R 9150

Generation 7

LIEBHERR

Mining excavator

Technologies
- Assistance Systems
- Liebherr Power Efficiency
- Bucket Filling Assistant

Powertrain options

Liebherr ICE – Diesel:	565 kW (FCO, Tier 4f) 757 HP
GE E-Motor:	565 kW (50 Hz, 60 Hz) 757 HP

Backhoe configuration

Overall weight:	130 tonnes 143 tons
Bucket payload:	16 tonnes 18 tons

Face shovel configuration

Overall weight:	130 tonnes 143 tons
Bucket payload:	15 tonnes 17 tons

Overview

R 9150

Diesel drive 565 kW / 757 HP
Electric drive 565 kW / 757 HP

BH 8.8 – 9.6 m³ / 11.5 – 12.6 yd³
FS 8.3 m³ / 10.9 yd³

BH 130 tonnes / 143 tons
FS 130 tonnes / 143 tons

Stress-relieved structure
The R 9150 attachment has been designed with long boom radius and limited number of sharp edges to optimize the stress applied on the component. Reduced weight of attachment to guarantee faster cycle time and increased payload.

Standard heavy-duty bucket
- Highest bucket capacity in its class with proven EVO bucket design
- Maximised payload with versatile Liebherr bucket solution
- Shift levers and bucket links with integrated greasing system

Perfect shovel truck match
3-4 pass loading of 55 tonne trucks
4 pass loading of 65 tonne trucks
6-7 pass loading of 100 tonne trucks

Latest cabin generation
Increased comfort and ergonomics
- User-friendly operator station
- Suspended operator seat
- Slim line dash and LED lighting

Latest cutting-edge technologies
- Liebherr Assistance Systems
- Advanced machine monitoring with modern 15" touchscreens (day & night mode)
- Permanent vision system

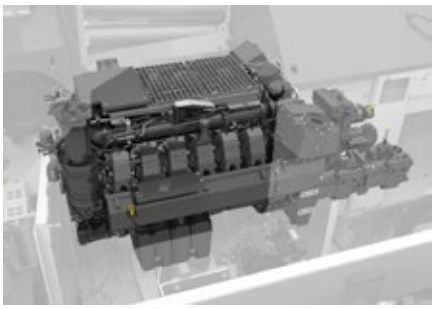
Sustainable performance
- US EPA Tier 4f / EU Stage V compliant engine
- SCR after-treatment technology
- Serial implementation Liebherr Power Efficiency solutions
- Electric drive version

Performance & sustainability

Powertrain

Diesel drive

Liebherr D9512
565 kW / 757 HP at 1,800 RPM
12 cylinder V-engine
Displacement 24.24 l / 1,479 in³



US EPA Tier 4f / EU Stage V
Using selective catalytic reduction technology to comply with latest emission regulations the R 9150 combines flexibility to meet customer expectations without compromising productivity.

Electric drive

Liebherr offers an alternative to diesel engines allowing customers to balance performance with environmental consciousness. Building on 40 years' experience in electric drive excavators, the electric drive option allows lower maintenance costs and reduced noise pollution. With high motor efficiency, the electric drive gives maximum performance.

- Lower maintenance costs
- 6,000 V (other voltage on request)
- Integrated design elements on all machine structures

No exhaust emission
Liebherr electric R 9150 provides class leading cycle times using electric motors without exposing people and the environment to diesel exhaust emissions. Complying with all Non Road Mobile Machinery (NRMM) emission regulations, the R 9150 E can be operated all around the world.

Less noise level
Liebherr Electric driven machines can be operated without restrictions in noise sensitive areas.

Productivity
Attachment

Build for maximum productivity

Backhoe
8.8 m³ – 9.6 m³
11.5 yd³ – 12.6 yd³

100 t trucks
6-7 passes

65 t trucks
4 passes

55 t trucks
3-4 passes

Face shovel
8.3 m³ / 10.9 yd³

100 t trucks
8 passes

65 t trucks
5-6 passes

55 t trucks
4-5 passes

Site-specific factors like loose material density, bucket size, fill factors, truck body size and payload capacity will influence pass match. Contact your local Liebherr affiliate or sales partner for analysis of your site.

Maximised payload
Designed for best force distribution, the attachment design delivers high digging and hoisting forces, which ensures maximum payload during each cycle. The EVO bucket allows the operator to take advantage of each pass and therefore increase productivity.

Optimised cost per tonne
Built to outperform all competitors in its class, the R 9150 is a perfect loader for 55 t up to 100 t off-highway trucks and offers a wide array of uses.

*Liebherr EVO bucket compared to competitor's average bucket capacity.

IoMine

Automation

Bucket Filling Assistant
The first automation product of the Liebherr hydraulic excavator portfolio allows easier bucket filling and consistent bucket fill factors, especially in blocky or hard digging conditions. As a result overall productivity improves while operator's fatigue decreases.

Anti-stalling function
Prevents the bucket from being stalled during the digging phase.

Semi-automatic bucket filling function
Allows the machine electronic to realise fully automatic attachment movements.

Discover more.

