

Mining Excavator

R 9800

Operating Weight with Backhoe Attachment: 800,000 kg / 1,763,700 lb
Operating Weight with Shovel Attachment: 810,000 kg / 1,785,700 lb
Engine Output: 2,984 kW / 4,000 hp
Loading Capacity: 75 – 85 t/pass (38,00 – 52,00 m³)
82 – 93 ton/pass (49.7 – 68.0 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

Twin-Engine available versions:

- Cummins QSK 60 (USA/EPA Tier 2)
- MTU 12V4000 (USA/EPA Tier 2)
- Fuel consumption optimized version for Cummins and MTU engines (option)

Electrical Motors (Option):

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





Productivity



The R 9800 is built to outperform all competitors in the Ultra class mining market. As a perfect loader for 200 t, 290 t and 360 t class dump trucks, the R 9800 is the right match for the Liebherr T 284. Developed as the optimal loading tool for large scale mining operations, the R 9800 can achieve the most challenging targets.

Engineered for Intense Mining

Powerful Drive System The R 9800 can be optioned with two versions of diesel drive systems. Customers can choose between Cummins or MTU as their preferred engine partner. An optional electric drive system provides outstanding performance when the machine is used in the most specific conditions. The R 9800 combines flexibility and productivity to meet customer expectations.

Fast Cycle Times Rather than using open hydraulic circuit, the R 9800 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 9800 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, the R 9800'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 9800'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.

High Performance Option

The optimised design increases the overall production rate without compromising the component life. This remarkable feat is achieved by:

- Decreasing the weight
- Converting attachment weight into payload or bucket protection
- Maintaining the original attachment design life

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, electrical and hydraulic systems
- Safe, fast and precise control
- Optimum equipment operation
- Productivity and efficiency maximization

Litronic plus®



Machine Monitoring System

Integration of the Liebherr-made monitoring system:

- 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 9800 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 9800's 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 9800'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 both engine circuits 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 9800'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 9800 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 9800'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 xenon 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



Hydraulic System Efficiency

- Optimal oil flow distribution through the valves blocks reducing hydraulic losses
- Reduced pressure drops between pumps and consumers (hydraulic motors / cylinders)
- Allows the combination of the main movements under maximal forces
- Earlier maximal forces generation for an accurate control of the combination of force and cylinder speed
- Increased hydraulic oil cooling efficiency
- Enables fast cycle times



Heavy Duty Undercarriage

- Designed for an optimal weight distribution
- Optimized to provide the best machine stability
- External travel drive for easy maintenance access
- Heavy duty rock protection for travel drive
- Automatic track tensioning system
- Monobloc dual pin combined pad links





Reliability



More than 50 years of hydraulic excavator design and manufacturing experience is the basis for the R 9800's outstanding reliability. The machine combines innovative technologies, design optimization and Liebherr components. Customers can expect durable performance from the R 9800 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 9800 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 9800 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 9800 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 9800 provides the necessary stability and reliability.

Reliable Attachment Design

- Under slung arch hoses to improve lifetime
- Fatigue resistant steel structure
- Use of the most advanced welding techniques
- Heat treatment to reduce residual stresses and increase fatigue life
- Reinforced with strategically located castings in high stress areas
- Designed for optimized digging force distribution



Liebherr Vertical Integration

Liebherr-made integrated parts are:

- Electronic and control technology
 - Control and regulation electronics
 - Display and operation units
- Hydraulic cylinders
- Large diameter bearing (swing ring)
- Swing and travel drives



Liebherr Service Tools

Liebherr service tools for excavator-specific maintenance ensure safe working conditions even when handling large components.

- A wide range of tools
- OEM certified solution
- Designed for Liebherr mining excavators
- Cost-efficient maintenance
- Easy and fast component replacement
- High 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

Ergonomic access, easy serviceability and safe component accessibility through:

- A 45° powered stairway and catwalks with handrails and perforated steps
- Walkways with slip-resistant surfaces
- Emergency egress with handrails located near the operator's cab
- Optional service folding platform for safe action on front swing gears and attachment pins





Safety



The Liebherr R 9800 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 9800 allows quick and safe maintenance. The R 9800's cab provides numerous features for operator safety.

