

Mining Excavator

R 9150



Operating Weight with
Backhoe Attachment:
128 tonnes / 141 tons

Shovel Attachment:
130 tonnes / 143 tons

Engine:
565 kW / 757 HP

Bucket Capacity:
8.30 m³ / 10.9 yd³

Shovel Capacity:
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LIEBHERR

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Productivity
Working Harder and Faster



Efficiency
Moving More for Less



 **Reliability**
Ready to Work
When You Need It

 **Customer Service**
World-Class Support,
Everywhere, Every Day

 **Safety**
Protecting Your Most
Important Assets

 **Environment**
Mining Responsibly





Working Harder and Faster

The 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 off highway 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.

Fast and Precise Movement

Liebherr Engine V12

The R9150 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 extreme conditions.

Fast Cycle Time

Rather than using a standard open hydraulic circuit, the R 9150 employs a closed-loop swing circuit enabling maximum swing torque while retaining the full oil flow for the working circuit. The main hydraulic circuit comprises a combination of three independent main valves fed by three working pumps, providing unrivaled flexibility of attachment control and force distribution for fast movement and lowest cycle times.

Precise Machine Motions

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

High Digging and Lifting Capabilities

High Digging Forces

Designed for the best mechanical force distribution, the production-tailored attachment delivers increased 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 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.



Liebherr Diesel Engine

- V12 by Liebherr
- US/EPA Tier 2/Tier 4i Compliant
- Fuel consumption optimized version (optional)
- Automatic idle control
- Max. altitude without derating: 3,600 m
- Eco-Mode selector

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

Exclusive Bucket Solution

- Innovative Liebherr bucket design to maximize bucket fill factor
- Optimized Liebherr GET and wear package according to customer application
- Ensure optimal penetration efficiency
- Single GET hammerless locking system for safe and easy maintenance
- Fully patented GET system design for optimal penetration/lifetime
- Four tooth profiles available for various range of applications



Efficiency



Moving More for Less

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

Built for Maximum Profitability

Electro-Hydraulic System Efficiency

Liebherr hydraulic technology in combination with the precision of electronic control contributes to the R 9150's efficient use of energy. The high-pressure hydraulic system and the optimized pipe and hose layout maximize usable power transmission. 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.

Independent Cooling System

Oil and water cooling fans are independent and electronically managed. The on-demand cooling control enables to maximize available power for the working process. This technology contributes to maintaining sustainable temperature of all hydraulic components extending their life.

Closed Loop Swing Circuit

All Liebherr Mining excavators are equipped with a closed loop swing circuit. Kinematic energy can be saved when the swing motion is used during deceleration, to drive the main and auxiliary pumps, reducing fuel consumption and allowing faster boom lift motion.

Comfortable Cab for Efficient Work

Superior Operator Comfort

The modern large cab provides ideal working conditions and optimal operator's comfort. Mounted on silent blocks, the R 9150's cab design reduces vibrations and limits noise pollution to provide a quiet working environment.

Extended Components Lifetime

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, while the grease and fuel tanks are sized to considerably extend the time between service intervals.



Advanced Machine Monitoring

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

First-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 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 / recirculated air
- Pressurization to prevent dust penetration (optional)
- Operator Comfort Kit as option: sun blinds, bottle cooler, reading light, electronic operator weight adjustment



Reliability



Ready to Work When You Need It

With over 50 years of innovative thinking, engineering and manufacturing excellence, Liebherr sets the industry standard for advanced equipment design and technology tools to provide the most up-to-date product, responding to the requirements of mining customers.

Quality: the Liebherr Trademark

Liebherr Components 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 reliable 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 selection 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 a single line centralized lubrication system for the entire attachment and swing ring. All greasing points are suitably protected against external damages, extending component life and ensuring constant performance over the excavator's 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 management providing the necessary stability and reliability.