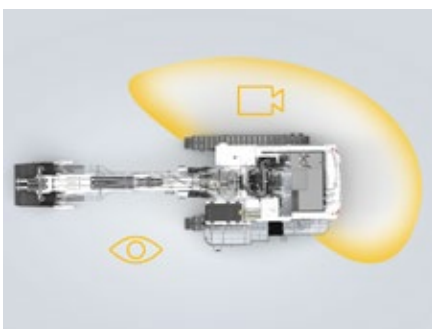
Comfort

Operator cabin

Enhanced comfort & ergonomics

Advanced machine monitoring
- Modern and large touchscreens
- State-of-the-art on-board technologies
- Long term data storage for maintenance
- User-friendly piloting station
- On-board diagnostics to service staff

Superior comfort
- Tinted laminated safety glass
- Armored front window
- Adjustable air suspended seat
- A/C with dust filter in fresh/ recirculated air



Vision system
The R 9150 offers superior visibility of the machine's surroundings. The dedicated monitor inside the cabin provides continuous rear and side vision around the machine, from the two cameras strategically fixed on the uppercarriage.

Working environment

Operator comfort
Resiliently mounted, the modern large cab design reduces vibrations and limits noise to provide a comfortable workspace. Providing ideal working conditions and optimal visibility on attachment, the cab can be optioned with a comfort kit and a pre-heating system for the most demanding conditions.

Optional
- Cab pressurization
- FOPS top guard
- Premium heated seats
- Four point harness
- HEPA filtration system
- Front protective grid

IoMine

Unleash the full potential of your mine.

IoMine

Your connected mining ecosystem

IoMine, Liebherr Mining's cutting-edge technology product line, supports customers' transition to integrated operations. By adopting IoMine, customers can improve decision-making and provide greater operational safety – all while fostering sustainable development and ensuring cost optimisation in the management of their mines. IoMine is a reliable partner for achieving a more efficient, cost-effective, and productive mining operation.

Partnering for mining success

IoMine, Liebherr Mining's advanced technology product line, optimises operations by improving asset availability, efficiency and productivity. These products enhance fleet capabilities, simplify operations and improve fleet management for more profitability and smarter energy use.

Unlock peak performance

Enhanced decision-making
Optimise your mining operations and increase efficiency by making informed decisions supported by accurate, real-time data.

Increased operational efficiency
Real-time operator assistance, streamlined maintenance and autonomous technologies work together to enhance integration, productivity, efficiency and profitability.

Increased safety
Real-time machine monitoring and operator alerts from assistance systems enhance safety while autonomous technology reduces risks, ensuring a safer worksite.

Maximised machine availability
Proactive maintenance, operational insights and advanced automation collectively prevent breakdowns, minimise downtime and boost efficiency, productivity and profitability for continuous operations.

Let’s journey together on the path to data-driven decision-making and autonomy in digging, dozing and hauling.

Operate –
Empower mining success.
Find the right IoMine products dedicated to operations to optimise processes, reinforce safety and increase the profitability of your mining operations.

Automate –
Safe. Efficient. Automated.
Liebherr’s advanced automation solutions integrate seamlessly into your existing systems for real-time monitoring and intelligent automation.

Maintain –
Less downtime, more mining.
Keep your mining fleet running at peak performance with IoMine's dedicated maintenance products, whose innovative maintenance solutions are designed to minimise downtime and increase efficiency.

Assistance Systems
The best performance. Easy.