Service-Friendly Machine Design

Safe Service Access

The R 9800 is fitted with ergonomic access for fast and safe maintenance. The R 9800's top structure is accessible via a powered 45° stairway with handrails. 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 9800 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 9800 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 machine is off.

Safety First Working Conditions

Safety-First Cab Design

In addition to its ergonomic design, the R 9800'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.

Powerpacks Provision of Security

The powerpack modules integrate a protection wall that separates the engines from the hydraulic pumps. This reduces the risk of hydraulic oil entering the engine compartments. The turbochargers and exhaust systems are heat shielded, and 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:

- Ten long-range working xenon lights located on attachment, uppercarriage and counterweight
- 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
- Optional installation kit for 1 or 2 extra camera(s) to be positioned according to specific need



Electric Motor 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





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 adjustment 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 9800 is powered by two high horsepower diesel engines which comply with the USA/EPA Tier 2 emissions limits. The electric drive version is an efficient alternative for applications that do not require frequent machine relocation. The power systems make the R 9800 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

2 Cummins diesel engine	
Rating per SAE J 1995	2 x 1,492 kW/2 x 2,000 HP at 1,800 rpm
Model	Cummins QSK60 (USA/EPA Tier 2 or fuel consumption optimized setting)
Type	16 cylinder V-engine
Displacement	60 l/3,661 in ³
Bore/Stroke	159/190 mm/6.26/7.48 in or
2 MTU diesel engine	
Rating per ISO 3046	2 x 1,425 kW/2 x 1,910 HP at 1,800 rpm
Model	12V4000 (USA/EPA Tier 2)
Type	12 cylinder V-engine
Displacement	57,2 l/3,490 in ³
Bore /Stroke	170/210 mm/6.69/8.26 in
Engine cooling system	fans driven via hydraulic piston motors
Air cleaner	dry-type air cleaner with pre-cleaner, automatic dust ejector, primary and safety elements
Fuel tank	17.597 l/4,649 gal
Fuel filtration	2 stage fuel filtration with water separator and electric priming pump
Engine lubrication	pre-lube starting system ELIMINATOR™ engine oil automatic filtration system (Cummins) + centrifugal filtration engine oil automatic filtration system (MTU) + centrifugal filtration
Electrical system	
Voltage	24 V
Batteries	8 x 170 Ah/12 V (Cummins)/ 12 x 170 Ah/12 V (MTU) starting battery 4 x 170 Ah/12 V service systems
Alternator	2 x 24 V/260 Amp (brushless)
Engine idling	electronically controlled
Electronic engine power management	engine power and speed sensing over the entire engine rpm range



Electric Motor (optional)

2 electric motors	
Power output	2 x 1,700 kW/2,280 HP
Type	3 phase AC squirrel cage motor
Voltage	6,600 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
Starting sequence	successive startup of electric motors



Electric System

Electric isolation	easy accessible battery isolations
Working lights	LED lights: <ul style="list-style-type: none">- 4 on working attachment- 4 on RHS of uppercarriage- 4 on LHS of uppercarriage- 2 on counterweight- 2 on cab
Emergency stop switches	at ground level, in hydraulic compartment, in engine and pumps 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

Attachment and travel drive	
Hydraulic pumps	10 variable flow axial piston pumps
Max. flow	10 x 750 l/min./10 x 198 gpm
Max. hydr. pressure	320 bar/4,641 psi
Swing drive	
Hydraulic pumps	4 reversible swash plate pumps, closedloop circuit
Max. flow	4 x 535 l/min./4 x 141 gpm
Max. hydr. pressure	320 bar/4,641 psi
Pump management	electronically controlled pressure and flow management with oil flow optimisation
Hydraulic tank capacity	5.800 l/1,532 gal
Hydraulic system capacity	10.000 l/2,642 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	4 separate coolers, 4 temperature controlled fans driven via hydraulic piston motors
Main pump protection	automatic protection against low oil level