Arctic Package (optional)

- Designed for reliability in regions with temperatures of down to $-50\text{ }^{\circ}\text{C}/-58\text{ }^{\circ}\text{F}$;
- Integrated into machine structure
- Start up easily even at very low temperatures
- Increases machine and component lifetime
- Optimum operator comfort even in harsh temperature conditions
- Facilitate machine servicing

Liebherr Component Integration

- Diesel engine
- Hydraulic pumps and motors
- Electronic and control technology
- Swing and travel drives
- Hydraulic cylinders
- Splitter box
- Swing ring
- GET

Quality Commitment

- Liebherr-Mining Equipment Colmar, France, ISO 9001 certified
- Compliance of materials tested in laboratory
- Quality control during the stages of production
- Vertical integration practice



Customer Service



World-Class Support, Everywhere, Every Day

By partnering with our customers, Liebherr implements tailored solutions from technical support, spare parts and logistics solutions to global maintenance for all types of equipment, all over the world.

Customer Support

International Service Organization

The Liebherr Service Support has always been an important focus for the company. Complete service during all operating phases from machinery installation to problem solving, spare parts inventory and technical service. Our service team is close to our customers, delivering the best specific maintenance solution to reduce both equipment downtime and repair costs.

Complete Training Program

From fully trained technicians to a full team of certified field service engineers, Liebherr commits to provide you with world class training. Dedicated to mining, the Liebherr training team provides maintenance staff training programs to allow cost-efficient and safe operations.

Remanufacturing

Reduced Costs and Investment

Over the course of a mining machine's lifetime, major components must be replaced to ensure continued safety, productivity and reliability. The Liebherr Mining Remanufacturing Program offers customers an OEM alternative to purchasing brand new replacement components. Enabling customers to achieve lowest possible equipment lifecycle costs without compromising quality, performance or reliability.

Fast Availability

A international service network and component facilities worldwide means that component repair services and exchange components are available to customers regardless of their location.

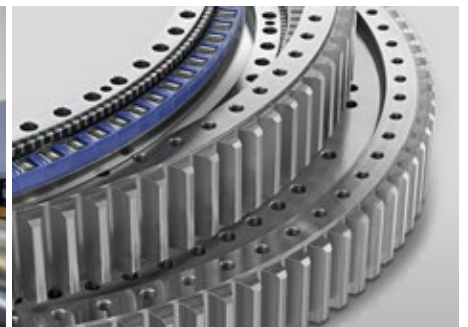
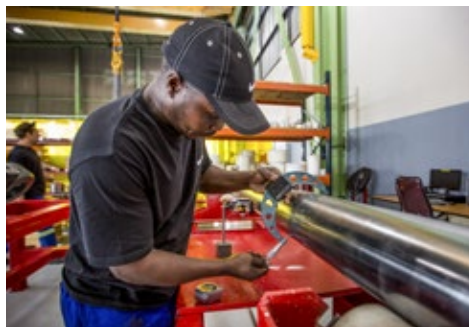
Genuine Parts

Performance

Using genuine Liebherr components ensures the best interaction within your machine, encouraging optimal performance and most effective machine operation and you can be sure that you are in line with the latest improvements and updates on parts providing peace-of-mind as all major components are tracked in the Liebherr Maintenance Management System.

Partnership

Liebherr regularly reviews requirements for parts and components for individual machines, based on operating hours, consumption and planned maintenance, resulting in minimized down time for customers. With access to the Global stock via all Liebherr Mining Warehouses, you will improve productivity by having the part you need, when you need it.



Troubleshoot Advisor Platform

- Unique maintenance system to help you identify problems
- Easy and friendly-user interface
- Compatible with mobile, tablet or laptop
- Regular updating of the database
- Procedures described by specialist with images and videos

Repair and Remanufacturing Programs

- Liebherr certified quality
- As-new warranty
- OEM expertise
- Reduced costs and investment
- Fast availability

Easy Access Parts Online

- Available any time anywhere
- User friendly interface
- Online ordering
- Save time and money



Safety



Protecting Your Most Important Assets

The Liebherr R 9150 provides uncompromising safety for operators and maintenance crews. Equipped with the service flap accessible from the ground level and integrating wide open accesses, the R 9150 allows quick and safe maintenance. The R 9150's cab provides numerous features for operator safety.

