45,5#)	34,3# (34,3#)	25,5# (25,5#)	19,3# (19,3#)	14,1# (14,1#)					
- 7,5		22,9# (22,9#)	17,2# (17,2#)	11,9# (11,9#)						
- 9,0										
- 10,5										
- 12,0										

The load values are quoted in tons (t) on the backhoe bucket's load hook, and may be swung 360° on firm and even ground. Values quoted in brackets apply to the undercarriage when in longitudinal position. Capacities are valid for 600 mm wide double grouser pads. Indicated loads are based on ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity (indicated via #). Maximum load for the backhoe bucket's lifting eye is 27 t. Without bucket (6,40 m³), the lift capacities will increase by 7.200 kg, without bucket cylinder, link and lever they increase by an additional 1.900 kg. Lifting capacity of the excavator is limited by machine stability, hydraulic capacity and maximum permissible load of the load hook.

When lifting loads, the hydraulic excavator must be equipped with automatic check valve on its hoist cylinders and overload warning device according to European Standard, EN 474-5.

Backhoe Attachment

with Gooseneck Boom 9,20 m/30'2"



Digging Envelope		1	2	3	4*
Stick length	m	3,40	4,50	5,60	6,80
	ft in	11'1"	14'9"	18'4"	22'3"
Max. digging depth	m	9,25	10,35	11,45	12,30
	ft in	30'4"	33'11"	37'6"	40'4"
Max. reach at ground level	m	15,20	16,25	17,35	18,10
	ft in	49'10"	53'3"	56'10"	59'4"
Max. dump height	m	10,20	10,85	11,45	12,20
	ft in	33'5"	35'7"	37'6"	40'
Max. teeth height	m	15,00	15,70	16,35	16,40
	ft in	49'2"	51'5"	53'7"	53'9"
Max. digging force (ISO 6015)	kN	420	355	310	280
	lbf	94,420	79,807	69,691	62,946
Max. breakout force (ISO 6015)	kN	560	560	560	445
	lbf	125,893	125,893	125,893	100,040

* with stick 6,80 m with R 974 B Litronic buckets

Operating Weight and Ground Pressure

The operating weight includes the basic machine with gooseneck boom 9,20 m/30'2", stick 4,50 m/14'9" and bucket 4,70 m³/6.2 yd³.

Undercarriage		HD
Pad width	mm/ft in	600/1'11" 750/2'5"
Weight	kg/lb	118.800/261,900 120.000/264,600
Ground pressure*	kg/cm ² /psi	1,78/25.32 1,44/20.48

* according to ISO 16754

Buckets

Capacity ISO 7451	m ³	2,90	3,50	3,90	4,70	5,50	6,20	2,70	3,20	3,80
	yd ³	3.8	4.6	5.1	6.2	7.2	8.1	3.5	4.2	5.0
Suitable for material up to a specific weight of										
with stick 3,40 m	t/m ³	–	–	2,2	2,0	1,8	1,5	–	–	–
with stick 11'1"	lb/yd ³	–	–	3,710	3,373	3,035	2,530	–	–	–
with stick 4,50 m	t/m ³	–	2,2	2,0	1,8	1,5	–	–	–	–
with stick 14'9"	lb/yd ³	–	3,710	3,373	3,035	2,530	–	–	–	–
with stick 5,60 m	t/m ³	2,2	2,0	1,8	1,5	–	–	–	–	–
with stick 18'4"	lb/yd ³	3,710	3,373	3,035	2,530	–	–	–	–	–
with stick 6,80 m	t/m ³	–	–	–	–	–	–	2,2	2,0	1,8
with stick 22'3"	lb/yd ³	–	–	–	–	–	–	3,710	3,373	3,035
Cutting width	mm	1.300 ¹⁾	1.300 ¹⁾	1.400 ¹⁾	1.600 ¹⁾	1.800 ¹⁾	2.000 ¹⁾	1.350 ²⁾	1.550 ²⁾	1.750 ²⁾
	ft in	4'3" ¹⁾	4'3" ¹⁾	4'7" ¹⁾	5'2" ¹⁾	5'10" ¹⁾	6'6" ¹⁾	4'5" ²⁾	5'1" ²⁾	5'8" ²⁾
Weight	kg	3.720	4.080	4.530	4.970	5.280	5.700	3.190	3.310	3.610
	lb	8,201	8,995	9,987	10,957	11,640	12,566	7,033	7,297	7,959

¹⁾ Medium-duty bucket with teeth size Z100 (appropriate for materials up to classification 5, according to VOB, Section C, DIN 18300)

²⁾ Bucket R 974 B Litronic

Lift Capacities

with Gooseneck Boom 9,20 m/30'2"