Electro-Hydraulic Controls

Servo circuit	independent, electronic over hydraulic proportional controls of each function
Emergency control	emergency lowering of the attachment to the ground
Power distribution	via monoblock control valves with integrated primary relief valves and flanged on secondary valves for travel and with integrated proportional and safety valves to attachment and travel drive
Flow summation	to attachment and travel drive
Electro-hydraulic servo control	
Attachment and swing	electronic optimized control via proportional valves
Travel	electronic optimized control via proportional valves
Electronic damping system	Liebherr designed electronic control of cylinder end-position



Swing Drive

Hydraulic motor	4 Liebherr axial piston motors
Swing gear	4 Liebherr planetary reduction gears
Swing ring	Liebherr, sealed triple roller swing ring, internal teeth
Swing speed	0 - 3.6 rpm
Swing-holding brake	4 hydraulically released, maintenance-free, external multi-disc brakes



Uppercarriage

Design	torsion resistant designed upper frame in box type structure for superior strength and durability
Attachment mounting	parallel longitudinal main girders in box-section structure
Machine access	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 pneumatic seat, body-contoured with shock absorber, adjustable to operator's weight, additional "retractable passenger/trainer seat" seat heating
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 windshieldwasher-system with 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 unit with filters
Controls	joystick levers integrated into armrest of seat, armrest adjusted to seat position
Display	10.5 in color LCD-Display with low and high brightness settings
Condition monitoring	machine condition monitoring system with error reporting and operational information
Rear vision systems	camera installation on counterweight and right-hand side of the uppercarriage displayed over an additional LCD-Display
Safety function Automatic engine shut off	engine self controlled power limitation and shut off
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) = 77 dB(A) with oil/water fans at 100 % and AC fan at 65 %



Undercarriage

Design	3-piece undercarriage, box type structure for center piece and side frames, stress relieved
Hydraulic motor	3 axial piston motors per side frame
Travel gear	Liebherr planetary reduction gear
Travel speed	Diesel: 0 - 2,0 - 2,6 km/h/0 - 1.2 - 1.6 mph Electric: 0 - 1,7 km/h/0 - 1.05 mph
Parking brake	spring engaged, hydraulically pressure released external wet multi-disc brakes for each travel motor, maintenance-free
Track components	maintenance-free dual pin cast link and pad combined
Track rollers/ Carrier rollers	6/3 per side frame
Automatic track tensioner	pressurized hydraulic cylinder with accumulator, maintenance free
Transport	undercarriage side frames are removable



Service Flap

Design	hydraulically actuated service flap, easily accessible from ground level to including: <ul style="list-style-type: none"> - 2 fast fuel refill lines - hydraulic oil refill and drainage - engine oil exchange - splitterbox oil exchange - swing gearbox oil exchange (4 x draining / 4 x refill) - swing ring teeth grease barrel refilling with grease filter - attachment/swing ring bearing grease barrel refilling with grease filter - windshield washer water refilling - oil reserve system refilling (optional) - different couplings available on request
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Central Lubrication System