Safety-First Working Conditions

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.

Secure Maintenance

All components have been located to allow for effortless inspection and replacement. Numerous service lights are strategically located in the service areas to sustain suitable maintenance conditions, day or night. Emergency stops have been strategically placed in the cab, engine compartment and at ground level. The R 9150 eliminates hazards to ensure a safe environment for the service staff during maintenance.

Efficient Machine Protection

Protection Against Fire Ignition

The engine compartment integrates a bulkhead 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 fire resistant material.

Automatic Fire Suppression System

The R 9150 can be equipped with a fully integrated fire suppression, employing a dual agent solution to prevent and protect the machine. The fire suppression system has both automatic and manual release capabilities, emergency stop devices are strategically located on the machine to be easily accessible in any case by the operator.



Improved Accessibility

Ease of Maintenance

- All walkways with slip-resistant surfaces
- Emergency ladder available near the cab
- Wide open service access
- Reflective stripes on counterweight
- 45° hydraulic driven access stair (optional)

Working

Environment Control

- Rear and side camera system
- LCD color screen to display cameras view
- 4 Long-range working halogen lights (xenon/LED in option)

Commitment to

Employees Safety

- Safe and protected access to the components
- Major components centralized to be easily accessible
- E-stops located for the operator and maintenance staff
- Optional ground-level fluid maintenance hub



Mining Responsibly

Liebherr considers the conservation and preservation of the environment as a major challenge for the present and future. Liebherr are considerate of environmental issues in designing, manufacturing and managing machine structures, providing solutions that allow customers to balance performance with environmental consciousness.

Minimized Impact on Life

Optimized Energy Consumption, Fewer Emissions

The intelligent energy management system facilitates interaction between the hydraulic system and engine output with the goal of maximum performance with minimum consumption. In "Eco-Mode" setting, the machine is set up to reduce engine load, significantly improve fuel consumption and reduce emissions.

Controlled Emission Rejection

The R 9150 is powered by a high horsepower diesel engine which complies with the US/EPA Tier 2 or Tier 4i compliant emission limits. This power drive makes the R 9150 cost effective without compromising productivity and reduces the machines impact on the environment.

Sustainable Design and Manufacturing Process

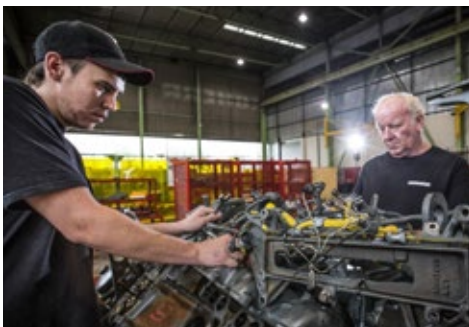
Certified Environment Management Systems

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 material, pollution control, water conservation, energy and environmental campaigns.

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 total cost of ownership.

*REACH is the European Community Regulation on chemicals and their safe use (EC 1907/2006) It deals with the Registration, Evaluation, Authorization and Restriction of Chemical Substances.



Remanufacturing Program

- Second life for your major components
- Liebherr certified quality
- Reduced environmental impact
- Reduced costs and investment

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

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)

Technical Data



Engine

1 Liebherr diesel engine	
Rating per ISO 9249	565 kW (757 HP) at 1,800 rpm
Model	Liebherr D9512 (US/EPA Tier 2, Tier 4i compliant 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



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



Swing Drive

Hydraulic motor	2 Liebherr axial piston motors
Swing gear	2 Liebherr planetary reduction gears
Swing ring	Liebherr, sealed single race ball bearing swing ring, internal teeth
Swing speed	0 – 6.5 rpm
Swing-holding brake	wet multi-disc brakes, spring applied, hydraulically released