Stick 3,40 m

Height (m)	Radius of load from centerline of machine (m)									
	4,5	6,0	7,5	9,0	10,5	12,0	13,5	15,0	16,5	18,0
12,0										
10,5					12,2# (12,2#)					
9,0					12,5# (12,5#)	11,7# (11,7#)				
7,5				14,8# (14,8#)	13,1# (13,1#)	11,9# (11,9#)				
6,0		25,4# (25,4#)	19,5# (19,5#)	16,1# (16,1#)	13,8# (13,8#)	12,3# (12,3#)				
4,5			21,9# (21,9#)	17,5# (17,5#)	14,7# (14,7#)	12,9# (12,9#)	10,8# (11,5#)			
3,0			23,9# (23,9#)	18,8# (18,8#)	15,6# (15,6#)	13,1# (13,4#)	10,4# (11,7#)			
1,5			25,1# (25,1#)	19,8# (19,8#)	16,2# (16,2#)	14,9# (13,7#)	12,5# (11,9#)	10,0#		
0		28,6# (28,6#)	25,1# (25,6#)	20,2# (20,2#)	16,6# (16,6#)	14,9# (13,9#)	12,0#			
- 1,5	21,2# (21,2#)	32,2# (32,2#)	24,6# (25,2#)	18,5# (20,1#)	14,5# (16,5#)	11,7# (13,6#)				
- 3,0	31,6# (31,6#)	30,2# (30,2#)	24,0# (24,0#)	18,4# (19,3#)	14,4# (15,8#)	11,8# (12,7#)				
- 4,5	33,8# (33,8#)	27,1# (27,1#)	21,9# (21,9#)	17,7# (17,7#)	14,2# (14,2#)					
- 6,0	27,7# (27,7#)	22,7# (22,7#)	18,5# (18,5#)	14,7# (14,7#)						
- 7,5		16,1# (16,1#)	12,8# (12,8#)							
- 9,0										
- 10,5										
- 12,0										

Stick 4,50 m

Height (m)	Radius of load from centerline of machine (m)									
	4,5	6,0	7,5	9,0	10,5	12,0	13,5	15,0	16,5	18,0
12,0										
10,5							9,8# (9,8#)			
9,0							9,9# (9,9#)	9,5# (9,5#)		
7,5								11,2# (11,2#)	10,2# (10,2#)	9,6# (9,6#)
6,0								14,0# (14,0#)	12,1# (12,1#)	10,8# (10,8#)
4,5		25,9# (25,9#)	19,4# (19,4#)	15,6# (15,6#)	13,2# (13,2#)	11,5# (11,5#)				
3,0			21,8# (21,8#)	17,2# (17,2#)	14,2# (14,2#)	12,1# (12,1#)	10,3# (10,6#)			
1,5		29,2# (29,2#)	23,7# (23,7#)	18,5# (18,5#)	15,1# (15,1#)	12,4# (11,7#)	9,8# (11,0#)			
0		28,9# (28,9#)	24,8# (24,8#)	19,1# (19,3#)	14,9# (15,7#)	11,8# (13,1#)	9,4# (11,1#)			
- 1,5	18,3# (18,3#)	33,1# (33,1#)	24,5# (25,0#)	18,3# (19,7#)	14,2# (15,9#)	11,3# (13,2#)	9,2# (11,0#)			
- 3,0	25,5# (25,5#)	31,9# (31,9#)	24,1# (24,5#)	17,9# (19,4#)	13,9# (15,7#)	11,1# (12,9#)	9,1# (10,3#)			
- 4,5	34,3# (34,3#)	29,6# (29,6#)	23,1# (23,1#)	17,9# (18,4#)	13,9# (14,8#)	11,2# (11,8#)				
- 6,0	34,0# (34,0#)	26,2# (26,2#)	20,7# (20,7#)	16,5# (16,5#)	12,9# (12,9#)					
- 7,5	26,8# (26,8#)	21,1# (21,1#)	16,7# (16,7#)	12,9# (12,9#)						
- 9,0			9,9# (9,9#)							
- 10,5										
- 12,0										

Stick 5,60 m

Height (m)	Radius of load from centerline of machine (m)									
	4,5	6,0	7,5	9,0	10,5	12,0	13,5	15,0	16,5	18,0
13,5						8,1# (8,1#)				
12,0										
10,5							8,1# (8,1#)			
9,0							8,1# (8,1#)			
7,5						8,9# (8,9#)	8,4# (8,4#)	8,0# (8,0#)		
6,0					10,7# (10,7#)	9,6# (9,6#)	8,8# (8,8#)	8,2# (8,2#)		
4,5				13,9# (13,9#)	11,8# (11,8#)	10,4# (10,4#)	9,3# (9,3#)	8,5# (8,5#)		
3,0			19,9# (19,9#)	15,7# (15,7#)	13,0# (13,0#)	11,2# (11,2#)	9,8# (9,8#)	8,3# (8,8#)		
1,5		30,6# (30,6#)	22,3# (22,3#)	17,3# (17,3#)	14,1# (14,1#)	11,9# (11,9#)	10,1# (10,3#)	7,9# (9,0#)		
0		31,3# (31,3#)	24,0# (24,0#)	18,6# (18,6#)	15,0# (15,0#)	12,0# (12,5#)	9,5# (10,7#)	7,6# (9,2#)		
- 1,5	16,5# (16,5#)	31,9# (31,9#)	24,9# (24,9#)	18,8# (19,3#)	14,5# (15,6#)	11,4# (12,9#)	9,1# (10,8#)	7,3# (9,1#)		
- 3,0	21,7# (21,7#)	33,1# (33,1#)	24,4# (25,0#)	18,1# (19,6#)	14,0# (15,8#)	11,1# (12,9#)	8,9# (10,7#)			
- 4,5	28,3# (28,3#)	31,7# (31,7#)	24,1# (24,2#)	17,8# (19,1#)	13,7# (15,4#)	10,9# (12,5#)	8,9# (10,0#)			
- 6,0	36,6# (36,6#)	29,3# (29,3#)	22,6# (22,6#)	17,8# (17,9#)	13,8# (14,3#)	11,0# (11,3#)				
- 7,5	33,7# (33,7#)	25,4# (25,4#)	19,8# (19,8#)	15,6# (15,6#)	12,1# (12,1#)					
- 9,0	25,5# (25,5#)	19,7# (19,7#)	15,2# (15,2#)	11,4# (11,4#)						
- 10,5										