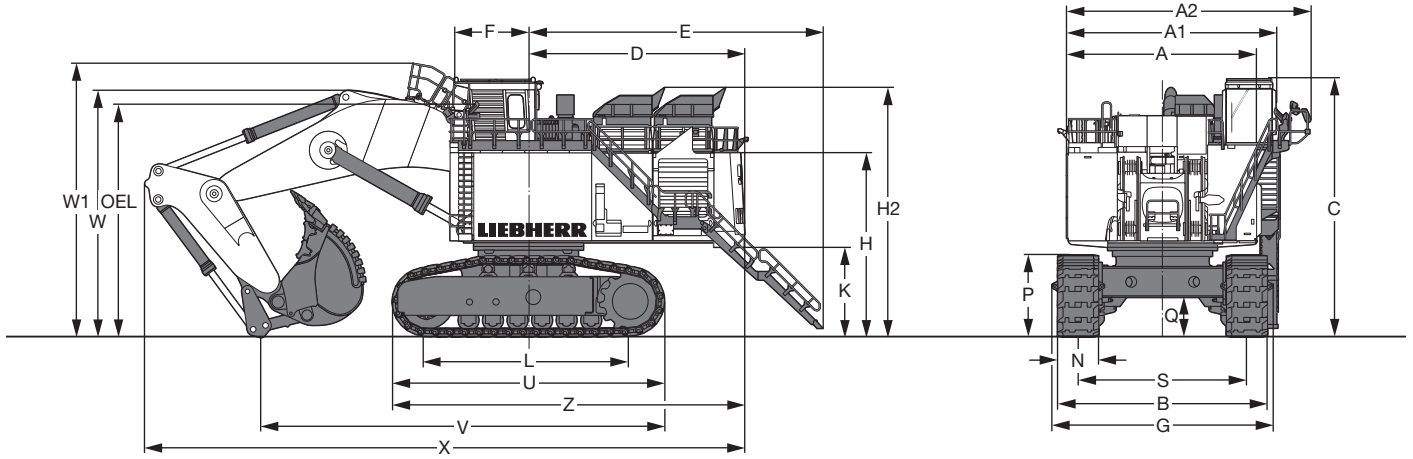
Type	Lincoln Centromatic lubrication system for the entire attachment/swing ring bearing and teeth
Grease pumps	2 Lincoln Powermaster pumps for attachment/swing ring bearing lubrication with switch over function 1 Lincoln Flowmaster pump for swing ring teeth lubrication
Capacity	600 l/158.5 gal bulk container for attachment/swing ring bearing, separated 80 l/21 gal container for swing ring teeth
Refill	via the service flap for both containers with grease filters



Attachment

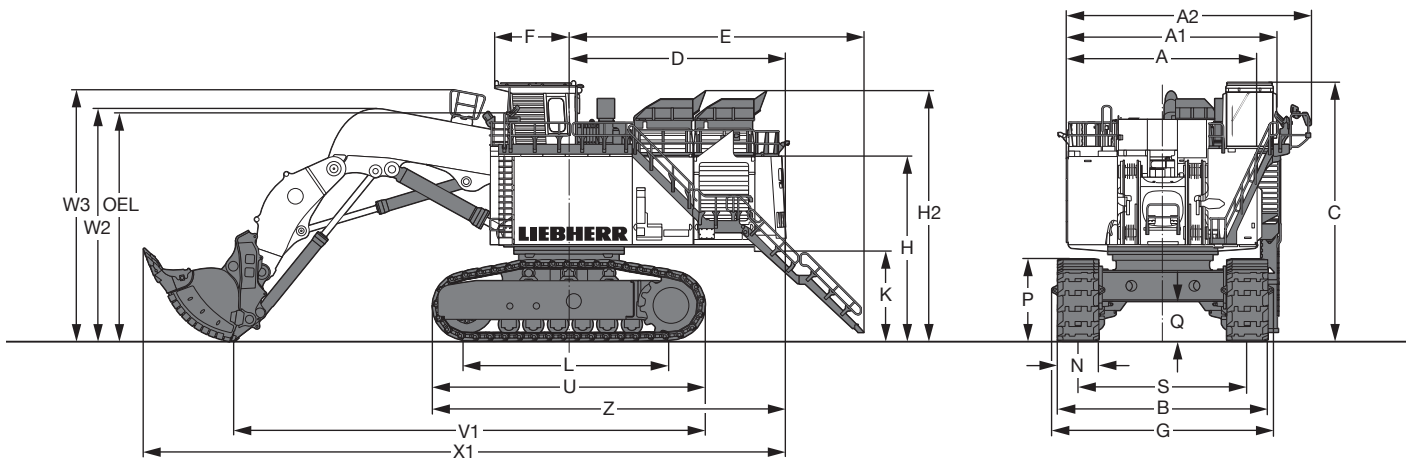
Design	box-type structure with large steel castings in all high-stress areas
Stick	wear protection underneath lower beam plate
Pivots	two floating pins per pivot, sealed covers, all bearings with wear resistant steel bushings, bolts hardened and chromium-plated
Hydraulic cylinder	Liebherr design, electronically controlled end-cushioning
Hydraulic connections	pipes and hoses equipped with SAE connections
Pivots bucket-to-stick/ bucket-to-link	O-ring sealed and completely enclosed
Lubrication	connected to the centralized lubrication system, each lubrication point independently lubricated

