Mining Excavator R 9250

Operating Weight with Backhoe Attachment:	250.000 kg / 551,200 lb
Operating Weight with Shovel Attachment:	253.500 kg / 558,900 lb
Engine Output:	960 kW / 1,287 HP
Bucket Capacity @ 1,8 t/m³ / 3,000 lb/yd³:	15,00 m³ / 19.6 yd³
Shovel Capacity @ 1,8 t/m³ / 3,000 lb/yd³:	15,00 m³ / 19.6 yd³

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.

Engine / Motor Options

Diesel engine available versions:

- Cummins QSK 38 (USA/EPA Tier 2)
- Cummins QSK 45 (USA/EPA Tier 1)
- Fuel consumption optimized version on Tier 2 engine (option)

Electrical motor (option):

- 3 phase AC squirrel cage motor
- Voltage on request
- 50 or 60 Hz frequency

Litronic plus®

Productivity

The R 9250 is built to outperform all competitors in the medium class mining market. Boasting a 15,00 m³ / 19.6 yd³ bucket capacity in standard configuration, the R 9250 is the ideal machine to load a fleet of 100 t dump trucks. Available in both diesel or electric versions, the R 9250 offers the flexibility to perform many specific applications.

Engineered for Intense Mining

Powerful Drive System

The R 9250 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. The electric drive system provides superior performance when the machine is used in the most specific conditions.

Optimized Cycle Times

Rather than using open hydraulic circuit, the R 9250 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 9250 design integrates the Litronic Plus electronic control system to allow for easy control even when simultaneous movements are required. The patented Liebherr electronic 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 9250's attachment ensures the highest forces, easy bucket penetration and high fill factor to perform even in the most demanding conditions.

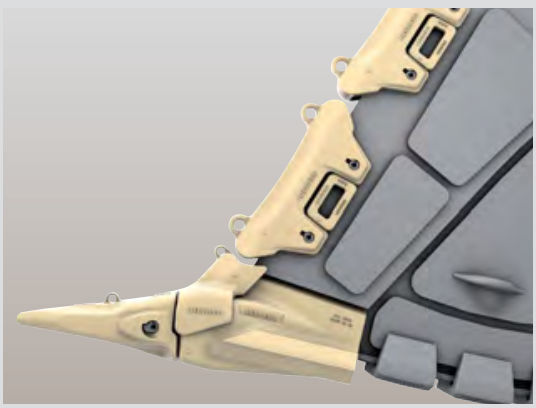
Power-Oriented Energy Management

The R 9250'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.

Litronic Plus - Electronic Control

A power management system developed to optimize electrical, mechanical, hydraulic power distribution which encompasses:

- Liebherr designed and built power components
- Continuous monitoring of the engine and electrical system
- Safe, fast and precise control
- Optimum equipment operation
- Productivity and efficiency maximization



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

Hydraulic System Efficiency

The R 9250's hydraulic system is designed for an optimized hydraulic power management via the:

- Closed-loop swing circuit
- Pressureless boom down function
- Electronic hydraulic pumps management
- High pressure hydraulic oil filtration system
- Electro-hydraulic control system
- Optimized pipe and hose layout

Efficiency

The R 9250 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 9250's spacious 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 9250'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 9250'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.

Comfortable Cab for Efficient Work

Superior Operator Comfort

The large and spacious cab which equips the R 9250 offers ideal working conditions and optimal operator's comfort. Mounted on silent blocks, the cab design reduces vibrations and limit noise pollution to provide a quiet environment.

Working Environment Total Control

The R 9250's cab offers a panoramic view over the entire machine and loading spot. Two outside cameras show areas that cannot be observed directly. Long-distance halogen working lights promote efficient loading.