Stick 6,80 m

Height (m)	Radius of load from centerline of machine (m)									
	4,5	6,0	7,5	9,0	10,5	12,0	13,5	15,0	16,5	18,0
12,0							8,8# (8,8#)			
10,5							8,7# (8,7#)	7,5# (7,5#)		
9,0							8,9# (8,9#)	8,8# (8,8#)		
7,5							9,3# (9,3#)	9,0# (9,0#)		
6,0						10,4# (10,4#)	9,8# (9,8#)	9,3# (9,3#)	7,5# (7,5#)	
4,5					12,6# (12,6#)	11,4# (11,4#)	10,4# (10,4#)	9,7# (9,7#)	8,6# (8,6#)	
3,0			20,0# (20,0#)	16,4# (16,4#)	14,1# (14,1#)	12,4# (12,4#)	11,1# (11,1#)	10,2# (10,2#)	8,4# (9,3#)	
1,5		30,9# (30,9#)	23,1# (23,1#)	18,4# (18,4#)	15,4# (15,4#)	13,3# (13,3#)	11,8# (11,8#)	9,9# (10,6#)	8,1# (9,5#)	
0		34,2# (34,2#)	25,4# (25,4#)	20,1# (20,1#)	16,6# (16,6#)	14,2# (14,2#)	11,7# (12,3#)	9,5# (10,9#)	7,8# (8,9#)	
- 1,5	18,0# (18,0#)	35,1# (35,1#)	27,0# (27,0#)	21,3# (21,3#)	17,0# (17,5#)	13,7# (14,8#)	11,2# (12,7#)	9,2# (11,1#)		
- 3,0	21,6# (21,6#)	36,6# (36,6#)	27,4# (27,7#)	20,7# (21,9#)	16,3# (18,0#)	13,1# (15,1#)	10,8# (12,9#)	9,0# (11,0#)		
- 4,5	26,6# (26,6#)	36,0# (36,0#)	26,7# (27,6#)	20,1# (22,0#)	15,8# (18,0#)	12,8# (15,0#)	10,6# (12,6#)	8,9# (10,4#)		
- 6,0	32,9# (32,9#)	34,4# (34,4#)	26,6# (26,6#)	19,9# (21,3#)	15,7# (17,4#)	12,7# (14,4#)	10,6# (11,7#)			
- 7,5	41,2# (41,2#)	31,5# (31,5#)	24,6# (24,6#)	19,8# (19,8#)	15,8# (16,0#)	12,9# (12,9#)				
- 9,0	35,7# (35,7#)	27,0# (27,0#)	21,3# (21,3#)	16,9# (16,9#)	13,2# (13,2#)					
- 10,5	26,1# (26,1#)	20,2# (20,2#)	15,7# (15,7#)	11,7# (11,7#)						
- 12,0										

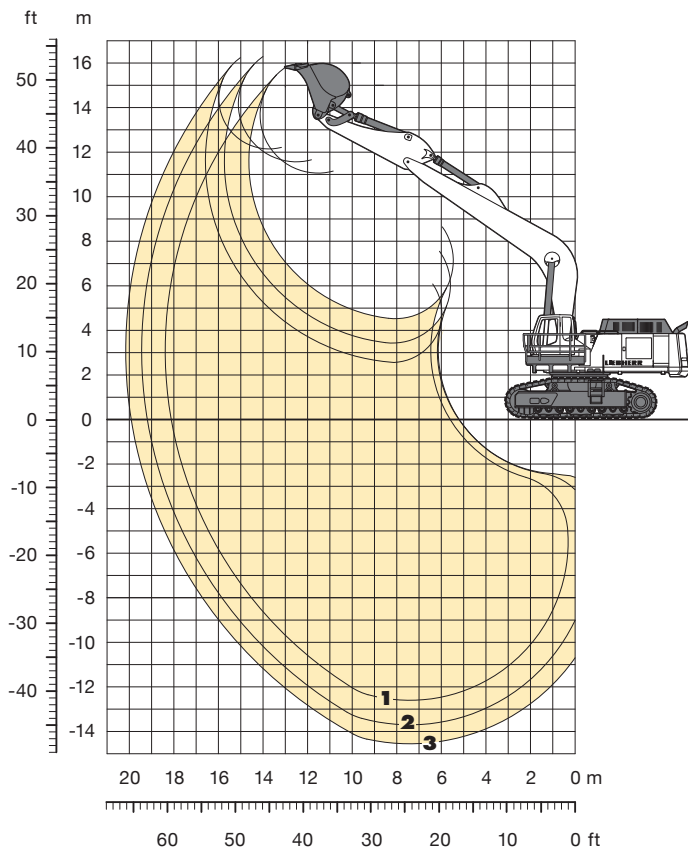
The load values are quoted in tons (t) on the backhoe bucket's load hook, and may be swung 360° on firm and even ground. Values quoted in brackets apply to the undercarriage when in longitudinal position. Capacities are valid for 600 mm wide double grouser pads. Indicated loads are based on ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity (indicated via #). Maximum load for the backhoe bucket's lifting eye is 27 t. Without bucket (3,90 m³/2,70 m³), the lift capacities will increase by 4.530 kg/3.190 kg*, without bucket cylinder, link and lever they increase by an additional 1.900 kg/1.100 kg*. Lifting capacity of the excavator is limited by machine stability, hydraulic capacity and maximum permissible load of the load hook.

