

Mining Excavator

R 9150

Operating Weight with Backhoe Attachment:	128.000 kg / 282,200 lb
Operating Weight with Shovel Attachment:	130.000 kg / 286,600 lb
Engine Output:	565 kW / 757 HP
Bucket Capacity @ 1,8 t/m ³ / 3,000 lb/yd ³ :	8,30 m ³ / 10.9 yd ³
Shovel Capacity @ 1,8 t/m ³ / 3,000 lb/yd ³ :	8,30 m ³ / 10.9 yd ³



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

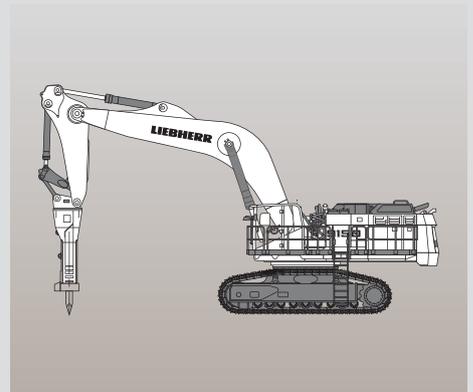
Liebherr optimizes mining equipment for fuel economy, emission compliance, and extended service intervals.





Liebherr Diesel Engine

- V12 by Liebherr
- USA/EPA Tier 2
- Fuel consumption optimized version (option)
- Automatic idle control
- Max. altitude without derating: 3.900 m
- Eco-Mode selector





Productivity



The brand new R 9150 is built to outperform all competitors in the small class mining market. As a perfect loader for 50 t up to 135 t dump trucks and offering a wide array of uses, the advanced R 9150 is the worthy successor of the esteemed Liebherr R 984 C. As the most powerful excavator in the small mining market, this machine reaches the highest excavating forces and an optimal cycle time.

Engineered for Intense Mining

Powerful Drive System

The R 9150 is equipped with the long-lasting and proven Liebherr V12 diesel engine specifically designed to withstand extreme outside temperatures and high altitudes with low atmospheric pressure. Integrating the latest engine management system, the R 9150 is built for intense mining.

Fast Cycle Times

Rather than using open hydraulic circuit, the R 9150 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.

Precise Machine Motions

The R 9150 design integrates the Litronic Plus electronic control system to allow for easy control even when simultaneous movements are required. The patented Liebherr electronic bucket cylinder damping system provides controlled end-cushioning for smooth attachment motions.

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 9150'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 9150'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.

An Array of Applications

The integration of the electronic control system - Litronic Plus - in combination with the R 9150's design optimization enable:

- Maximum machine versatility
- The use of various long reach attachments and specific tools
- To answer the most specific customers requirements



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



Machine Monitoring System

Integration of the Liebherr-made monitoring system also used on the R 9800:

- 10.5" LCD color 8-key screen
- Information interface to operator
- On-board diagnostics to service staff
- Real text information
- Long term data storage for maintenance





Efficiency

The R 9150 follows the Liebherr design philosophy of maximizing the machines performance by improving the efficiency of all individual subsystems. Engineered for optimum serviceability, the machine is designed to ensure maximum uptime. The R 9150 modern cab creates a comfortable working environment ensuring peak operator performance, every shift.

Optimized for Maximum Profitability

Electro-Hydraulic System Efficiency

Liebherr hydraulic technology in combination with the precision of electronic control contributes to the R 9150's energy optimization. The high-pressure hydraulic system and the optimized pipe and hose layout maximize usable power transmission. The hydraulic pumps are electronically managed to provide optimal pressure compensation and oil flow management. The hydraulic system is independently regulated over the engine circuit for the best operational efficiency.

Cooling System Efficiency

The oversized independent oil- and water coolers in combination with low energy consumption fans and on-demand cooling controls enable to maximize available power for digging process.

Optimized Service Intervals

The R 9150's high pressure hydraulic oil filtration systems remove contaminants from the fluid to offer the highest rate of hydraulic system efficiency. To maintain the oil quality, all return hydraulic oil flow goes through a 15/5 µm fine filtration system. To promote availability, the grease and fuel tanks are sized to considerably extend the time between service intervals.