Dimensions



	mm/ft in
A	7.550/24' 9"
A1	8.408/27' 6"
A2	8.880/29' 1"
B	8.330/27' 3"
C	10.338/33' 10"
D	8.600/28' 2"
E	11.697/38' 4"
F	2.955/ 9' 8"
G	8.778/28' 9"
H	7.347/24' 1"
H2	9.915/32' 6"
K	3.597/11' 9"

	mm/ft in
L	8.098/26' 6"
N	1.630/ 5' 4"
P	3.261/10' 8"
Q	1.574/ 5' 1"
S	6.700/21' 11"
U	10.846/35' 6"
V	16.055/52' 7"
W	9.834/32' 3"
W1	11.063/36' 3"
X	23.907/78' 4"
Z	14.023/45' 11"
OEL	Operator's Eye Level
	8.800/28' 10"

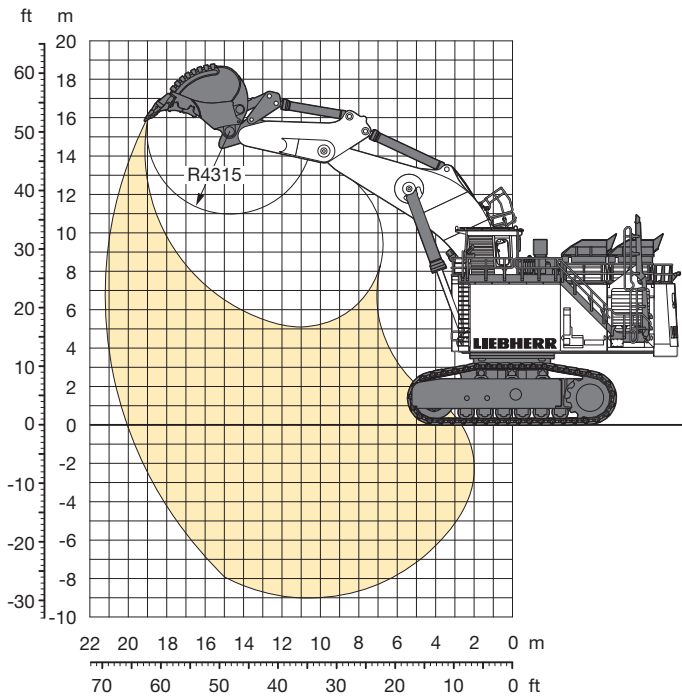


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L	8.098/26' 6"
N	1.630/ 5' 4"
P	3.261/10' 8"
Q	1.574/ 5' 1"
S	6.700/21' 11"
U	10.846/35' 6"
V	18.850/61' 9"
W2	9.280/30' 5"
W3	10.050/32' 11"
X1	25.330/83'
Z	14.023/45' 11"
OEL	Operator's Eye Level
	8.800/28' 10"

Backhoe Attachment

with Gooseneck Boom 11,75 m/38'6"



Digging Envelope

Stick length	5,00 m/16' 4"
Max. reach at ground level	20,10 m/65'11"
Max. teeth height	16,20 m/53' 1"
Max. dump height	10,90 m/35' 9"
Max. digging depth	9,00 m/29' 6"
Max. digging force (ISO 6015)	1.760 kN/395,664 lbf
Max. breakout force (ISO 6015)	1.980 kN/445,121 lbf

Operating Weight and Ground Pressure

The operating weight includes the basic machine with standard backhoe attachment and a 42,00 m³/54.9 yd³ bucket.