When lifting loads, the hydraulic excavator must be equipped with automatic check valve on its hoist cylinders and overload warning device according to European Standard, EN 474-5.

* Just for stick 6,80 m

Backhoe Attachment

with Gooseneck Boom 11,00 m/36'



Digging Envelope

		1	2	3*
Stick length	m	4,50	5,60	6,80
	ft in	14'9"	18'4"	22'3"
Max. digging depth	m	12,50	13,60	14,45
	ft in	41'	44'7"	47'4"
Max. reach at ground level	m	18,15	19,20	20,00
	ft in	59'6"	62'11"	65'7"
Max. dump height	m	11,25	11,80	12,65
	ft in	36'10"	38'8"	41'5"
Max. teeth height	m	16,05	16,60	16,80
	ft in	52'7"	54'5"	55'1"
Max. digging force (ISO 6015)	kN	355	310	280
	lbf	79,807	69,691	62,946
Max. breakout force (ISO 6015)	kN	530	530	445
	lbf	119,149	119,149	100,040

* with stick 6,80 m with R 974 B Litronic buckets

Operating Weight and Ground Pressure

The operating weight includes the basic machine with gooseneck boom 11,00 m/36', stick 5,60 m/18'4" and bucket 2,90 m³/3.8 yd³.

Undercarriage		HD
Pad width	mm/ft in	600/1'11" 750/2'5"
Weight	kg/lb	122.200/269,400 123.400/272,050
Ground pressure*	kg/cm ² /psi	1,83/26.03 1,48/21.05

* according to ISO 16754

Buckets

Capacity ISO 7451	m ³	2,90	3,50	3,90	4,70	2,70	3,20
	yd ³	3.8	4.6	5.1	6.2	3.5	4.2
Suitable for material up to a specific weight of							
with stick 4,50 m	t/m ³	2,2	1,8	1,6	1,2	–	–
with stick 14'9"	lb/yd ³	3,710	3,035	2,698	2,024	–	–
with stick 5,60 m	t/m ³	2,0	1,6	1,2	–	–	–
with stick 18'4"	lb/yd ³	3,373	2,698	2,024	–	–	–
with stick 6,80 m	t/m ³	–	–	–	–	2,2	1,8
with stick 22'2"	lb/yd ³	–	–	–	–	3,710	3,035
Cutting width	mm	1.300 ¹⁾	1.300 ¹⁾	1.400 ¹⁾	1.600 ¹⁾	1.350 ²⁾	1.550 ²⁾
	ft in	4'3" ¹⁾	4'3" ¹⁾	4'7" ¹⁾	5'2" ¹⁾	4'5" ²⁾	5'1" ²⁾
Weight	kg	3.720	4.080	4.530	4.970	3.190	3.310
	lb	8,201	8,995	9,987	10,957	7,033	7,297

¹⁾ Medium-duty bucket with teeth size V 69 SD (appropriate for materials up to classification 5, according to VOB, Section C, DIN 18300)

²⁾ Bucket R 974 B Litronic

Lift Capacities

with Gooseneck Boom 11,00 m/36'

Stick 4,50 m

Height (m)	Radius of load from centerline of machine (m)									
	4,5	6,0	7,5	9,0	10,5	12,0	13,5	15,0	16,5	18,0
12,0							5,5# (5,5#)			
10,5							5,5# (5,5#)	5,5# (5,5#)		
9,0							5,7# (5,7#)	5,4# (5,4#)		
7,5						6,8# (6,8#)	6,1# (6,1#)	5,6# (5,6#)		
6,0				10,7# (10,7#)	8,7# (8,7#)	7,4# (7,4#)	6,5# (6,5#)	5,9# (5,9#)	5,6# (5,6#)	
4,5				12,2# (12,2#)	9,7# (9,7#)	8,1# (8,1#)	7,0# (7,0#)	6,2# (6,2#)	5,7# (5,7#)	
3,0				13,6# (13,6#)	10,7# (10,7#)	8,8# (8,8#)	7,5# (7,5#)	6,6# (6,6#)	6,0# (6,0#)	
1,5				14,8# (14,8#)	11,6# (11,6#)	9,5# (9,5#)	8,0# (8,0#)	6,9# (6,9#)	6,1# (6,2#)	
0				20,7# (20,7#)	15,7# (15,7#)	12,4# (12,4#)	10,1# (10,1#)	8,4# (8,4#)	7,2# (7,2#)	
- 1,5				21,0# (21,0#)	16,2# (16,2#)	12,9# (12,9#)	10,5# (10,5#)	8,7# (8,8#)	7,1# (7,4#)	
- 3,0	13,0# (13,0#)	20,3# (20,3#)	20,9# (20,9#)	16,3# (16,3#)	13,1# (13,1#)	10,4# (10,7#)	8,5# (8,9#)	7,0# (7,4#)		
- 4,5	19,9# (19,9#)	26,3# (26,3#)	20,4# (20,4#)	16,1# (16,1#)	13,0# (13,0#)	10,4# (10,6#)	8,5# (8,8#)			
- 6,0	27,7# (27,7#)	24,7# (24,7#)	19,4# (19,4#)	15,5# (15,5#)	12,5# (12,5#)	10,2# (10,2#)	8,2# (8,2#)			
- 7,5	29,2# (29,2#)	22,4# (22,4#)	17,8# (17,8#)	14,3# (14,3#)	11,5# (11,5#)	9,1# (9,1#)				
- 9,0	24,5# (24,5#)	19,1# (19,1#)	15,3# (15,3#)	12,2# (12,2#)	9,5# (9,5#)					
- 10,5		14,2# (14,2#)	11,2# (11,2#)	8,2# (8,2#)						
- 12,0										