Modern Cab for Efficient Work

Superior Operator Comfort

The new and modern large cab which equips the Liebherr 100 t series offers ideal working conditions and optimal operator's comfort. Mounted on silent blocks, the R 9150's cab design reduces vibrations and limit noise pollution to provide a quiet environment.

Working Environment Total Control

Equipped with a large one-piece windscreen, the R 9150's cab offers a panoramic view over the entire attachment and loading spot. Two outside cameras show areas that cannot be observed directly. Long-distance halogen working lights promote efficient loading.

1st-Class Service Arrangements

Service friendly design allows for easy and fast maintenance for maximum uptime:

- Service from one-side
- Large catwalk and walkway
- Refillable grease tanks instead of drums to be changed
- Centralized automatic lubrication system
- Enhanced single-line lubrication system



Comfort-Oriented Cab Design

An array of features:

- Tinted laminated safety glass
- Armored front window
- Adjustable air suspended seat
- A/C with dust filter in fresh air / recirculated
- Pressurization to prevent dust penetration (option)
- Operator Comfort Kit (option): sun blinds, bottle cooler, reading light, electronic operator weight adjustment
- Joysticks integrated on the suspended seat armrests



Automatic Central Lubrication System

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

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





Reliability

More than 50 years of hydraulic excavator design and manufacturing experience is the basis for the R 9150 outstanding reliability. The machine combines innovative technologies, design optimization and Liebherr components. Customers can expect durable performance from the R 9150 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 9150 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 9150 is equipped with an automatic central 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.

Rugged Undercarriage Structure

The R 9150 is mounted on a heavy duty fatigue-resistant undercarriage. The swing ring is reinforced to provide an improved superstructure weight distribution. Designed and built for both shovel and backhoe configurations, the enlarged undercarriage offers an efficient ground bearing pressure repartition providing the necessary stability and reliability.



Strengthened Attachment Design

Backhoe or face shovel attachments are built to face all standard and specific applications:

- Use of advanced welding techniques
- Reinforced with strategically located castings in high stress areas
- Designed for maximum structure life
- Use of cutting-edge engineering tools such as Finite Element Analysis and Fatigue Life Analysis



Liebherr Vertical Integration

Liebherr-made integrated parts are:

- Diesel engine
- Hydraulic pumps and motors
- Splitter box
- Electronic and control technology
 - Control and regulation electronics
 - Display and operation units
- Hydraulic cylinders
- Large diameter bearing (swing ring)
- Swing and travel drives
- Ground Engaging Tools



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

Designed for safe access on the machine upperstructure via:

- Ladder and catwalk with handrails
- A 45° stairway (option)
- Walkway with slip-resistant surfaces
- Intermediary platform near the access ladder for easy rise of toolbox
- Emergency ladder available near the cab





Safety



The Liebherr R 9150 provides uncompromising safety for operators and maintenance crew. As it is designed to be serviced from one side, the R 9150 allows effortless access facilities to the major service points for quick and safe maintenance. The R 9150's newly designed cab is reinforced for operator safety.

Service-Friendly Machine Design

Safe Service Access The R 9150 is fitted with ergonomic access for fast and safe maintenance. All service points are within reach from one side and at machine level. The R 9150's upperstructure is accessible via a robust fixed ladder or via an optional hydraulic actuated 45° stairway.

Easy Inspection and Components Replacement All components have been located in areas that allow for effortless inspection and replacement. The R 9150 is equipped with robust hinged louvers for easy cleaning and maintenance. Numerous service lights are strategically located in the main service areas to sustain suitable maintenance conditions, day or night.

Secure Maintenance The R 9150 eliminates hazards to ensure a safe environment for the service staff during maintenance. Emergency stops are strategically located in the cab and 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 9150's cab provides maximum protection for the operator. The structure is composed of strong, low stress tubing and safety glass. The Falling Object Protection System (FOPS) and the front guard are available as an option for even more safety.

Engine Compartment Provision of Security The engine compartment integrates a protection wall that separates the engine from the hydraulic pumps. This reduces the risk of hydraulic oil entering the engine compartment. The turbochargers and exhaust systems are heat shielded, and all the hydraulic hoses are made from a highly resistant material.