Hydraulic System

Hydraulic pump	3 Liebherr variable flow axial piston pumps
for attachment and travel drive	
Max. flow	3 x 512 l/min. / 3 x 135 gpm
Max. pressure	350 bar / 5,076 psi
for swing drive	1 Liebherr reversible swashplate pump, closed-loop circuit
Max. flow	635 l/min. / 168 gpm
Max. pressure	350 bar / 5,076 psi
Pump management	electronically controlled pressure and flow management with oil flow optimisation
Hydraulic tank capacity	1,200 l / 317 gal
Hydraulic system capacity	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 oil 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



Electric System

Electric isolation	easy accessible battery isolators
Working lights	high brightness halogen lights: – 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



Uppercarriage

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



Operator's Cab

Design	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)	76 dB(A)



Undercarriage

Version HD	heavy duty
Drive	Liebherr swashplate motors
Travel gear	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

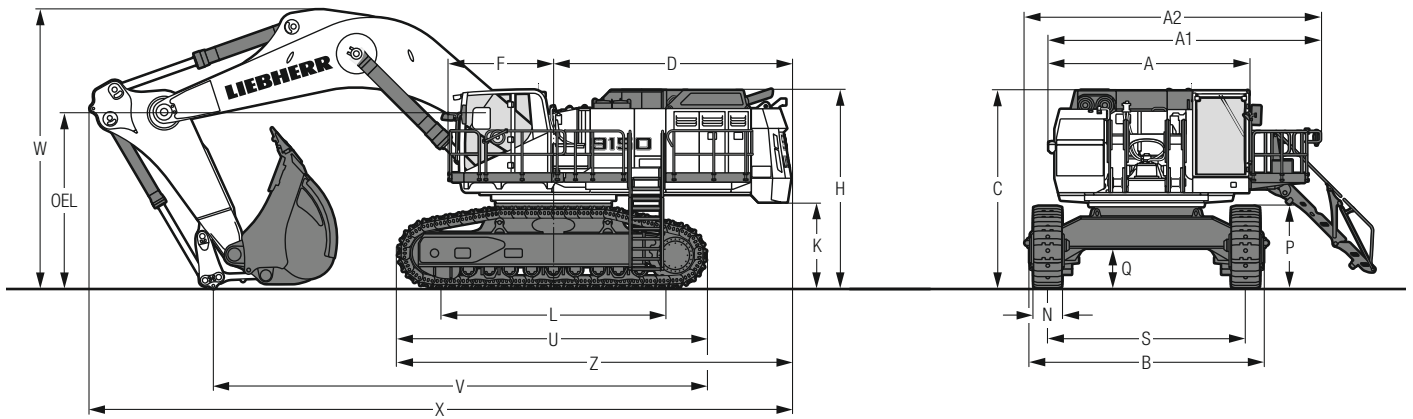
Type	single line lubrication system, for the entire attachment/swing ring bearing and teeth
Grease pumps	1 hydraulic pump for attachment/swing ring bearing lubrication, 1 electric pump for swing teeth lubrication
Capacity	65 l / 17.2 gal bulk container for attachment/swing ring bearing, separated 8 l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