Stick 5,60 m

Height (m)	Radius of load from centerline of machine (m)									
	4,5	6,0	7,5	9,0	10,5	12,0	13,5	15,0	16,5	18,0
12,0										4,4# (4,4#)
10,5										4,3# (4,3#)
9,0										4,5# (4,5#)
7,5										4,4# (4,4#)
6,0										4,5# (4,5#)
4,5										4,7# (4,7#)
3,0										4,7# (4,7#)
1,5										5,1# (5,1#)
0										5,1# (5,1#)
- 1,5										4,7# (4,7#)
- 3,0										4,5# (4,5#)
- 4,5										5,1# (5,1#)
- 6,0										5,1# (5,1#)
- 7,5										4,7# (4,7#)
- 9,0										5,1# (5,1#)
- 10,5										5,5# (5,5#)
- 12,0										4,9# (4,9#)

Stick 6,80 m

Height (m)	Radius of load from centerline of machine (m)									
	4,5	6,0	7,5	9,0	10,5	12,0	13,5	15,0	16,5	18,0
12,0										5,6# (5,6#)
10,5										5,5# (5,5#)
9,0										5,6# (5,6#)
7,5										5,7# (5,7#)
6,0										5,8# (5,8#)
4,5										6,0# (6,0#)
3,0										6,1# (6,1#)
1,5										6,3# (6,3#)
0										6,5# (6,5#)
- 1,5										6,5# (6,5#)
- 3,0										6,6# (6,6#)
- 4,5										6,6# (6,6#)
- 6,0										6,6# (6,6#)
- 7,5										6,6# (6,6#)
- 9,0										6,5# (6,5#)
- 10,5										6,5# (6,5#)
- 12,0										6,5# (6,5#)

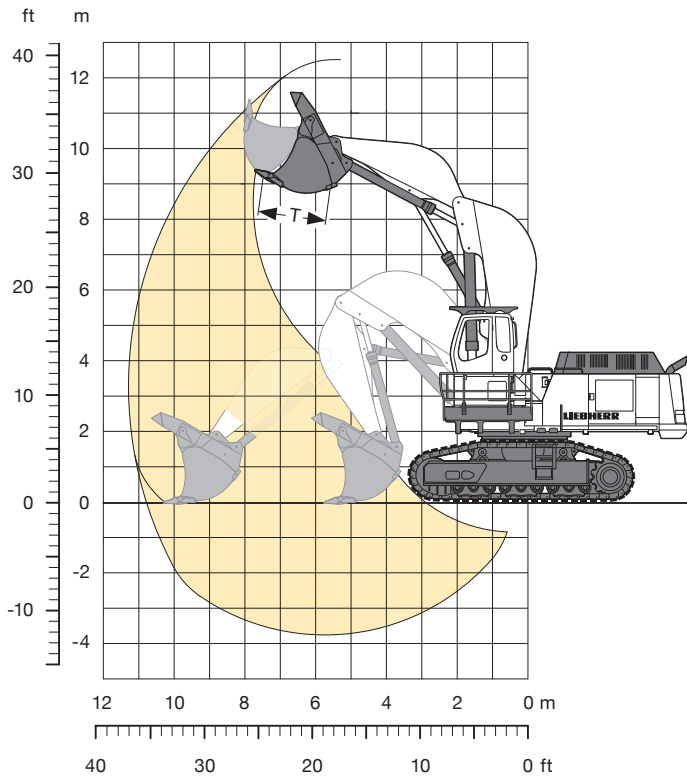
The load values are quoted in tons (t) on the backhoe bucket's load hook, and may be swung 360° on firm and even ground. Values quoted in brackets apply to the undercarriage when in longitudinal position. Capacities are valid for 600 mm wide double grouser pads. Indicated loads are based on ISO 10567 standard and do not exceed 75 % of tipping or 87 % of hydraulic capacity (indicated via #). Maximum load for the backhoe bucket's lifting eye is 27 t. Without bucket (3,90 m³/2,70 m³), the lift capacities will increase by 4.530 kg/3.190 kg*, without bucket cylinder, link and lever they increase by an additional 1.900 kg/1.100 kg*. Lifting capacity of the excavator is limited by machine stability, hydraulic capacity and maximum permissible load of the load hook.

When lifting loads, the hydraulic excavator must be equipped with automatic check valve on its hoist cylinders and overload warning device according to European Standard, EN 474-5.