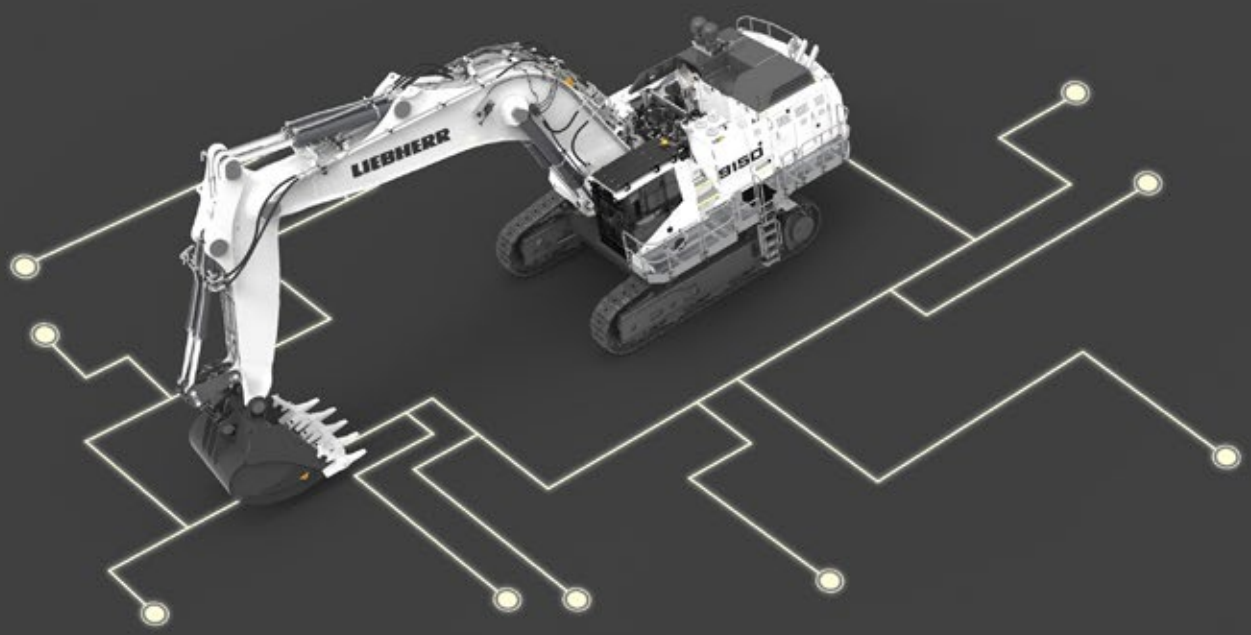
IoMine

Get the best out of your Liebherr mining excavator

Available today on the R 9150, the Liebherr Assistance Systems are advanced onboard applications designed to support operators to become more efficient through analytics and actionable insights. Systems will assist the operator to obtain optimal productivity and efficiency by providing realtime operational information.

Want to live the real experience?

- Measure and analyse every bucket payload for optimal truck loading
- Data visualised within different views & advanced filtering
- Display targeted productivity and actual payload with 99 % accuracy
- Provide transparency of performance, operating time and fuel efficiency
- Identify operational conformance and improve operator effectiveness
- State-of-the-art on-board touchscreen displays
- Make informed decisions
- Increase productivity



Truck Loading Assistant

Assists the operator to obtain target truck payloads.

With 99 % measurement accuracy
- Measures instantaneously the bucket payload
- Provides real-time information to the operator
- Strategises the number of passes required
- Computes the best truck loading strategy
- Automatic truck recognition (optional)

Performance monitoring

Measures and analyses the overall performance.

Using KPIs, histograms and time-related charts
- Production KPIs
- Loading indicators
- Time distribution
- Energy efficiency

Application severity

Quantifies application, reports severity indicators and provides an overall application severity score.

KPIs to indicate and display the application as sensed by the machine
- Underfoot and digging conditions
- Abrasiveness and travel ratio
- Engine load factor and temperature variation
- Machine inclination, loading, etc.

Operational conformance

Detects and counts events to improve operator effectiveness.

Several filtering criteria to identify specific events
- Swinging into digging face
- Digging with swing brake activated
- Turning the machine with the attachment
- Bucket hitting track pads, etc.

Performance

Advanced hydraulic system

Highest digging force

530 kN

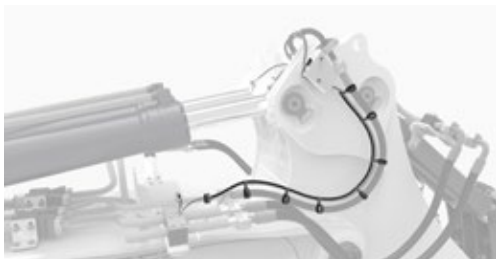
Breakout force

620 kN

in its class

Fast & precise movement

Intelligent power management system
The Liebherr R 9150 mining excavator is equipped with a closed loop swing circuit. Kinetic energy is recovered when the swing motion is used during deceleration to drive the main and auxiliary pumps resulting in fuel consumption reduction.



Cylinder dampening through IMUs provides smoother attachment movements without affecting attachment speed.

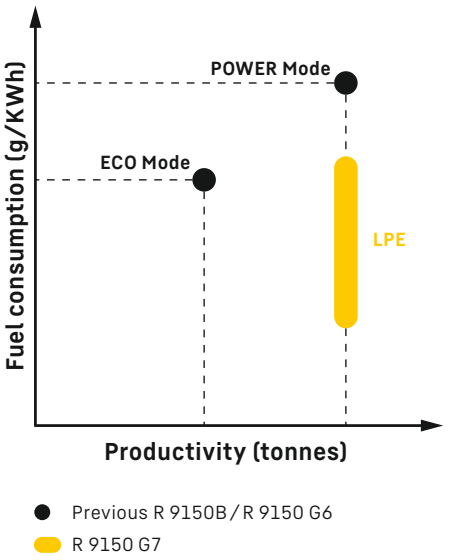
Independent cooling system
Oil and water cooling fans are independently and electronically managed. The oversized cooling systems reduce parasitic demand on engine horsepower ensuring maximum available horsepower is provided to the excavator working circuits.

Valve bank control system
- Under slung arch hoses to improve lifetime
- Flow optimized hose fittings
- Less hydraulic pressure losses by design
- Pilot valves integrated into valve blocks