Fast Maintenance System

The service flap is hydraulically actuated and accessible from the ground level allowing for fast maintenance:

- Hydraulic oil refill
- Engine oil refill and drainage
- Splitter box and swing gearbox oil exchange
- Attachment/swing ring bearing grease barrel refilling with filters
- Windshield washer water refilling
- Fast fuel refilling line

Comfort-Oriented Cab Design

An array of features:

- Tinted laminated safety glass
- Armored front and attachment side windows
- Heavy duty sun louvers on windows
- Adjustable air suspended seat
- A/C with dust filter in fresh air / recirculated
- Pressurization to prevent dust penetration
- Trainer seat

Liebherr Vertical Integration

Liebherr-made integrated parts are:

- 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 9250's outstanding reliability. The machine combines innovative technologies, design optimization and Liebherr components. Customers experience durable performance from the R 9250 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 9250 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 9250 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 9250 is mounted on a heavy duty 3-piece fatigue resistant undercarriage steel structure. This design provides better weight distribution of the superstructure and reduces ground bearing pressure. Designed and built for both shovel and backhoe configurations, the R 9250 provides 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
- Heat treatment to reduce residual stresses and increase fatigue life
- Designed for maximum structure life
- Use of cutting-edge engineering tools such as Finite Element Analysis and Fatigue Life Analysis

Arctic Kit (Option)

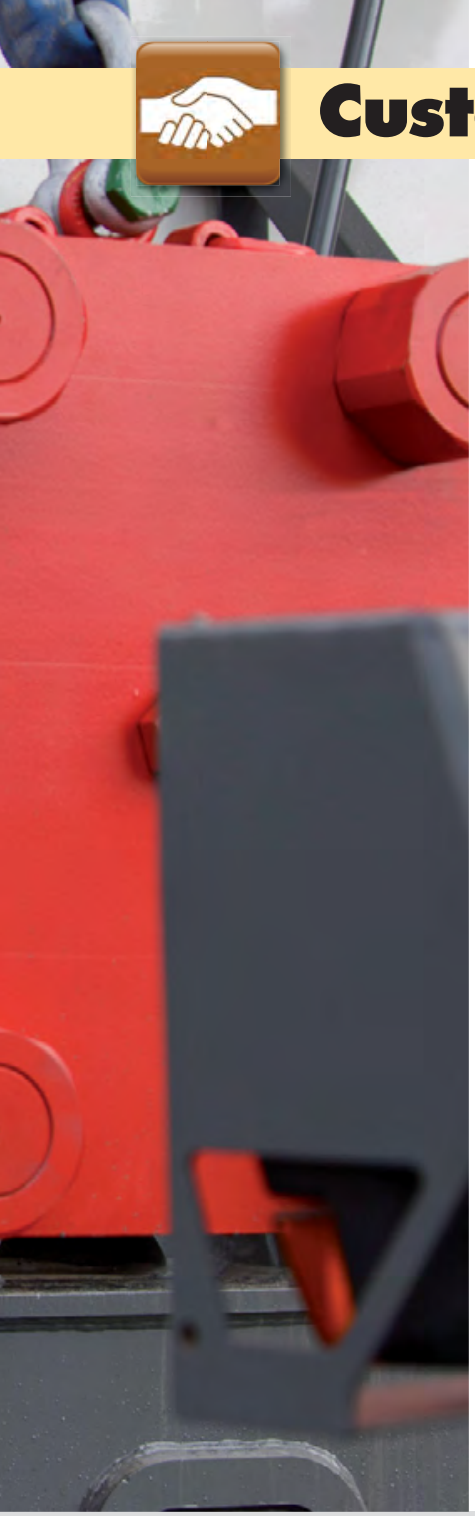
Designed for maximum reliability in regions with temperatures of down to -50°C / -58°F:

- Integrated into machine structure
- For 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.

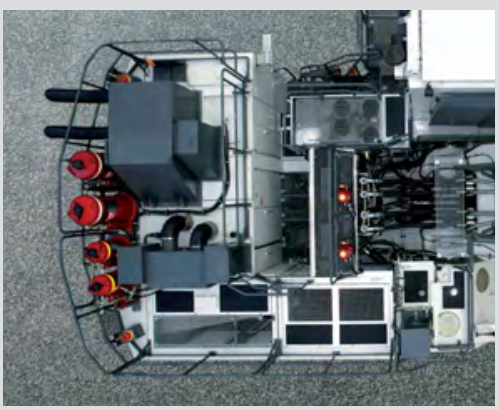
Liebherr Mining Exchange Components

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

Designed for safe access on the machine upperstructure via:

- Stairway and catwalks with handrails and perforated steps
- Walkways with slip-resistant surfaces
- Emergency egress with handrails in front of the excavator

Safety

The Liebherr R 9250 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 9250 allows quick and safe maintenance. The R 9250's cab provides numerous features for operator safety.