Machine Improved Visibility

The machine is easily visible even by night or in extremely dusty working environments thanks to:

- Reflective stripes on counterweight
- Four long-range working halogen lights located on attachment and upperstructure (Xenon in option)
- Travel alarm system with light and buzzer



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
- One LCD color screen 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

Optimized 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 monitor panel to reduce engine load, improve fuel efficiency and reduce carbon emissions.

Controlled Emission Rejections

The R 9150 is powered by a high horsepower diesel engine which complies with the USA/EPA Tier 2 emission limits. This power drive makes the R 9150 cost effective without compromising productivity whilst reducing the machines impact on the environment.

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, Authorization 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 Liebherr diesel engine	
Rating per ISO 9249	565 kW/757 HP at 1,800 rpm
Model	Liebherr D9512 (USA/EPA Tier 2 or fuel consumption optimized setting)
Type	V12 cylinder engine
Bore/Stroke	128/157 mm / 5.04/6.18 in
Displacement	24,24 l / 1,479 in ³
Engine operation	4-stroke diesel common-rail direct injection turbo-charged
Cooling	water-cooled, hydrostatic fan drive
Air cleaner	dry-type air cleaner, primary and safety elements, automatic dust discharge
Fuel tank	1.984 l / 524 gal
Engine idling	automatic idle control
Electrical system	
Voltage	24 V
Batteries	4 x 75 Ah / 12 V
Starter	24 V / 2 x 8.4 kW
Alternator	24 V / 140 A
RPM adjustment	step by step via rpm selector



Hydraulic System

Hydraulic pump	
for attachment and travel drive	3 Liebherr variable flow axial piston pumps
Max. flow	3 x 512 l/min. / 3 x 135 gpm
Max. pressure	350 bar / 5,076 psi
Pump management	electronically controlled pressure and flow management with oil flow optimisation
Hydraulic pump	
for swing drive	1 Liebherr reversible swash plate pump, closed-loop circuit
Max. flow	635 l/min. / 168 gpm
Max. pressure	380 bar / 5,511 psi
Hydraulic tank	1.200 l / 317 gal
Hydraulic system	1.600 l / 423 gal
Hydraulic oil filter	1 high pressure safety filter after each high pressure pump + extra-fine filtration of entire return flow with integrated by-pass filtration (15/5 µm) + dedicated leak-oil filtration
Hydraulic cooler	1 separated cooler, temperature controlled fan driven via 1 hydraulic piston motor
MODE selection	adjustment of machine performance and the hydraulics via a mode selector to match application
ECO	for economical operation (can be combined with fuel optimized setting)
POWER	for maximum digging power and heavy duty jobs



Electro-Hydraulic Controls

Servo circuit	independent, electric over hydraulic proportional controls of each function
Emergency control	via accumulator for all attachment functions with stopped engine
Power distribution	via monoblock control valves with integrated primary relief valves and secondary valves
Flow summation	to attachment and travel drive
Closed-loop circuit	for uppercarriage swing drive
Control functions	
Attachment and swing	proportional via electronic joystick levers
Travel	proportional via electronic pedals or removable hand levers
Shovel flap functions	proportional via electronic pedals



Electric System

Electric isolation	easy accessible battery isolators
Working lights	high brightness halogen lights: <ul style="list-style-type: none"> - 2 on working attachment - 1 on RHS of uppercarriage - 1 on LHS of uppercarriage Xenon or LED lights in option
Emergency stop switches	in the cab and 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	2 Liebherr axial piston motors
Transmission	2 Liebherr planetary reduction gears
Swing ring	Liebherr, sealed single race ball bearing swing ring, internal teeth
Swing speed	0 - 6.5 rpm
Parking brake	wet multi-disc brakes, spring applied, hydraulically released



Uppercarriage

Design	torque resistant modular design upper frame
Attachment mounting	parallel length girders
Catwalks	large catwalk on the left-hand side with retractable ladder

Technical Data



Operator's Cab

Cab	sound insulated, tinted windows. Front window armored glass, door with sliding window
Operator's seat	air suspended, body-contoured with shock absorber, adjustable to operator's weight
Joysticks	joystick levers integrated into armrest of seat, armrest adjusted to seat position
Condition monitoring	machine condition monitoring system with error reporting and operational information
Display	color LCD-display with low and high brightness settings
Rear vision system	camera installation on counterweight and right-hand side of the uppercarriage displayed over the LCD-display
Heating system	standard automatic air conditioning, combined cooler/heater, additional dust filter in fresh air/recirculated
Noise level (ISO 6396)	78 dB(A)