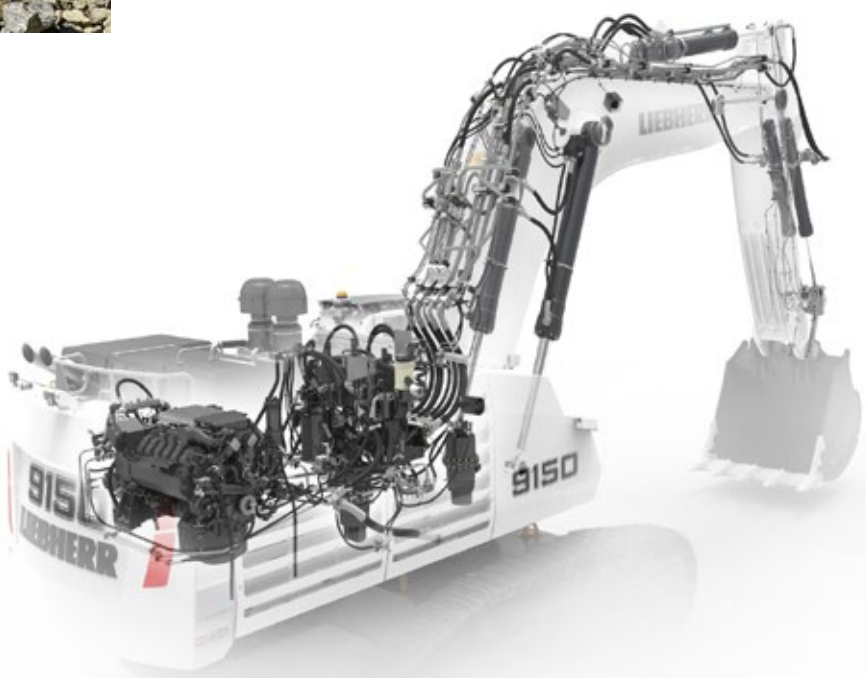
Moving more with less

Patented Liebherr Power Efficiency
Specific engine and hydraulic management, drastically reducing fuel consumption without any compromise on machine productivity.

- Adapted piloting processes according to operator requirements and machine condition
- Electronically controlled pressure and oil flow
- Reduce hydraulic throttling and load profile of the engine for increased component lifetime



Up to 20 %
less fuel consumption

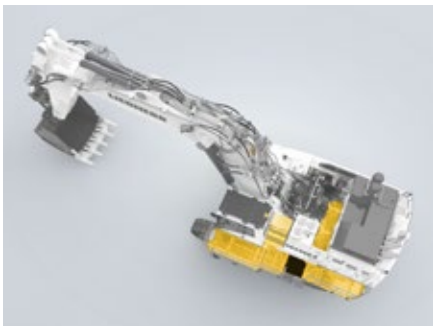


"Adapt the power and the hydraulic flow specifically to the load profile."

Safety

Protecting your most important asset

Machine accessibility
The R 9150 can be fitted with an ergonomic hydraulically controlled 45 degree stairway with handrails, providing safe access to the upper-carriage. Single side access to all service points.



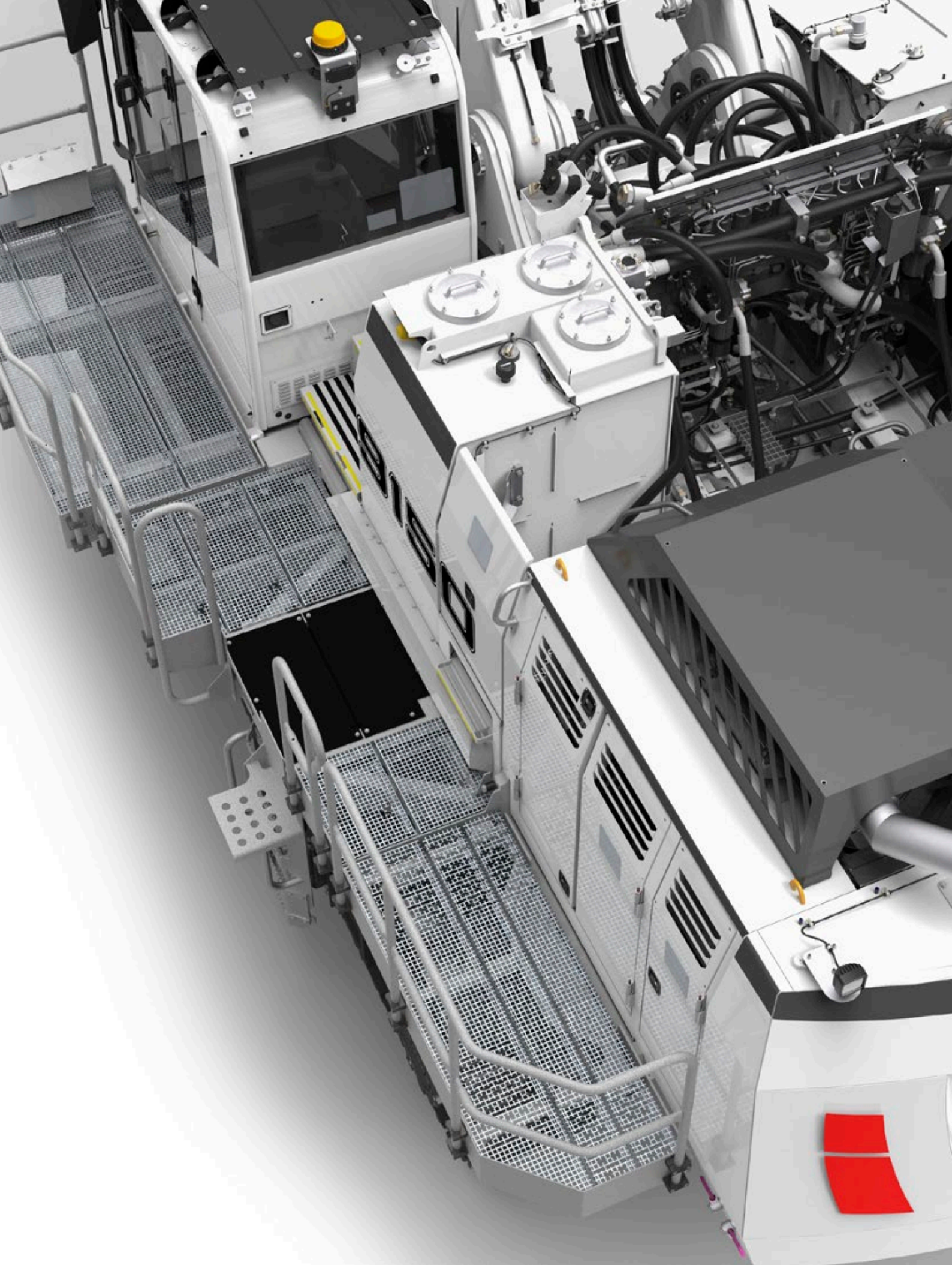
Wide catwalks for inspection
Enlarged walkways allow easy and safe access for inspection and maintenance around engine, fans, and pumps. All routine service items have been located to allow effortless inspection and replacement.