Pad width	mm/ft in	1.630/5'4"
Weight	kg/lb	800.000/1,763,700
Ground pressure*	kg/cm ² /psi	2,71/38.45

* according to ISO 16754

Buckets for Machine in Standard Configuration

For materials classe according to VOB, Section C, DIN 18300		5 – 6	5 – 6	5 – 6	5 – 6
Typical operation according to VOB, Section C, DIN 18300		HD	HD	HD	HD
Capacity ISO 7451	m ³	40,00	42,00	45,00	47,50
	yd ³	52.3	54.9	58.9	62.1
Suitable for material up to a specific weight of	t/m ³	1,9	1,8	1,7	1,6
	lb/yd ³	3,204	3,035	2,867	2,698
Cutting width	mm	4.800	4.800	4.800	4.800
	ft in	15'8"	15'8"	15'8"	15'8"
Weight	kg	45.000	45.150	42.550	43.650
	lb	99,208	99,539	93,807	96,232

Buckets for Machine with High Performance Option

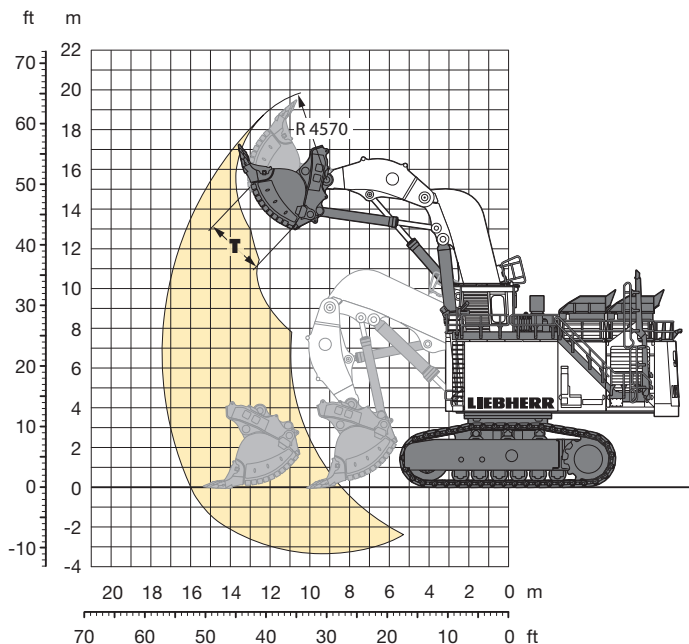
For materials classe according to VOB, Section C, DIN 18300		5 – 6	5 – 6	5 – 6	5 – 6
Typical operation according to VOB, Section C, DIN 18300		HD	HD	HD	HD
Capacity ISO 7451	m ³	45,00	47,50	50,00	52,00
	yd ³	58.9	62.1	65.4	68.0
Suitable for material up to a specific weight of	t/m ³	1,9	1,8	1,7	1,6
	lb/yd ³	3,204	3,035	2,867	2,698
Cutting width	mm	4.800	4.800	4.800	4.800
	ft in	15'8"	15'8"	15'8"	15'8"
Weight	kg	39.100	39.630	40.300	41.000
	lb	86,201	87,369	88,846	90,389

HD: Heavy-duty bucket

Other buckets for other densities and/or material class on request

Shovel Attachment

with Shovel Boom 8,55 m/28'



Digging Envelope

Stick length	5,10 m/16' 8"
Max. reach at ground level	15,90 m/52' 1"
Max. dump height	13,00 m/42' 7"
Max. crowd length	5,60 m/18' 4"
Bucket opening width T	3,00 m/ 9'10"

Crowd force at ground level (ISO 6015)	2.945 kN/662,062 lbf
Max. crowd force (ISO 6015)	3.090 kN/694,660 lbf
Max. breakout force (ISO 6015)	2.395 kN/538,417 lbf

Operating Weight and Ground Pressure

The operating weight includes the basic machine with shovel attachment and a 42,00 m³/54.9 yd³ bucket.