Undercarriage

Version HD	heavy duty
Drive	Liebherr swash plate motors
Transmission	Liebherr planetary reduction gears
Travel speed	0 – 2,9 km/h / 0 – 1.80 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

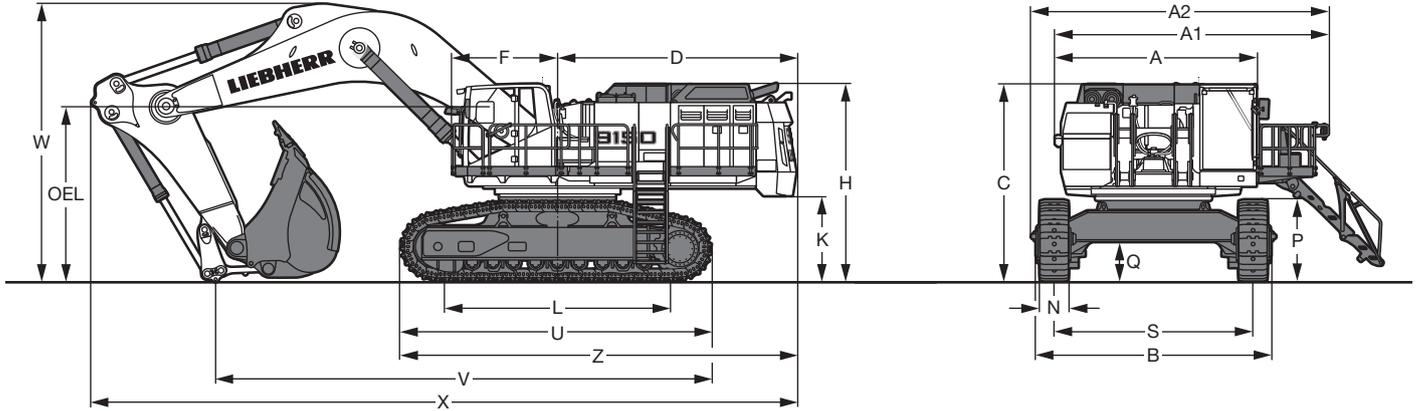
Type	Lincoln Centromatic lubrication system, for the entire attachment/swing ring bearing and teeth
Grease pumps	1 Lincoln Flowmaster pump for attachment/swing ring bearing lubrication 1 Lincoln P203 electric pump for swing teeth lubrication
Capacity	65 l/17.2 gal bulk container for attachment/swing ring bearing, separated 8 l/2.1 gal container for swing ring teeth
Refill	via quick connections and grease filters for both containers



Attachment

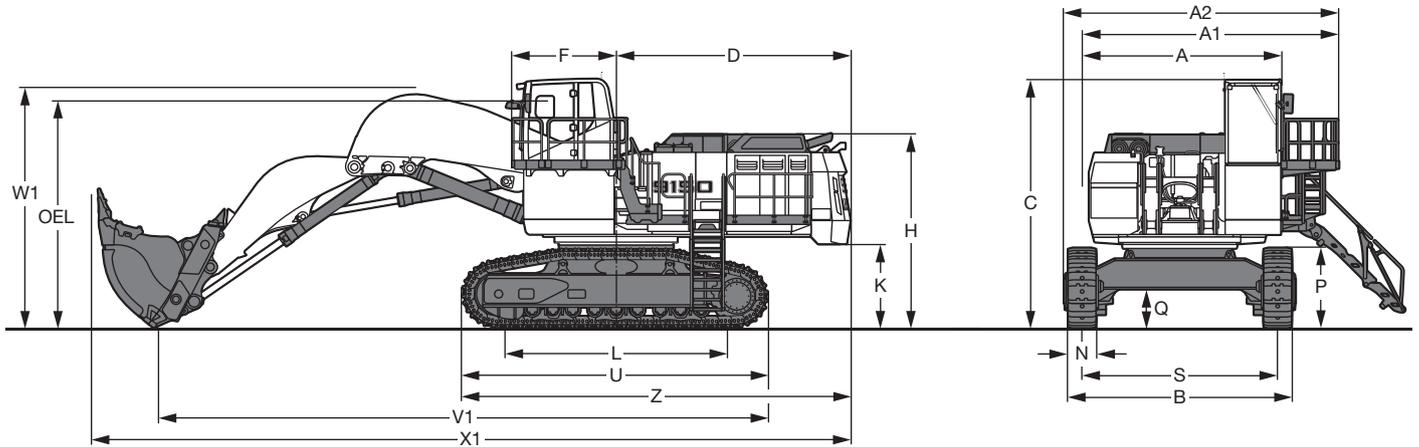
Type	box-type, combination of resistant steel plates and cast steel components
Hydraulic cylinders	Liebherr design
Pivots	sealed, low maintenance
Pivots bucket-to-stick bucket-to-link	O-ring sealed and completely enclosed
Hydraulic connections	pipes and hoses equipped with SAE flange connections