Emergency stops and emergency exits
Emergency stops are specifically located throughout the machine, increasing safety. A emergency drop-down ladder guaranties safe and quick exit from the machine.

Advanced engine fire protection
After treatment systems and turbo-chargers are heat shielded. The engines are mechanically segregated from hydraulic components, further improving on machine safety.

LED lighting system
Thanks to LED long-reach lights located on attachment, uppercar-riage and counterweight, the machine offers best visibility to the operator and to the people/equipment around.

Safe surrounding area
Horn, LED working lights, LED service lights, LED access lights, flashing lights and travel alarm guarantee safe 24 / 7 operation and maintenance conditions.



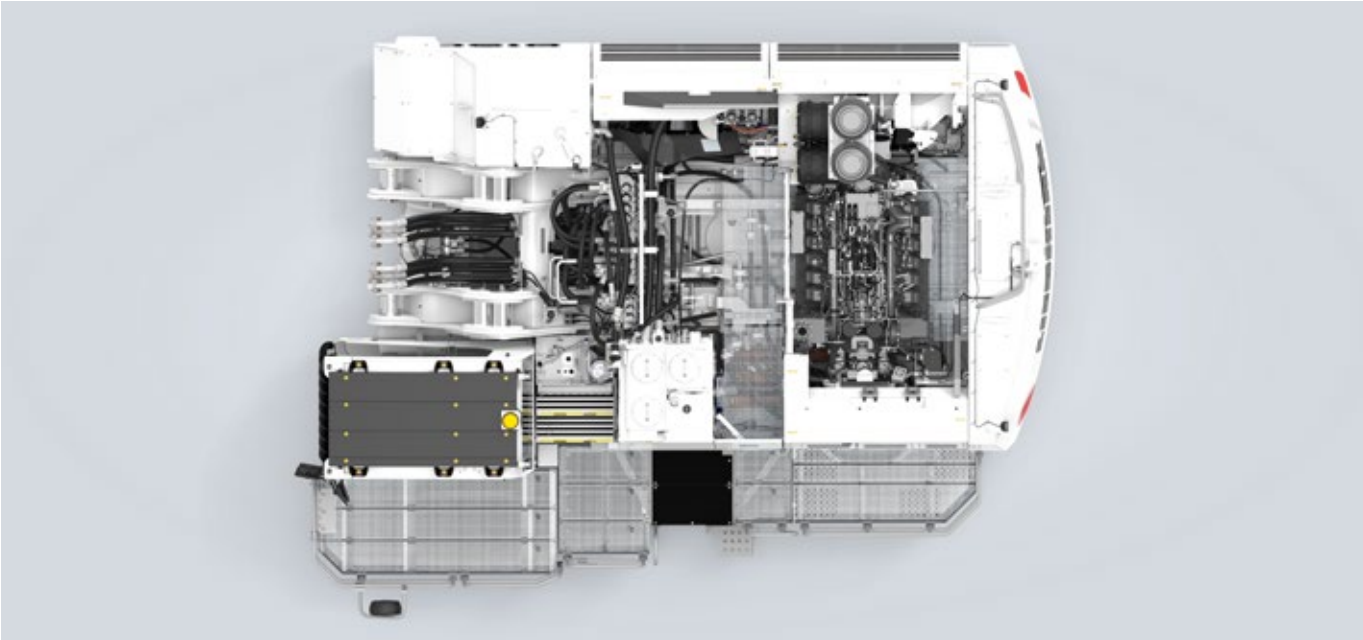
Maintenance

Easy & safe operations

24/7
Operations

Centralised service

Uppercarriage of the R 9150 has been designed for easier maintenance and quicker servicing. The central service area provides accessibility to uppercarriage fluid compartments reducing machine downtime. Refill and drain points of the R 9150 are easily accessed from the upperstructure or directly from the ground with optional fast couplings and depressurized valves.