* Just for stick 6,80 m

Shovel Attachment

with Shovel Boom 5,40 m/17'8"



Digging Envelope

Stick length	3,90 m/12'9"
Max. reach at ground level	10,80 m/35'5"
Max. dump height	8,90 m/29'2"
Max. crowd length	4,50 m/14'9"
Bucket opening width T	1.900 mm/ 6'2"
Max. crowd force at ground level (ISO 6015)	535 kN/120,273 lbf
Max. crowd force (ISO 6015)	785 kN/176,475 lbf
Max. breakout force (ISO 6015)	550 kN/123,645 lbf

Operating Weight and Ground Pressure

The operating weight includes the basic machine with shovel attachment and a 7,00 m³/9.2 yd³ bucket.

Undercarriage		HD	
Pad width	mm/ft in	600/1'11"	750/2'5"
Weight	kg/lb	125.100/275,800	126.300/278,450
Ground pressure*	kg/cm ² /psi	1,88/26.69	1,52/21.55

* according to ISO 16754

Bottom Dump Buckets

For materials classe according to VOB, Section C, DIN 18300		< 5	< 5	5 – 6	5 – 6	5 – 6	7 – 8	7 – 8	7 – 8
Typical operation according to VOB, Section C, DIN 18300		GP	GP	HD	HD	HD	XHD	XHD	XHD
Capacity ISO 7546	m ³	9,00	7,70	7,70	7,00	5,70	7,00	6,40	5,70
	yd ³	11.8	10.1	10.1	9.2	7.5	9.2	8.4	7.5
Suitable for material up to a specific weight of	t/m ³	1,3	1,7	1,5	1,8	2,3	1,5	1,8	2,2
	lb/yd ³	2,192	2,867	2,530	3,035	3,879	2,530	3,035	3,710
Cutting width	mm	2.900	2.900	2.900	2.900	2.500	2.900	2.900	2.500
	ft in	9'6"	9'6"	9'6"	9'6"	8'2"	9'6"	9'6"	8'2"
Weight	kg	13.300	11.000	13.300	12.900	11.400	14.400	13.200	12.400
	lb	29,321	24,251	29,321	28,440	25,133	31,747	29,101	27,337
Wear kit level		I	I	II	II	II	III	III	III

GP: General purpose bucket with Liebherr Z90 teeth

HD: Heavy-duty bucket with Liebherr Z100 teeth

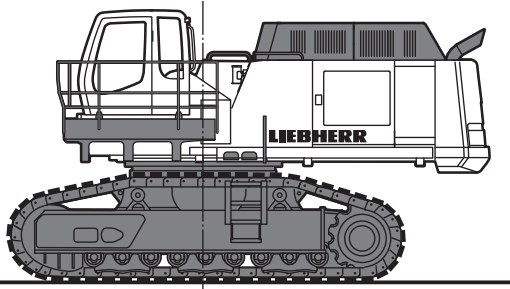
XHD: Heavy-duty rock bucket with Liebherr Z100 teeth

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 preblasted heavy rock, or deteriorated, cracked material (classification 5 to 6, according to DIN 18300)

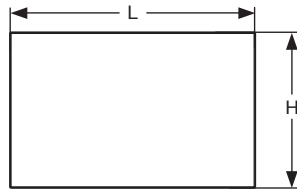
Level III: For highly-abrasive materials such as rock with a high silica content, sandstone etc.

Component Dimensions and Weights



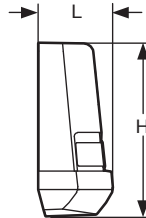
Basic Machine (with Catwalks)

Track pads	mm/ft in	600/1'11"	750/2'5"
Weight with counterweight	kg/lb	89.140/196,520	90.330/199,143



Catwalks and Railings (Wooden Crate)

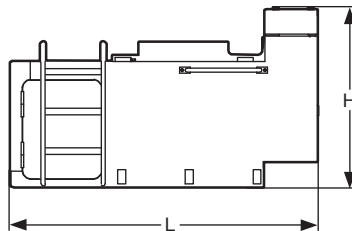
L Length	mm/ft in	3.500/11' 5"
H Height	mm/ft in	2.400/ 7'10"
Width	mm/ft in	1.900/ 6' 2"
Weight	kg/lb	1.800/3,968



Counterweight

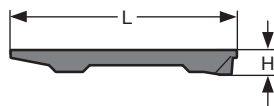
L Length	mm/ft in	900/ 2'11"	900/ 2'11"*
H Height	mm/ft in	1.800/ 5'10"	1.800/ 5'10"*
Width	mm/ft in	4.050/13' 3"	4.050/13' 3"*
Weight	kg/lb	19.020/ 41,932	22.000/ 48,502*

* only with 11,00 m/36' gooseneck boom



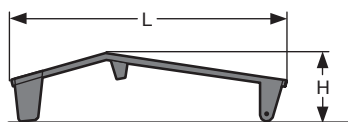
Cab Elevation

L Length	mm/ft in	1.950/6'4"
H Height	mm/ft in	1.130/3'8"
Width	mm/ft in	1.250/4'1"
Weight	kg/lb	600/1,323



Protective Grid Up

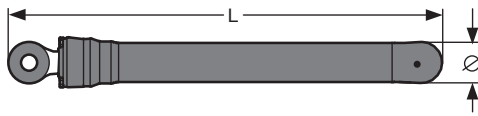
L Length	mm/ft in	1.730/5'8"
H Height	mm/ft in	185/ 7"
Width	mm/ft in	950/3'1"
Weight	kg/lb	30/66