Service-Friendly Machine Design

Safe Service Access

The R 9250's top structure is accessible via a powered 45° stairway as standard on the Tier 2 version. The robust service flap provides easy ground level access to the main service points.

Easy Inspection and Components Replacement

All components have been located in areas that allow for effortless inspection and replacement. The R 9250 is equipped with robust hinged louvers for easy cleaning and maintenance. Numerous service lights are located in the main service areas to sustain suitable maintenance conditions, day or night.

Secure Maintenance

The R 9250 eliminates hazards ensuring a safe environment for the service staff during maintenance. Emergency stops are strategically located at ground level, in the cab, in hydraulic and engine compartments. 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 9250'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 armored front and attachment side windows enable to create a safe working environment for the operator.

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

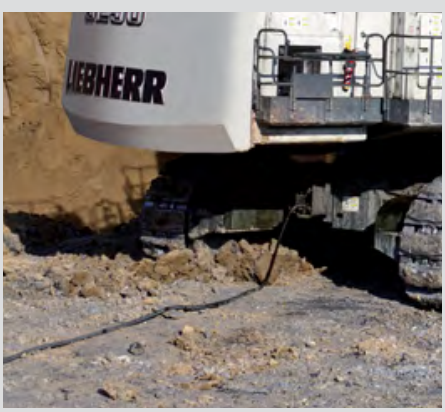
The machine is easily visible even by night or in extremely dusty working environments thanks to:

- Eight long-range working halogen lights located on attachment, uppercarriage and counterweight
- Xenon or LED lights 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



Electric Drive Version

The electric drive system is an efficient alternative to diesel engine allowing:

- Less vibration resulting in higher component lifetime
- Lower maintenance costs
- Less noise pollution
- High motor efficiency
- Maximum efficiency in cold climate conditions when combined with the Arctic Kit

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 equipment fuel efficiency, depending on the application. Fan coolers speed is adjusted on-demand in order to optimize energy consumption. The automatic idling system reduces the engine speed when the machine is at rest.

Controlled Emission Rejections

The R 9250 is powered by a high horsepower diesel engine which complies with the USA/EPA Tier 1 or Tier 2 emissions limits. The electric drive version is an efficient alternative for applications that do not require frequent machine relocation. The power system makes the R 9250 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.

Sound Attenuation Kit (Option)

Developed with the latest noise measurement technologies, this approach is based on both removal of noise at the source and passive sound attenuation:

- Noise-optimized fan regulation
- Valve bank covering
- Sound attenuation on louvers, doors and walls

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 SAE J 1995 — 960 kW/1,287 HP at 1,800 rpm
- Model — Cummins QSK45 (USA/EPA Tier 1)
- Type — 12 cylinder turbocharged V-engine after-cooler, two separate water cooling circuits, direct injection system
- Displacement — 45 l/2,745 in³
- Bore/Stroke — 159/190 mm/6.26/7.48 in

or

1 Cummins diesel engine
- Rating per SAE J 1995 — 940 kW/1,261 HP at 1,800 rpm
- Model — Cummins QSK38 (USA/EPA Tier 2 or fuel consumption optimized setting)
- Type — 12 cylinder turbocharged V-engine after-cooler, two separate water cooling circuits, direct injection system
- Displacement — 37,8 l/2,307 in³
- Bore/Stroke — 159/159 mm/6.26/6.26 in

Engine cooling system — fans driven via hydraulic piston motor
Air cleaner — dry-type air cleaner with pre-cleaner, with automatic dust ejector, primary and safety elements
Fuel tank — 5.440 l/1,434 gal
Electrical system
- Voltage — 24 V
- Batteries — 6 x 170 Ah/12 V
- Alternator — 24 V/260 Amp

Engine idling — automatic engine idling
Electronic engine control system — engine speed sensing over the entire engine RPM range. Provides integration of engine with other machine systems

Electric Motor (optional)

1 electric motor
Power output — 1.050 kW/1,408 HP
Type — 3 phase AC squirrel cage motor
Voltage — 6,000 V, other voltage on request
Frequency — 50 Hz (or 60 Hz)
Revolutions — 1,500 rpm or 1,800 rpm
Motor cooling — integrated air-to-air heat exchanger
Starting method — inrush current limited to 2,2 full load current