Automatic greasing system
- Grease tank for the attachment, uppercarriage and swing ring bearing
- Grease tank for the swing ring teeth
- Simplified component layout
- Automatic greasing cycles
- Reduced number of injectors & hoses

Superior engine accessibility
- Central service area
- Maintenance-friendly maintenance items installation
- Wide catwalks with slip-resistant surfaces

Ease of troubleshooting
- Control system hardware and software completely developed and managed by Liebherr
- Reduced number of connections and connectors

Optional

- Increased fuel tank capacity (24h operation)
- Steel grease lines on swing ring
- Swing ring scrapers
- Banlaw or Wiggins couplings
- Piston rod guards

36,000
Operational hours

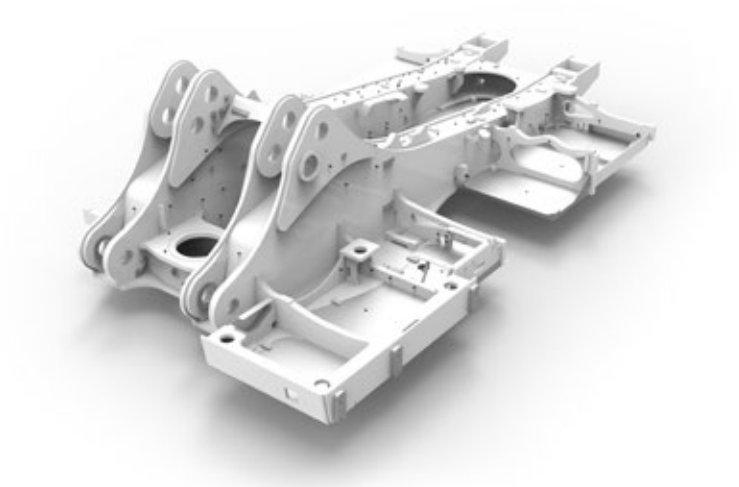
Reliability

Long-lasting performances

Vertical integration
As an OEM, Liebherr has built a solid reputation for its development and production of high quality strategic mining components. The R 9150 integrates robust and reliable mining optimised components that are developed and manufactured by Liebherr, which ensures the best reliability and highest performance.

Mining know-how
Liebherr mining excavators are conceptualised, designed and dedicated to the mining industry.
The engineering department uses specific 3D simulation solutions in order to meet possible requirements, such as finite element and fatigue life analysis.

Quality: the Liebherr trademark
Providing reliable machinery is the highest priority for Liebherr mining. Utilised in tough mining applications all around the world, our R 9150 is built to last over 36,000 operational hours. Liebherr's engineering expertise and continuous improvement programs combine to deliver industry leading machines.



Super structure
- Optimised welding penetration
- Increased structural rigidity and life
- Heavy duty conception through advanced 3D design and validation softwares

Robust undercarriage
- Heavy-duty conception with durable side frame links
- Standard one-piece or optional three-pieces undercarriage for easier transport
- Fatigue resistant steel structure design
- Travel motors with standard rock protection
- Large track pads choice

The four pillars of the Liebherr mining division

With more than 50 years of experience in the mining industry, Liebherr has identified four key factors of customer satisfaction: Performance, Safety, Service, and Sustainability. These pillars provide structure and focus for all our activities, and embody Liebherr's customer commitments.

Performance
Productive, efficient and reliable

Safety
Protecting your most important assets

Service
Where you need it, when you need it

Sustainability
Committed to our future

Technical data

Powertrain

1 Liebherr ICE – Diesel	
Rating per ISO 9249	565 kW (757 HP) at 1,800 rpm
Model	Liebherr D9512 (US EPA Tier 4f / EU Stage V 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 in³
Engine operation	4-stroke diesel common-rail direct injection turbo-charged
Cooling	water-cooled and air-cooled charge air, hydrostatic fan drive
Liebherr Power Efficiency – Engine Control	engine management systems adapting the power specifically to the load profile
Air cleaner	dry-type air cleaner, primary and safety elements, automatic dust discharge
Fuel tank capacity	1,984 l / 524 gal
DEF tank capacity	275 l / 73 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 for US EPA FCO engine and 24 V / 160 A for US EPA Tier 4f / EU Stage V engine
RPM adjustment	step by step via rpm selector
or	
1 GE E-Motor	
Power output	565 kW (757 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

Electro-hydraulic controls

Servo circuit	independent, electronic over hydraulic proportional controls of each functions
Emergency control	via accumulator for all attachment functions with stopped engine
Power distribution	via monoblock control valves with integrated primary and secondary relief valves
Flow summation	to attachment and travel drive
Closed-loop circuit	for uppercarriage swing drive
Attachment and swing	proportional via electronic joystick levers
Travel	proportional via electronic pedals or removable hand levers
Shovel flap functions	proportional via electronic pedals
Electronic dampening system	Liebherr designed electronic control of cylinder position via inertial measurement units

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	0–6.5 rpm
Swing-holding brake	wet multi-disc brakes, spring applied, hydraulically released