Dimensions



		mm/ft in
A		4.278/14'
A1		5.827/19' 1"
A2		6.233/20' 4"
B		5.087/16' 8"
C		4.230/13'10"
D		5.060/16' 7"
F		2.233/ 7' 3"
H		4.225/13'10"
K		1.840/ 6'
L		5.200/14'
N	500/1'7" 600/1'11"	750/ 2' 5"
P		1.748/ 5' 8"
Q		852/ 2' 9"
S		4.230/13'10"
U		6.610/21' 8"
Z		8.365/27' 5"
OEL	Operator's Eye Level	3.614/11'10"

	Stick Length m/ft in	Gooseneck Boom 7,80 m/25'7" mm/ft in	Gooseneck Boom 9,30 m/30'6" mm/ft in
V	3,40/11'1" 4,60/15'1" 5,70/18'8"	10.550/34'7" -/- -/-	12.140/39'9" 10.225/33'7" 10.450/34'3"
W	3,40/11'1" 4,60/15'1" 5,70/18'8"	6.320/20'8" -/- -/-	6.145/20'1" 7.130/23'4" 8.025/26'3"
X	3,40/11'1" 4,60/15'1" 5,70/18'8"	15.000/49'2" -/- -/-	16.500/54'1" 15.700/51'5" 15.145/49'8"

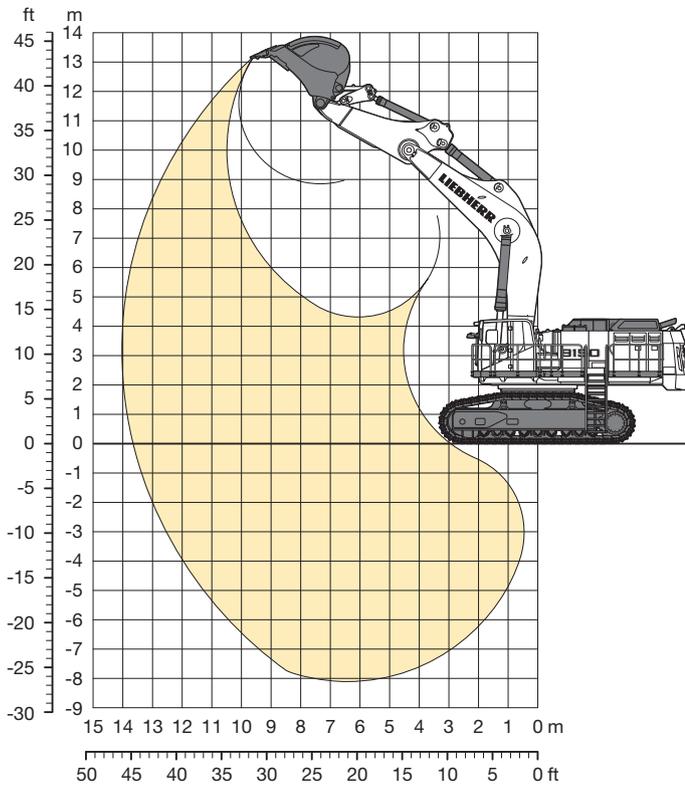


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K		1.840/ 6'
L		5.200/14'

		mm/ft in
N	500/1'7" 600/1'11"	750/ 2' 5"
P		1.748/ 5' 8"
Q		852/ 2' 9"
S		4.230/13'10"
U		6.610/21' 8"
V1		13.250/43' 4"
W1		5.265/17' 3"
X1		16.400/53' 9"
Z		8.365/27' 5"
OEL	Operator's Eye Level	4.814/15' 9"