Pad width	mm/ft in	1.630/5'4"
Weight	kg/lb	810.000/1,785,700
Ground pressure*	kg/cm ² / psi	2,74/38.94

* according to ISO 16754

Bottom Dump Buckets

For materials classe according to VOB, Section C, DIN 18300		7 – 8	5 – 6	5 – 6	5 – 6
Typical operation according to VOB, Section C, DIN 18300		XHD	HD	HD	HD
Capacity ISO 7546	m ³	38,00	40,00	42,00	44,00
	yd ³	49.7	52.3	54.9	57.5
Suitable for material up to a specific weight of	t/m ³	2,0	1,9	1,8	1,7
	lb/yd ³	3,373	3,204	3,035	2,867
Cutting width	mm	5.600	5.600	5.600	5.600
	ft in	18'4"	18'4"	18'4"	18'4"
Weight	kg	75.000	75.300	75.500	78.000
	lb	165,347	166,008	166,449	171.960

HD: Heavy-duty bucket

XHD: Heavy-duty rock bucket

Other buckets for other densities and/or material class on request

Optional Equipment



Undercarriage

Different track pad width
Full length track guiding guard
Travel motor guard with service access hatch
Undercarriage bottom cover



Operator's Cab

4-point seat belt
Additional wipers for all windows
Dual air conditioning system
One-piece side window
Protective front grid



Uppercarriage

Rock protection for fuel tank
Swing ring scraper bars
Wiggins/Banlaw/other brand name fast refilling system
Wiggins/Banlaw/other brand name counter plugs (service trucks)



Attachment

High performance option



Hydraulics

Oil cooler protection filters



Safety

Automatic fire fighting system (foam and powder)
Installation kit for extra cameras
Service folding platform



Engine

Fuel consumption optimized engine version (Tier non-certified)
Oil reserve system (Cummins)



Specific Solutions

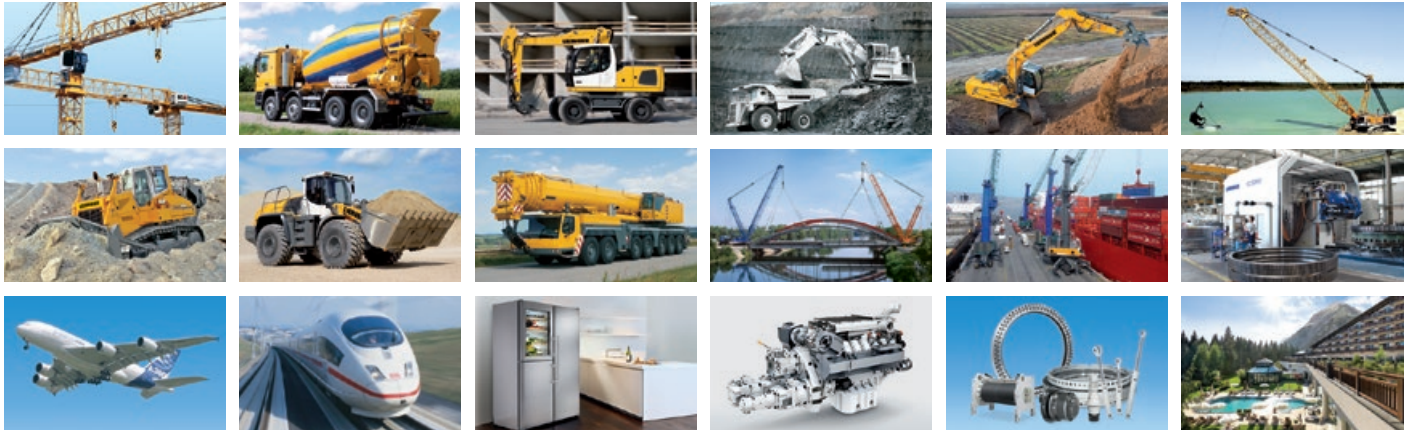
Arctic kit -30 °C/-22 °F
Arctic kit -40 °C/-40 °F



General

Maritime transport packaging

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 39,000 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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