Attachment

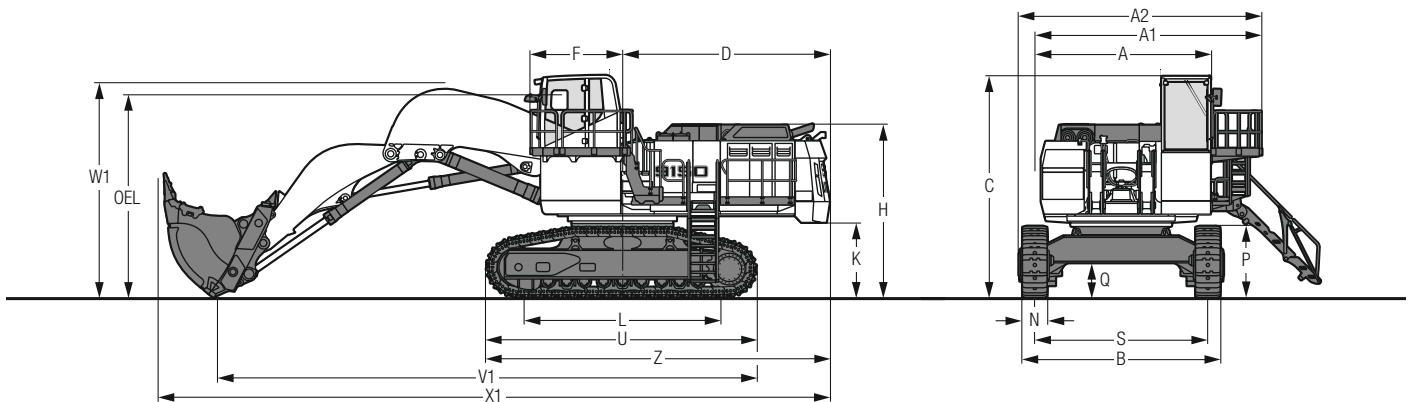
Design	box-type, combination of resistant steel plates and cast steel components
Hydraulic cylinders	Liebherr design
Hydraulic connections	pipes and hoses equipped with SAE flange connections
Pivots	sealed, low maintenance
Pivots bucket-to-stick	O-ring sealed and completely enclosed
Pivots bucket-to-link	

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	5,200/17' 1"	
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	Mono boom 7.80 m/25'7" mm/ft in	Mono boom 9.30 m/30'6" mm/ft in
V	3.40/11'1"	10,550/34'7"	12,140/39'9"
W	4.60/15'1"	-/-	10,225/33'7"
	5.70/18'8"	-/-	10,450/34'3"
X	3.40/11'1"	6,320/20'8"	6,145/20'1"
	4.60/15'1"	-/-	7,130/23'4"
	5.70/18'8"	-/-	8,025/26'3"
	3.40/11'1"	15,000/49'2"	16,500/54'1"
	4.60/15'1"	-/-	15,700/51'5"
	5.70/18'8"	-/-	15,145/49'8"

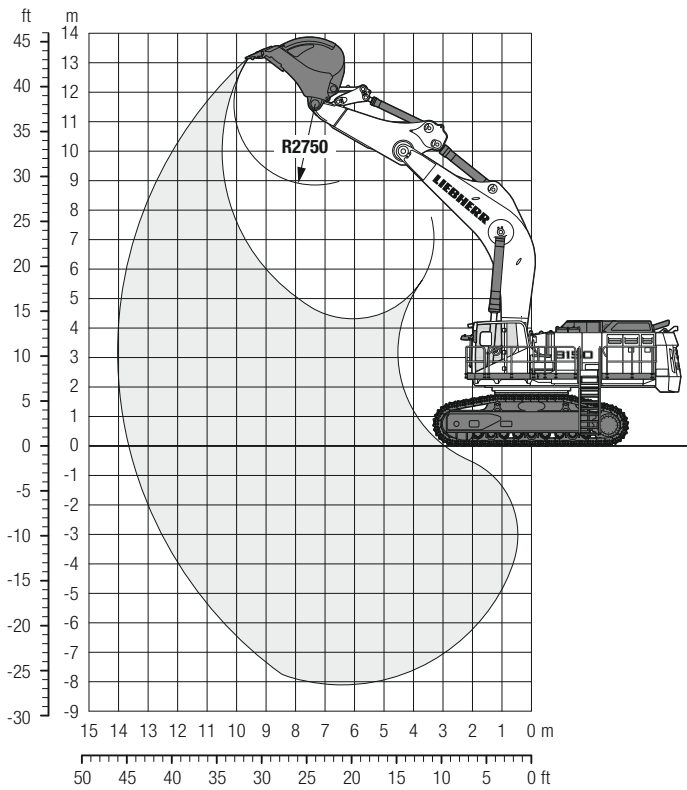


	mm/ft in	
A	4,278/14'	
A1	5,827/19' 1"	
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F	2,233/ 7' 3"	
H	4,225/13'10"	
K	1,840/ 6'	
L	5,200/17' 1"	