Electric System

Electric isolation — easy accessible battery isolations
Working lights — high brightness halogen lights:
- 2 on working attachment
- 1 on RHS of uppercarriage
- 3 on LHS of uppercarriage
- 2 on counterweight

Xenon or LED lights in option
Emergency stop switches — at ground level, in hydraulic compartment, in engine compartment and in operator cab
Electrical wiring — heavy duty execution in IP 65 standard for operating conditions of – 50 °C to 100 °C/ – 58 °F to 212 °F

Hydraulic System

Hydraulic pumps for attachment and travel drive — 3 variable flow axial piston pumps
- Max. flow — 2 x 771 l/min. + 1 x 579 l/min./ 2 x 204 gpm + 1 x 153 gpm
- Max. hydr. pressure — 320 bar/4,640 psi

Hydraulic pump for swing drive — 2 reversible swash plate pumps, closed-loop circuit
- Max. flow — 2 x 352 l/min./2 x 93 gpm
- Max. hydr. pressure — 350 bar/5,076 psi

Pump management — electronically controlled pressure and flow management with oil flow optimisation
Hydraulic tank capacity — 2.281 l/602 gal
Hydraulic system capacity — 4.050 l/1,070 gal
Hydraulic oil filter — 1 high pressure safety filter after each high pressure pump + fine filtration of entire return flow (15/5 µm)
Hydraulic oil cooler — cooler with temperature controlled fans driven via hydraulic piston motor

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 flanged on secondary valves for travel
- Flow summation — to attachment and travel drive

Control functions
- Attachment and swing — proportional via joystick levers
- Travel — proportional via foot pedals or hand levers
- Bottom dump bucket — proportional via foot pedals

Swing Drive

Hydraulic motor — 2 Liebherr axial piston motors
Swing gear — 2 Liebherr planetary reduction gears
Swing ring — Liebherr, sealed triple roller swing ring, internal teeth
Swing speed — 0 – 4.4 rpm
Swing-holding brake — hydraulically actuated, maintenance-free, multi-disc brakes integrated in each swing gear

Uppercarriage

Design — torque resistant designed upper frame in box type construction for superior strength and durability
Attachment mounting — parallel longitudinal main girders in box-section construction
Machine access — (Tier 1) hydraulically driven access ladder on the cab side of the uppercarriage, (Tier 2) 45° access system with handrails on the cab side of the uppercarriage, full controlled descent in case of emergency stop
additional emergency ladder fitted near the cab

Technical Data

Operator's Cab

Design	resiliently mounted, sound insulated, large windows for all around visibility, integrated falling object protection FOPS
Operator's seat	suspended, body-contoured with shock absorber, adjustable to operator's weight
Cabin windows	20,5 mm/0.8 in tinted armored glass for front window and 18 mm/0.7 in for right hand side windows, all other windows in tinted safety glass, high pressure windshield-washer system 75 l/20 gal watertank, sun louvers on all windows in heavy duty design
Heating system/ Air conditioning	heavy duty, fully automatic, high output air conditioner and heater unit
Cabin pressurization	ventilation with filter
Controls	joystick levers integrated into armrest of seat
Monitoring	via LCD-Display, data memory
Rear vision system	camera installation on counterweight and right-hand side of the uppercarriage displayed over an additional LCD-display
Automatic engine shut off	engine self-controlled shut off
Destroking of main pumps	in case of low hydraulic oil level
Safety functions	additional gauges with constant display for: engine speed, hourmeter, voltmeter, safety mode for engine speed control and pump regulation
Noise level (ISO 6396)	Diesel: L_{pA} (inside cab) = Tier 1: 77 dB(A) with oil/water fans at 100 % and AC fan at 65 % Electric: L_{pA} (inside cab) = 70 dB(A) with oil/water fans at 100 % and AC fan at 65 %

Undercarriage

Design	3-piece undercarriage, box type structures for center piece and side frames, stress relieved
Hydraulic motor	2 axial piston motors per side frame
Travel gear	Liebherr planetery reduction gear
Travel speed	0 – 2,1 – 2,7 km/h / 0 – 1.30 – 1.68 mph
Parking brake	spring engaged, hydraulically pressure released wet multi-disc brakes for each travel motor, maintenance-free
Track components	D 12, maintenance-free, forged double grouser pad
Track rollers/ Carrier rollers	9/2 per side frame
Automatic track tensioner	hydraulic and grease tensioner
Transport	undercarriage side frames are removable