Hydraulic system

Hydraulic pump	
for attachment and travel drive	3 Liebherr variable flow axial piston pumps
Max. flow	3 x 512 l/min. / 3 x 135 gpm
Max. pressure	350 bar / 5,076 psi
for swing drive	1 Liebherr reversible swashplate pump, closed-loop circuit
Max. flow	643 l/min. / 170 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	1,631 l / 431 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
Liebherr Power Efficiency – Hydraulic Control	hydraulic management system adapting the hydraulic flow specifically to the load profile

Electric system

Electric isolation	easy accessible battery isolators
Working lights	high brightness LED lights: – 2 on working attachment – 2 on cabin – 2 on RHS of uppercarriage – 3 on LHS of uppercarriage
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

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, 1 additional fixation for supplementary customer device
Vision system	camera installation on counterweight and right-hand side of the uppercarriage, displayed over the LCD-display
Heating system / Air conditioning	standard automatic air conditioning, contains fluorinated greenhouse gases HFC 134a with a Global Warming Potential (GWP) of 1430, the AC circuit contains 1.7 kg / 3.8 lb of HFC-134 representing an equivalent of 2.4 tonnes / 2.7 tons of CO_2, combined cooler / heater, additional dust filter in fresh air / recirculated
Noise level (ISO 6396)	Diesel: L_{pA} (inside cab) = 74 dB(A)
Hand-arm vibrations	≤ 2.5 m/s²
Whole-body vibrations	≤ 0.5 m/s²

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

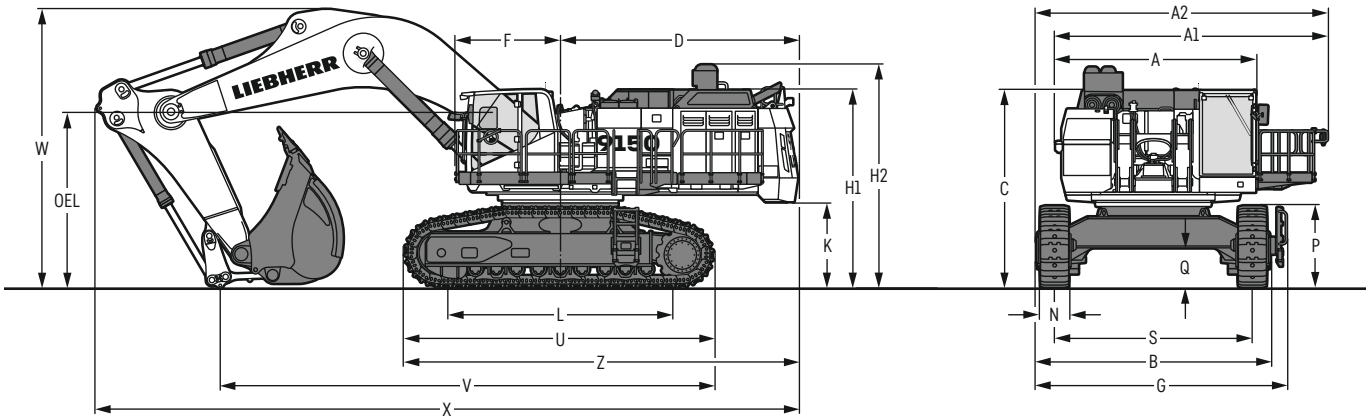
Central lubrication system

Type	single line lubrification system, for the entire attachment / swing ring bearing and teeth
Grease pumps	1 hydraulic pump for attachment / swing ring bearing lubrification, 1 electric pump for swing teeth lubrification
Capacity	80 l / 21.1 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, electronically controlled end-cushioning
Hydraulic connections	pipes and hoses equipped with SAE flange connections
Pivots	sealed, low maintenance
Pivots bucket-to-stick Pivots bucket-to-link	O-ring sealed and completely enclosed

Dimensions



	mm / ft in
A	4,318 / 14'2"
A1	5,702 / 18'7"
A2	6,105 / 20'
B	4,995 / 16'4"
C	4,230 / 13'4"
D	5,060 / 16'6"
F	2,233 / 7'3"
G	5,355 / 17'6"
H1	4,225 / 13'9"
H2	4,930 / 16'2"

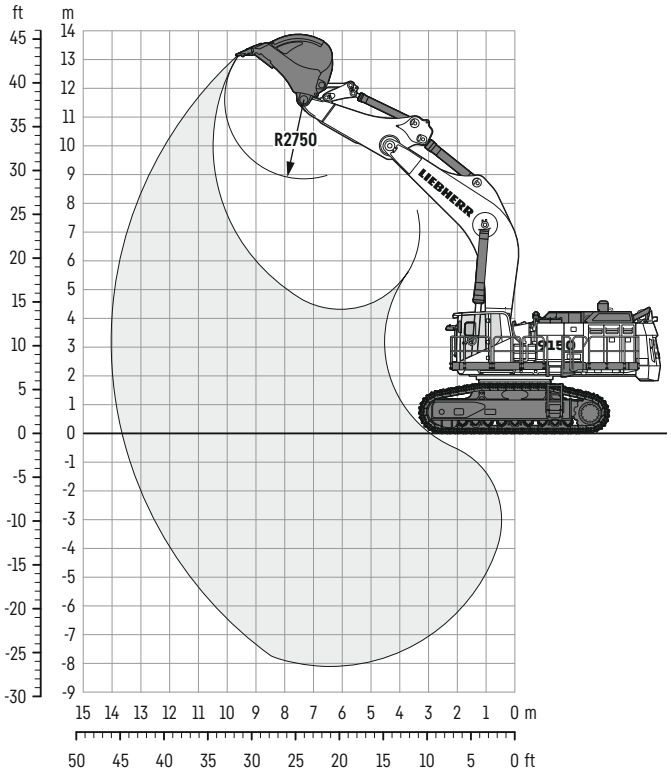
	mm / ft in
K	1,840 / 6'
L	5,200 / 17'1"
N	500 / 1'6" 600 / 2' 750 / 2'5"
P	1,748 / 5'7"
Q	852 / 2'8"
S	4,230 / 13'9"
U	6,610 / 21'7"
Z	8,365 / 27'4"
OEL (Operator's eye level)	3,614 / 11'9"