Front Window Screen

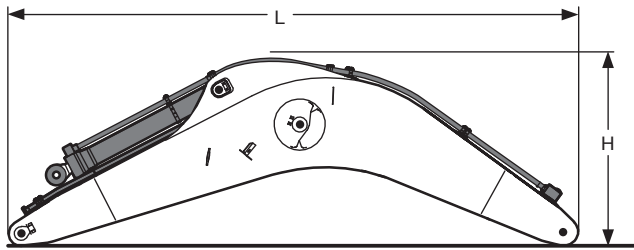
L Length	mm/ft in	1.970/6'5"
H Height	mm/ft in	500/1'7"
Width	mm/ft in	970/3'2"
Weight	kg/lb	45/99

Component Dimensions and Weights



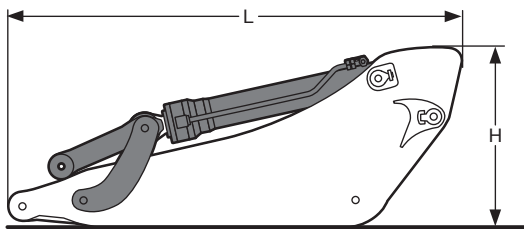
Backhoe Hoist Cylinder (two)

L Length	mm/ft in	3.300/10'9"
Ø Diameter	mm/ft in	400/ 1'3"
Weight	kg/lb	2 x 1.330/2 x 2,932



Gooseneck Boom with Stick Cylinder

Boom length	m	7,80	9,20	11,00
	ft in	25'7"	30'2"	36'
L Length	mm	8.200	9.600	11.400
	ft in	26'10"	31'5"	37'4"
H Height	mm	2.800	2.800	3.250
	ft in	9'2"	9'2"	10'7"
Width	mm	1.600	1.600	1.600
	ft in	5'2"	5'2"	5'2"
Weight	kg	13.345	14.285	15.810
	lb	29,421	31,493	34,855

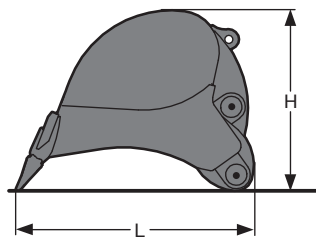


Stick with Bucket Cylinder

Stick length	m	3,40	4,50	5,60	6,80
	ft in	11'1"	14'9"	18'4"	22'3"
L Length	mm	4.800	5.700	6.800	8.000
	ft in	15'8"	18'8"	22'3"	26'2"
H Height	mm	1.850	1.650	1.550	1.400
	ft in	6'	5'4"	5'1"	4'7"
Width	mm	945	945	945	945
	ft in	3'1"	3'1"	3'1"	3'1"
Weight	kg	7.400	7.730	7.885	6.600
	lb	16,314	17,042	17,383	14,550

Mining Backhoe Buckets for Boom 7,80 m/25'7"

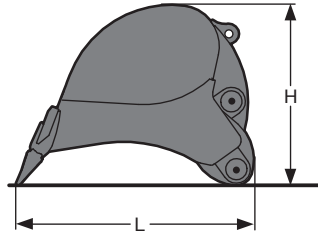
Application		GP	GP	GP
Capacity ISO 7451	m ³	8,00	7,30	6,70
	yd ³	10.5	9.6	8.8
L Length	mm	2.900	2.800	2.800
	ft in	9'6"	9'2"	9'2"
H Height	mm	2.250	2.200	2.200
	ft in	7'4"	7'2"	7'2"
Width	mm	2.600	2.400	2.250
	ft in	8'6"	7'10"	7'4"
Weight	kg	7.200	6.800	6.600
	lb	15,873	14,991	14,550



Application		HD	HD	HD
Capacity ISO 7451	m ³	7,70	7,00	6,40
	yd ³	10.1	9.2	8.4
L Length	mm	3.100	2.900	3.000
	ft in	10'2"	9'6"	9'10"
H Height	mm	2.300	2.200	2.150
	ft in	7'6"	7'2"	7'
Width	mm	2.550	2.400	2.250
	ft in	8'4"	7'10"	7'4"
Weight	kg	7.700	7.500	7.200
	lb	16,976	16,535	15,873

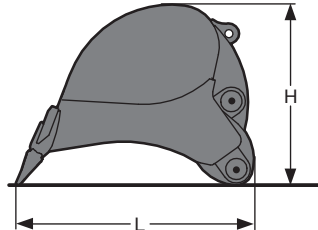
Component Dimensions and Weights

Mining Backhoe Buckets for Boom 7,80 m/25'7"



Application		XHD	XHD	XHD
Capacity ISO 7451	m ³	6,70	6,20	5,80
	yd ³	8.8	8.1	7.6
L Length	mm	3.100	3.150	2.950
	ft in	10'2"	10'3"	9'8"
H Height	mm	2.200	2.200	2.200
	ft in	7'2"	7'2"	7'2"
Width	mm	2.600	2.500	2.500
	ft in	8'6"	8'2"	8'2"
Weight	kg	9.300	9.000	8.200
	lb	20,503	19,842	18,078

Backhoe Buckets for Boom 9,20 m/30'2" and 11,00 m/36'