Service Flap

Design	hydraulically actuated service flap, easily accessible from ground level to allow: – fuel fast refill – engine oil quick change – swing ring teeth grease barrel refilling via grease filter – attachment/swing ring bearing grease barrel refilling via grease filter – hydraulic oil refill – hydraulic oil draining – splitterbox oil refill – windshield wash water refilling

Other coupler type on request

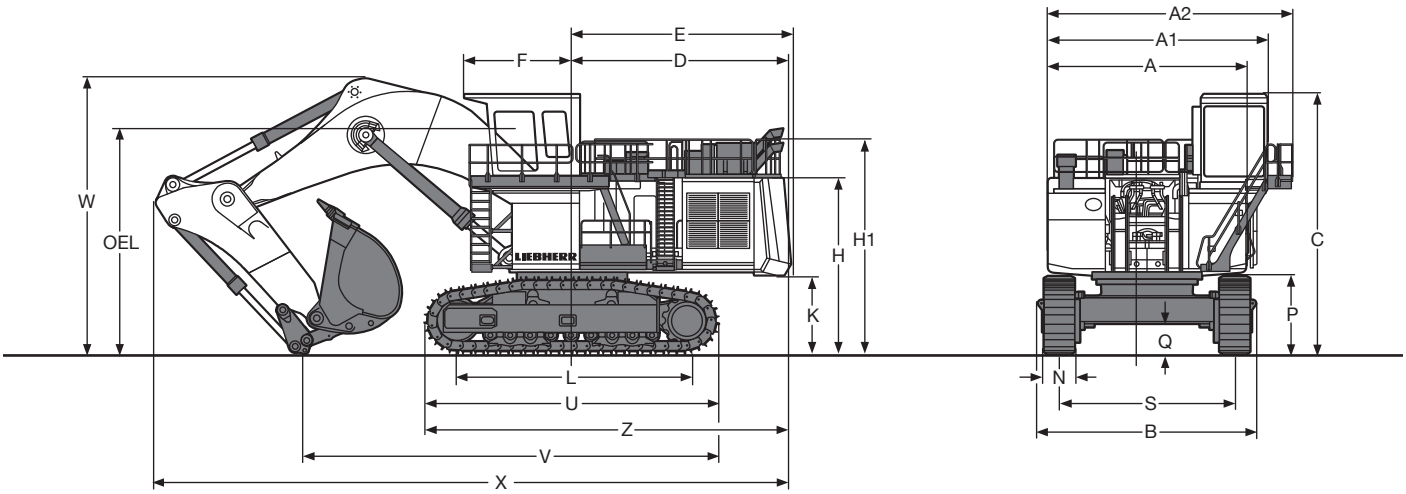
Central Lubrication System

Type	Lincoln Centromatic lubrication system, for the entire attachment/swing ring bearing and teeth
Grease pumps	Lincoln Powermaster pump plus separate P203 pump for swing ring teeth
Capacity	200 l/53 gal bulk container for attachment/ swing ring bearing, separated 15 l/4.0 gal bulk container for swing ring teeth
Refill	via the service flap for both containers, fill line with grease filters