	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 Mono 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. dumping 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 mono 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

Backhoe Buckets

For materials class 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	7.20
	yd ³	12.0	11.4	12.0	10.9	9.9	10.5	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
	lb/yd ³	2,782	3,035	2,698	3,035	3,373	3,035	3,541
Weight								
	kg	7,500	7,340	8,200	7,870	7,700	8,600	8,400
	lb	16,534	16,181	18,077	17,350	16,975	18,959	18,518

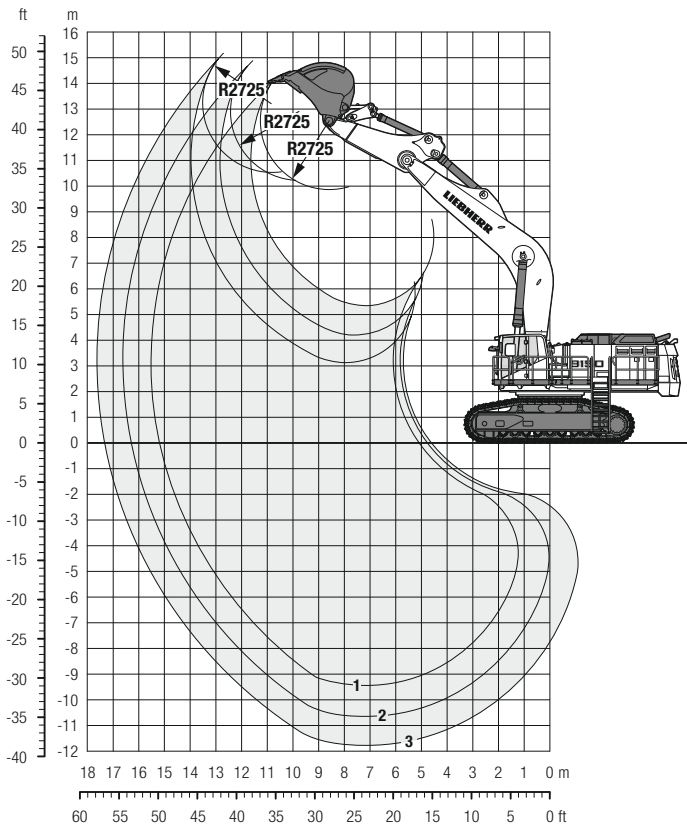
GP: General purpose bucket with Liebherr Z100 teeth

HD: Heavy-duty bucket with Liebherr Z110 teeth

XHD: Heavy-duty rock bucket with Liebherr Z110 teeth

Backhoe Attachment

with Mono 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. dumping 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 mono 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

Backhoe Buckets

For materials class 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 11'1"	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 15'1"	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

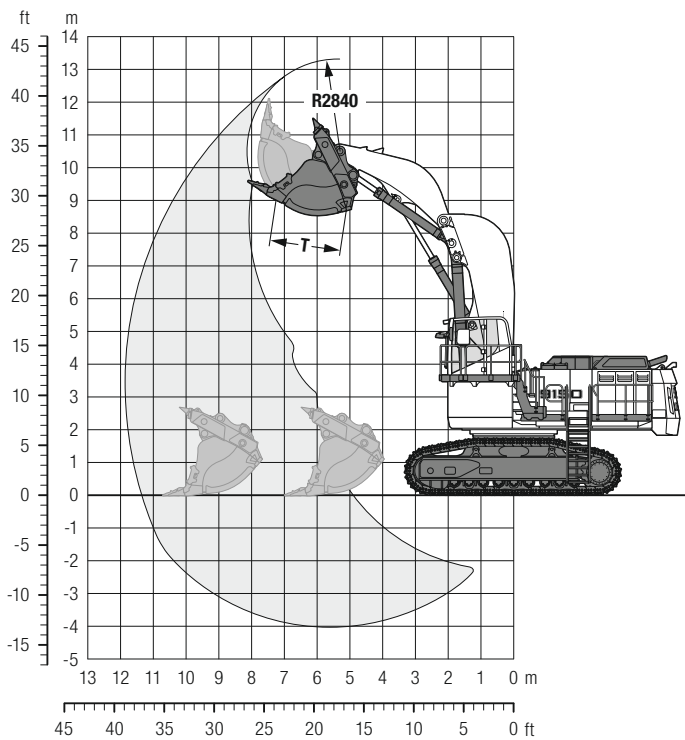
GP: General purpose bucket with Liebherr Z100 teeth