Backhoe Attachment

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



Digging Envelope

Stick length	m	3,40
	ft in	11' 1"
Max. digging depth	m	8,10
	ft in	26' 6"
Max. reach at ground level	m	13,65
	ft in	44' 8"
Max. dump height	m	8,84
	ft in	28' 11"
Max. teeth height	m	13,20
	ft in	43' 3"
Max. digging force (ISO 6015)	kN	530
	lbf	119,149
Max. breakout force (ISO 6015)	kN	620
	lbf	139,381

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 8,30 m³/10.9 yd³.

Undercarriage		HD	
Pad width	mm/ft in	600/1'11"	750/2'5"
Weight	kg/lb	128.000/282,200	131.400/289,687
Ground pressure*	kg/cm ² /psi	1,87/26.60	1,54/21.90

* according to ISO 16754

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 7451	m ³	9,20	8,70	9,20	8,30	7,60	8,00	7,60	7,20
	yd ³	12.0	11.4	12.0	10.9	9.9	10.5	9.9	9.4
Suitable for material up to a specific weight of	t/m ³	1,65	1,8	1,6	1,8	2,0	1,8	1,9	2,1
	lb/yd ³	2,782	3,035	2,698	3,035	3,373	3,035	3,204	3,541
Cutting width	mm	2.700	2.620	2.700	2.550	2.300	2.400	2.300	2.200
	ft in	8'10"	8'7"	8'10"	8'4"	7'6"	7'10"	7'6"	7'2"
Weight	kg	7.500	7.340	8.200	7.870	7.700	8.600	8.400	8.300
	lb	16,534	16,181	18,077	17,350	16,975	18,959	18,518	18,298
Wear kit level		I	I	II	II	II	III	III	III

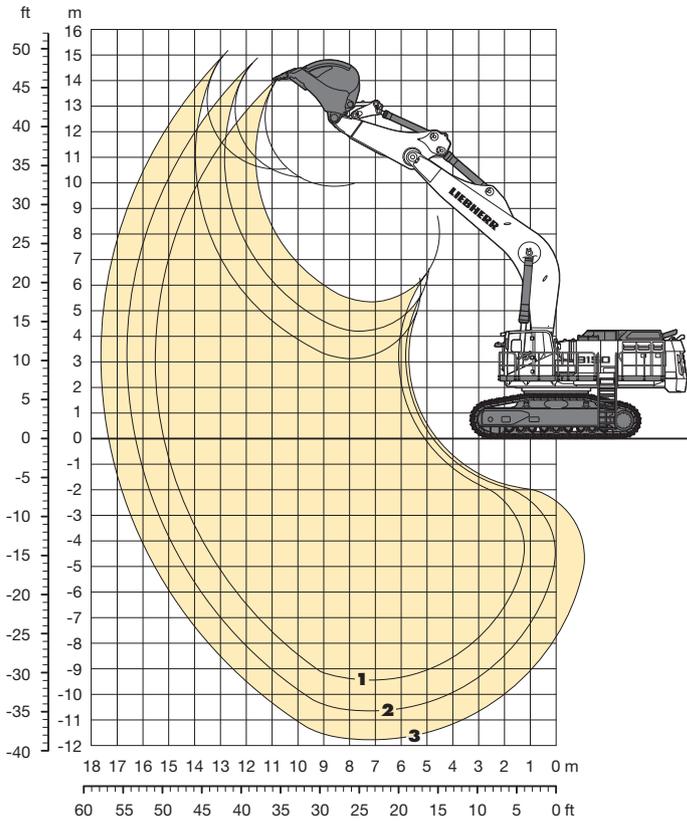
GP: General purpose bucket with Liebherr Z100 teeth