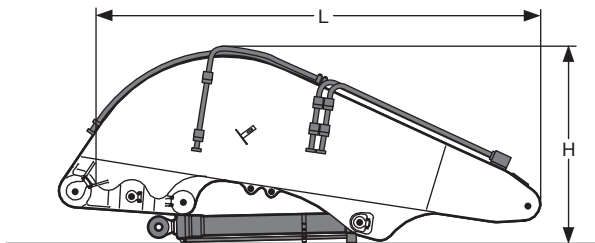
Capacity ISO 7451	m ³	2,90	3,50	3,90
	yd ³	3.8	4.6	5.1
L Length	mm	2.700	2.900	2.900
	ft in	8'10"	9'6"	9'6"
H Height	mm	2.100	2.250	2.250
	ft in	6'10"	7'4"	7'4"
Width	mm	1.300	1.300	1.400
	ft in	4'3"	4'3"	4'7"
Weight	kg	3.720	4.080	4.530
	lb	8,201	8,995	9,987

Capacity ISO 7451	m ³	4,70	5,50	6,20
	yd ³	6.2	7.2	8.1
L Length	mm	2.900	2.900	2.900
	ft in	9'6"	9'6"	9'6"
H Height	mm	2.250	2.250	2.250
	ft in	7'4"	7'4"	7'4"
Width	mm	1.600	1.800	2.000
	ft in	5'2"	5'10"	6'6"
Weight	kg	4.970	5.280	5.700
	lb	10,957	11,640	12,566



Shovel Hoist Cylinder (two)

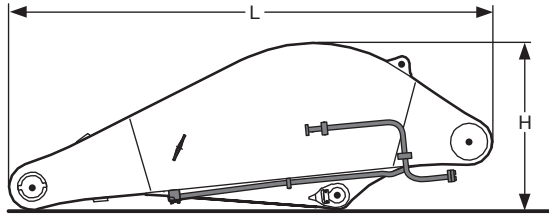
L Length	mm/ft in	3.300/10'9"
Ø Diameter	mm/ft in	400/ 1'3"
Weight	kg/lb	2 x 1.330/2 x 2,932



Shovel Boom

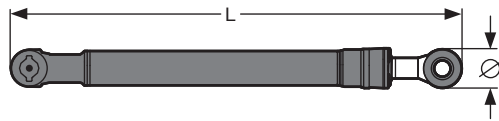
L Length	mm/ft in	5.800/19'
H Height	mm/ft in	2.400/ 7'10"
Width	mm/ft in	1.800/ 5'10"
Weight without crowd cylinder	kg/lb	11.090/24,449
Weight crowd cylinder	kg/lb	563/1,241

Component Dimensions and Weights



Shovel Stick

L Length	mm/ft in	4.350/14' 3"
H Height	mm/ft in	1.500/ 4'11"
Width	mm/ft in	1.900/ 6' 2"
Weight	kg/lb	6.130/13,514

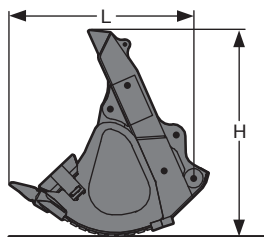


Shovel Bucket Cylinder (two)

L Length	mm/ft in	3.350/10'11"
Ø Diameter	mm/in	300/ 11"
Weight	kg/lb	2 x 810/2 x 1,786

Bottom Dump Buckets for Boom 5,40 m/17'8"

Capacity ISO 7451	m ³	5,70	7,00	7,70	9,00
	yd ³	7.5	9.2	10.1	11.8
L Length	mm	2.800	2.800	2.850	3.250
	ft in	9'2"	9'2"	9'4"	10'7"
H Height	mm	2.900	3.000	3.000	3.050
	ft in	9'6"	9'10"	9'10"	10'
Width	mm	2.500	2.900	2.900	2.900
	ft in	8'2"	9'6"	9'6"	9'6"
Weight					
Wear kit level I	kg	–	–	11.000	13.300
	lb	–	–	24,251	29,321
Wear kit level II	kg	11.400	12.900	13.300	–
	lb	25,133	28,440	29,321	–
Wear kit level III	kg	12.400	14.400	–	–
	lb	27,337	31747	–	–



Optional Equipment



Undercarriage

Different undercarriage versions
Different track pads width
Double sealed gearbox



Uppercarriage

Large catwalks with access ladder
Cab elevation (500 mm, 800 mm, 1,200 mm, 2,000 mm)
Electric fuel tank filler pump
Pedal controlled positioning swing brake
Heavy counterweight
Hydraulic grease pump
LED lights (with flood/access lights)
Enlarged fuel tank for 24 h operation
Wiggins/Banlaw coupling fueling
Customized paint – compl. machine



Hydraulics

Additional hydraulic circuits
Bio-degradable hydraulic oil
Bypass fine filtration



Engine

Fuel lines with integrated heater
Centrifugal oil filter



Operator's Cab

AM/FM stereo radio with USB connection and bluetooth
Operator comfort kit (premium seat, inside louvers, bottle refresher, heated mirror, foot rest)
Cab pressurisation
FOPS
Front protective grid
4-point seat belt



Attachment

Hydraulic quick change tool adapter
Cylinder – rod protection



Specific Solutions

Arctic kit –30 °C
Basic sound attenuation kit
Industry options (lifting/handling)
Demolition options
Marine options



Safety

Automatic fire fighting system (FFS)

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.