Attachment

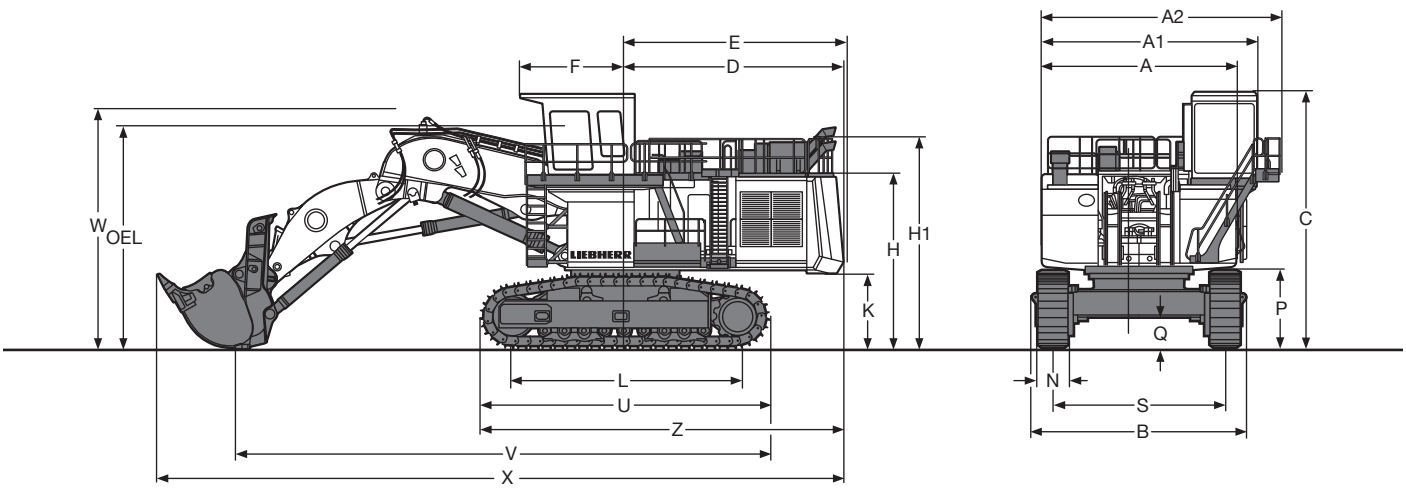
Design	box-type structure with large steel castings in all high-stress areas
Stick	wear protection underneath lower beam plate
Pivots	sealed and floating pins
Hydraulic cylinder	Liebherr design, sealed bearings, electronically controlled end-cushioning
Hydraulic connections	pipes and hoses equipped with SAE split-flange connections
Pivots bucket-to-stick	
Pivots bucket-to-link	O-ring sealed and completely enclosed
Kinematics	Liebherr parallel face shovel attachment geometry, electronic controlled end-cushioning

Dimensions



	mm/ft in
A	5.500/18’
A1	6.100/20’
A2	6.800/22’ 3”
B	6.183/20’ 3”
C	7.250/23’ 9”
D	6.100/20’
E	6.140/20’ 1”
F	2.993/ 9’ 9”
H	4.905/16’ 1”
H1	6.000/19’ 8”
K	2.205/ 7’ 2”

		mm/ft in
L		6.400/20’11”
N		850/ 2’ 9”
P		2.200/ 7’ 2”
Q		870/ 2’10”
S		4.900/16’
U		8.255/27’
V		11.600/38’
W		7.800/25’ 7”
X		17.800/58’ 4”
Z		10.240/33’ 7”
OEL	Operator’s Eye Level	6.350/20’ 9”