HD: Heavy-duty bucket with Liebherr Z110 teeth

XHD: Heavy-duty rock bucket with Liebherr Z110 teeth

Backhoe Attachment

with Gooseneck Boom 9,30 m/30'6"



Digging Envelope

		1	2	3
Stick length	m	3,40	4,60	5,70
	ft in	11'1"	15'1"	18'8"
Max. digging depth	m	9,45	10,65	11,80
	ft in	30'11"	34'11"	38'8"
Max. reach at ground level	m	15,20	16,30	17,35
	ft in	49'10"	53'5"	56'10"
Max. dump height	m	9,85	10,20	10,50
	ft in	32'3"	33'5"	34'5"
Max. teeth height	m	14,15	14,90	15,20
	ft in	46'4"	48'10"	49'10"
Max. digging force (ISO 6015)	kN	530	440	390
	lbf	119,149	98,916	87,675
Max. breakout force (ISO 6015)	kN	620	620	620
	lbf	139,382	139,382	139,382

Operating Weight and Ground Pressure

The operating weight includes the basic machine with gooseneck boom 9,30 m/30'6", stick 4,60 m/15'1" and bucket 5,00 m³/6.5 yd³.

Undercarriage		HD	
Pad width	mm/ft in	600/1'11"	750/2'5"
Weight	kg/lb	128.000/282,200	131.400/289,687
Ground pressure*	kg/cm ² /psi	1,87/26.60	1,54/21.90

* according to ISO 16754

Buckets

For materials classe according to VOB, Section C, DIN 18300		< 5	< 5	5 – 6	5 – 6	5 – 6	7 – 8
Typical operation according to VOB, Section C, DIN 18300		GP	GP	HD	HD	HD	XHD
Capacity ISO 7451	m ³	5,50	6,50	4,20	5,00	6,00	4,20
	yd ³	7.2	8.5	5.5	6.5	7.8	5.5
Suitable for material up to a specific weight of							
with stick 3,40 m	t/m ³	–	1,6	–	2,2	1,8	2,2
with stick 10'5"	lb/yd ³	–	2,698	–	3,710	3,035	3,710
with stick 4,60 m	t/m ³	1,6	1,3	2,1	1,8	1,3	2,0
with stick 14'9"	lb/yd ³	2,698	2,192	3,541	3,035	2,192	3,373
with stick 5,70 m	t/m ³	1,4	–	1,8	1,5	–	1,6
with stick 18'8"	lb/yd ³	2,361	–	3,035	2,530	–	2,698
Weight	kg	6.500	7.000	6.600	6.800	7.200	7.300
	lb	14,33	15,432	14,550	14,991	15,873	16,094

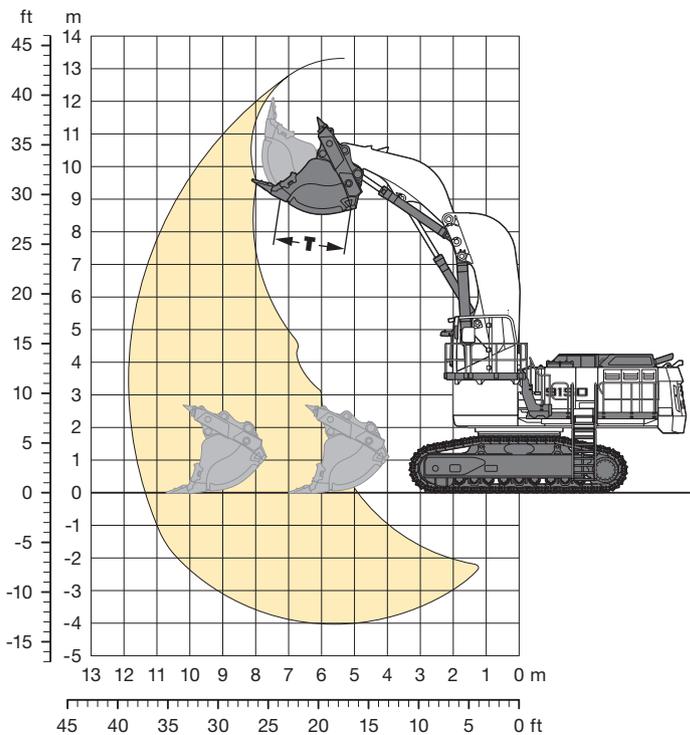
GP: General purpose bucket with Liebherr Z100 teeth