HD: Heavy-duty bucket with Liebherr Z110 teeth

XHD: Heavy-duty rock bucket with Liebherr Z110 teeth

Face 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. dumping 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 bucket
8.00 m³ / 10.5 yd³.

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

Face Shovel Buckets

For materials class 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 7451									
	m³	9.30	8.90	8.90	8.30	7.70	7.00	8.30	7.70
	yd³	12.2	11.6	11.6	10.9	10.1	9.2	10.9	10.1
Suitable for material up to a specific weight of									
	t/m³	1,6	1,7	1,6	1,8	2,0	2,4	1,7	1,85
	lb/yd³	2,698	2,867	2,698	3,035	3,373	4,047	2,867	3,120
Cutting width									
	mm	2,900	2,900	2,900	2,900	2,900	2,600	2,900	2,900
	ft in	9'6"	9'6"	9'6"	9'6"	9'6"	8'6"	9'6"	9'6"
Weight									
	kg	13.500	13.100	14.020	13.250	12.920	11.550	14.180	13.800
	lb	29,762	28,881	30,909	29,211	28,484	25,463	31,262	30,424

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

Optional Equipment

Undercarriage

Narrow track pad width (500 mm / 1'7")
Large track pad width (750 mm / 2'5")
600 mm / 1'11" track pads (reinforced profile)
Removable side frames
HD travel gear for muddy application
Rock protection for travel drive
Rock protection for undercarriage center frame
Rock protection for idler wheel
Rock protection for sprocket
Full length chain guide

Uppercarriage

Hydraulically operated 45° access stair
Electric-powered refueling pump
Heavy counterweight (22,000 kg / 48,500 lb)
Increased fuel tank capacity (24h operation)
LED lighting kit (11 pieces)
Xenon lighting kit (11 pieces)
Grid protection for front headlights
Semi-automatic swing brake with joystick control
Rock protection for swing gear and grease lines
Wiggins/Banlaw/other brand name fast fueling system
Wiggins/Banlaw/other brand name fast fueling system with Multiflo Hydrau-Flo®
Wiggins/Banlaw/other brand name counter plugs (service trucks)
Wiggins/Banlaw/other brand name couplings for ground level access service
Steel grease lines
Swing ring scrapers
Hydraulic-powered grease refill station

Hydraulic System

Fine filtration bypass (2 µm)
Oil cooler inlet screen

Engine

Fuel consumption optimized engine version (non-certified)

Operator's Cab

4-point seat belt
Cab elevation (500 mm / 1'7" / 1,200 mm / 3'9")
Cab pressurization
FOPS top guard with additional sunshade
Operator comfort package
Front protective grid
Pre-heating system for cab

Attachment

Piston rod guard for bucket cylinder (BH)
Piston rod guard for hoist cylinders (BH/FS)
Quick change coupling

Specific Solutions

Arctic package (-20 °C / -4 °F, -30 °C / -22 °F, -40 °C / -40 °F, -50 °C / -58 °F)
Hammer / shear attachments / tooth ripper
Grapple attachment
Arrangement for object handling operation
Hydraulic arrangement for special application (rotating / coupler)
Sound attenuation package

Safety

Additional LED lighting with timer (main access)
Additional emergency stop (ground level)
Automatic fire suppression system

General

Maritime transport packaging