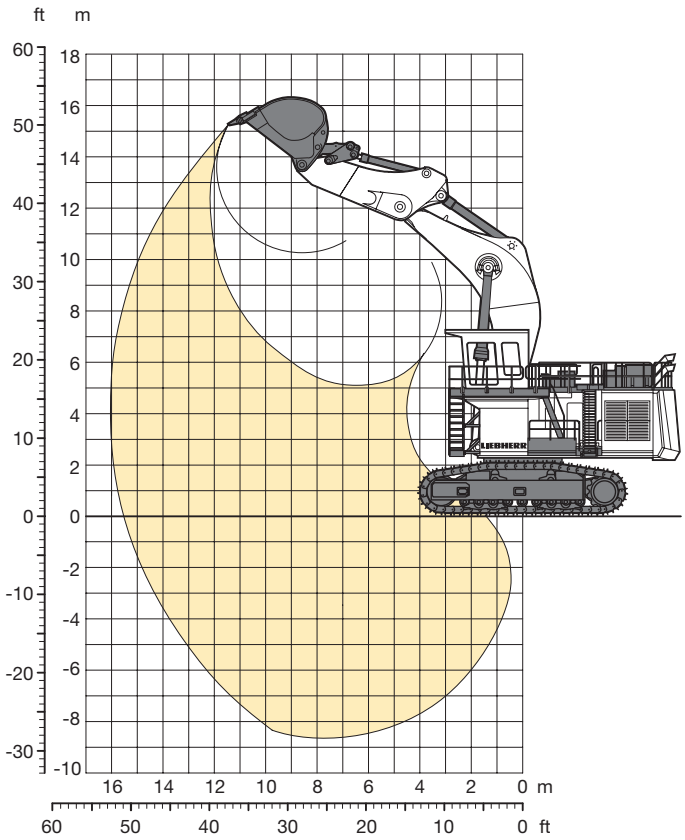


	mm/ft in
A	5.500/18’
A1	6.100/20’
A2	6.800/22’ 3”
B	6.183/20’ 3”
C	7.250/23’ 9”
D	6.100/20’
E	6.140/20’ 1”
F	2.993/ 9’ 9”
H	4.905/16’ 1”
H1	6.000/19’ 8”
K	2.205/ 7’ 2”

		mm/ft in
L		6.400/20’11”
N		850/ 2’ 9”
P		2.200/ 7’ 2”
Q		870/ 2’10”
S		4.900/16’
U		8.255/27’
V		17.400/57’
W		6.700/21’11”
X		19.600/64’ 3”
Z		10.240/33’ 7”
OEL	Operator’s Eye Level	6.350/20’ 9”

Backhoe Attachment

with Gooseneck Boom 9,00 m/29’6”



Digging Envelope

Stick length	4,00 m/13’ 1”
Max. reach at ground level	15,50 m/50’10”
Max. teeth height	15,20 m/49’10”
Max. dump height	10,30 m/33’ 9”
Max. digging depth	8,70 m/28’ 6”
Max. digging force (ISO 6015)	800 kN/179,847 lbf
Max. breakout force (ISO 6015)	870 kN/195,584 lbf

Operating Weight and Ground Pressure

The operating weight includes the basic machine with backhoe attachment and a 15,00 m³/19.6 yd³ bucket.

Pad width	mm/ft in	850/2’9”
Weight	kg/lb	250.000/551,200
Ground pressure*	kg/cm²/psi	2,09/29.63

* according to ISO 16754

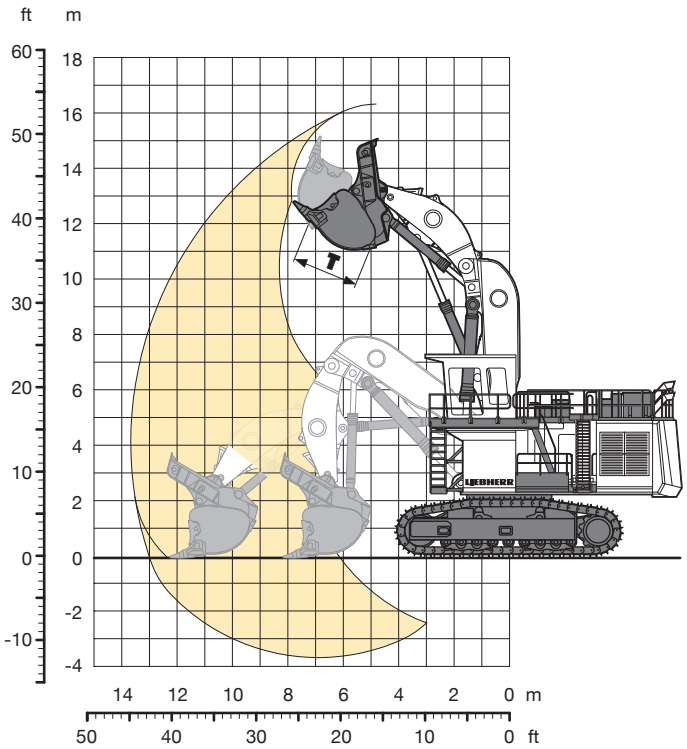
Buckets

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	m³	16,00	17,00	13,00	15,00	17,00	13,50
	yd³	20.9	22.2	17.0	19.6	22.2	17.7
Suitable for material up to a specific weight of	t/m³	1,8	1,7	2,1	1,8	1,6	1,8
	lb/yd³	3,035	2,867	3,541	3,035	2,698	2,867
Cutting width	mm	3.300	3.500	3.000	3.120	3.500	3.160
	ft in	10’9”	11’5”	9’10”	10’2”	11’5”	10’4”
Weight	kg	14.300	14.800	14.300	15.500	16.400	19.200
	lb	31,526	32,628	31,526	34,172	36,156	42,329