HD: Heavy-duty bucket with Liebherr Z110 teeth

XHD: Heavy-duty rock bucket with Liebherr Z110 teeth

Shovel Attachment

with Shovel Boom 5,30 m/17'4"



Digging Envelope

Stick length	3,80 m/12' 5"
Max. reach at ground level	10,25 m/36'10"
Max. dump height	8,55 m/28'
Max. crowd length	4,10 m/13' 5"
Bucket opening width T	2.150 mm/ 7'
Max. crowd force at ground level (ISO 6015)	650 kN/146,126 lbf
Max. crowd force (ISO 6015)	779 kN/175,126 lbf
Max. breakout force (ISO 6015)	720 kN/161,862 lbf

Operating Weight and Ground Pressure

The operating weight includes the basic machine with shovel attachment and a 8,00 m³/10.5 yd³ bucket.

Undercarriage		HD	
Pad width	mm/ft in	600/1'11"	750/2'5"
Weight	kg/lb	130.000/286,600	133.400/294,100
Ground pressure*	kg/cm ² / psi	1,90/27.02	1,56/22.20

* 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	5 – 6	7 – 8	7 – 8	7 – 8
Typical operation according to VOB, Section C, DIN 18300		GP	GP	HD	HD	HD	HD	XHD	XHD	XHD
Capacity ISO 7546	m ³	9,30	8,90	8,90	8,30	7,70	7,00	8,30	7,70	7,00
	yd ³	12.2	11.6	11.6	10.9	10.1	9.2	10.9	10.1	9.2
Suitable for material up to a specific weight of	t/m ³	1,6	1,7	1,6	1,8	2,0	2,4	1,7	1,85	2,25
	lb/yd ³	2,698	2,867	2,698	3,035	3,373	4,047	2,867	3,120	3,794
Cutting width	mm	2.900	2.900	2.900	2.900	2.900	2.600	2.900	2.900	2.600
	ft in	9'6"	9'6"	9'6"	9'6"	9'6"	8'6"	9'6"	9'6"	8'6"
Weight	kg	13.500	13.100	14.020	13.250	12.920	11.550	14.180	13.800	12.500
	lb	29,762	28,881	30,909	29,211	28,484	25,463	31,262	30,424	27,558
Wear kit level		I	I	II	II	II	II	III	III	III

GP: General purpose bucket with Liebherr Z100 teeth

HD: Heavy-duty bucket with Liebherr Z110 teeth

XHD: Heavy-duty rock bucket with Liebherr Z110 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.

Optional Equipment



Undercarriage

Narrow track pad width (500 mm/1'7")
Wide track pad width (750 mm/2'5")
Removable side frames
Rock protection for travel drive



Uppercarriage

Hydraulically operated 45° access stair
Electric-powered refueling pump
Heavy counterweight for backhoe configuration (22.000 kg/48,500 lb)
Increased fuel tank capacity (for 24h operation)
Xenon lighting kit (11 floodlights)
Grid protection for front floodlights
Semi-automatic swing brake with joystick control
Rock protection for swing gear and grease lines
Wiggins/Banlaw/other brand name fast refueling system
Wiggins/Banlaw/other brand name fast refilling system (excluding fuel)
Wiggins/Banlaw/other brand name fast refueling system with Multiflo Hydro-Flo®
Wiggins/Banlaw/other brand name counter plugs (service trucks)



Hydraulics

Fine filtration bypass (2 µm)
Oil cooler protection filter



Engine

Fuel consumption optimized engine version (Tier non-certified)



Operator's Cab

4-point seat belt
Cab elevation (1.200 mm/3'9")
Cab pressurization
FOPS top guard
Operator comfort kit
Protective front grid



Attachment

Piston rod guard for bucket cylinder
Quick change coupling



Safety

Additional Xenon lighting with timer (main access)
Automatic fire fighting system (foam and powder)



Specific Solutions

Arctic kit -20 °C/- 4 °F
Arctic kit -30 °C/-22 °F
Arctic kit -40 °C/-40 °F
Hammer/shear attachments
Grapple attachment



General

Maritime transport packaging