GP: General purpose bucket with Liebherr Z120 teeth
HD: Heavy-duty bucket with Liebherr Z120 teeth
XHD: Heavy-duty rock bucket with Liebherr Z140 teeth

Shovel Attachment

with Shovel Boom 6,37 m/20’9”



Digging Envelope

Stick length	4,20 m/13’9”
Max. reach at ground level	13,00 m/42’7”
Max. dump height	11,00 m/36’
Max. crowd length	4,00 m/13’1”
Bucket opening width T	2,15 m/ 7’
Crowd force at ground level (ISO 6015)	1.060 kN/238,297 lbf
Max. crowd force (ISO 6015)	1.260 kN/283,259 lbf
Max. breakout force (ISO 6015)	1.030 kN/231,553 lbf

Operating Weight and Ground Pressure

The operating weight includes the basic machine with shovel attachment and a 15,00 m³/19.6 yd³ bucket.

Pad width	mm/ft in	850/2’9”
Weight	kg/lb	253.500/558,900
Ground pressure*	kg/cm²/psi	2,12/30.05

* according to ISO 16754

Bottom Dump Buckets

For materials classe according to VOB, Section C, DIN 18300		< 5	5 – 6	5 – 6	7 – 8	7 – 8
Typical operation according to VOB, Section C, DIN 18300		GP	HD	HD	XHD	XHD
Capacity ISO 7546	m³	17,00	13,00	15,00	11,00	13,00
	yd³	22.2	17.0	19.6	14.4	17.0
Suitable for material up to a specific weight of	t/m³	1,6	2,1	1,8	2,3	1,8
	lb/yd³	2,698	3,541	3,035	3,879	3,035
Cutting width	mm	3.700	3.700	3.700	3.700	3.700
	ft in	12’1”	12’1”	12’1”	12’1”	12’1”
Weight	kg	27.000	27.000	27.000	28.000	29.000
	lb	59,525	59,525	59,525	61,729	63,934
Wear kit level		I	II	II	III	III

GP: General purpose bucket with Liebherr Z120 teeth
HD: Heavy-duty bucket with Liebherr Z120 teeth
XHD: Heavy-duty rock bucket with Liebherr Z140 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

- Different track pads width
- Double sealed gearbox
- Additional track guide

Uppercarriage

- LED lights (with flood/access lights)
- Xenon lights (with flood/access lights)
- Fast fueling system with Multiflo & Wiggins/Banlaw coupling (other brand name couplings possible)
- Water separator
- Valve position monitoring on hydraulic tank
- Customized paint – compl. machine

Hydraulics

- Bio-degradable hydraulic oils
- Oil cooler protection filter

Engine

- Fuel consumption optimized version
- Automatic engine shutdown (5 min.)
- Cummins Cense™ Kit
- Cummins Eliminator™ Kit

Operator's Cab

- Front protective grid
- 4-point seat belt
- Double A/C system
- Additional windscreen wipers for all windows

Attachment

- Cylinder – rod protection (bucket)

Specific Solutions

- Arctic kit –30 °C
- Arctic kit –40 °C
- Sound attenuation kit (until +40 °C)

Safety

- Automatic fire fighting system (FFS)

The Liebherr Group of Companies

Wide Product Range

The Liebherr Group is one of the largest construction equipment manufacturers in the world. Liebherr's high-value products and services enjoy a high reputation in many other fields. The wide range includes domestic appliances, aerospace and transportation systems, machine tools and maritime cranes.

Exceptional Customer Benefit

Every product line provides a complete range of models in many different versions. With both their technical excellence and acknowledged quality, Liebherr products offer a maximum of customer benefits in practical application.

State-of-the-art Technology

To provide consistent, top quality products, Liebherr attaches great importance to each product area, its components and core technologies. Important modules and components are developed and manufactured in-house, for instance the entire drive and control technology for construction equipment.

Worldwide and Independent

Hans Liebherr founded the Liebherr family company in 1949. Since that time, the enterprise has steadily grown to a group of more than 130 companies with over 38,000 employees located on all continents. The corporate headquarters of the Group is Liebherr-International AG in Bulle, Switzerland. The Liebherr family is the sole owner of the company.

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