	Stick length m / ft in	Mono boom 7.40 m / 24'3" mm / ft in	Mono boom 7.80 m / 25'6" mm / ft in	Mono boom 9.30 m / 30'5" mm / ft in
V	3.40 / 11'2"	10,400 / 34'1"	10,550 / 34'6"	12,140 / 39'8"
	4.60 / 15'1"	-/-	-/-	10,225 / 33'5"
	5.70 / 18'7"	-/-	-/-	10,450 / 34'3"
W	3.40 / 11'2"	6,250 / 20'5"	6,320 / 20'7"	6,145 / 20'2"
	4.60 / 15'1"	-/-	-/-	7,130 / 23'4"
	5.70 / 18'7"	-/-	-/-	8,025 / 26'3"
X	3.40 / 11'2"	14,550 / 47'7"	15,000 / 49'2"	16,500 / 54'1"
	4.60 / 15'1"	-/-	-/-	15,700 / 51'5"
	5.70 / 18'7"	-/-	-/-	15,145 / 49'7"

According to ISO 9248, measurements of general machinery dimensions, performances and capacities may vary within tolerances given by this norm.

Backhoe attachment (standard)

with boom 7.80 m / 25'6"



Digging envelope

Stick length	m ft in	3.40 11'2"
Max. digging depth	m ft in	8.10 26'6"
Max. reach at ground level	m ft in	13.65 44'8"
Max. dumping height	m ft in	8.84 29'
Max. teeth height	m ft in	13.20 43'3"

Forces

Max. digging force (ISO 6015)	kN lbf	530 119,149
Max. breakout force (ISO 6015)	kN lbf	620 139,382

Machine shown without option with a bucket for average material abrasiveness and 1.8 t/m³ (3,034 lb/yd³) density.
The characteristics of the material to be extracted and additionnal options can change the bucket volume, its shape, its radius and therefore may also change the work area reachable by the bucket.

Operating weight and ground pressure

The operating weight includes the basic machine with boom 7.80 m / 25'6", stick 3.40 m / 11'2" and bucket 8.80 m³ / 11.5 yd³.

Undercarriage		HD	
Pad width	mm ft in	600 2'	750 2'5"
Weight	kg lb	129,700 285,939	133,100 293,435
Ground pressure*	kg/cm² psi	1.90 27.02	1.56 22.19

* according to ISO 16754

Backhoe buckets

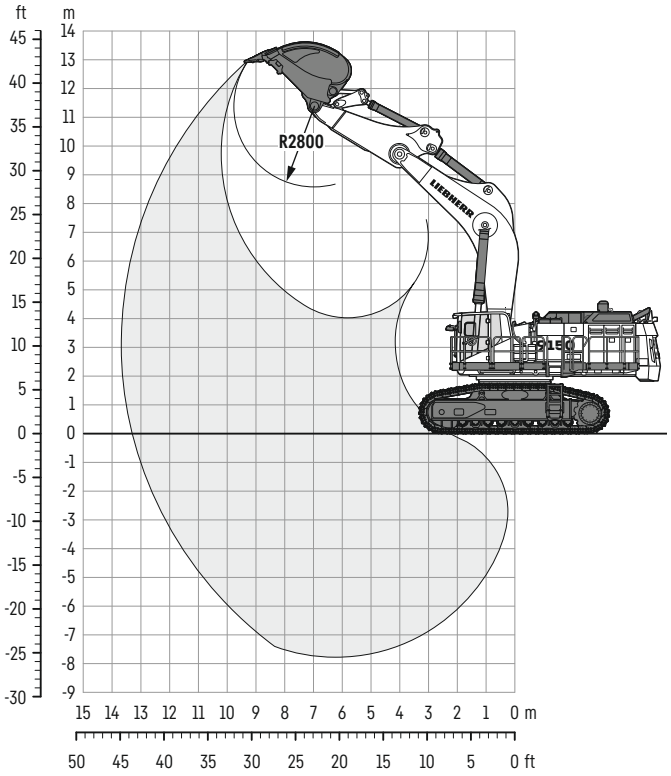
For materials class according to VOB, Section C, DIN 18300		< 5	< 5	5-6	5-6	5-6	7-8	7-8	7-8
Typical operation according to VOB, Section C, DIN 18300		GP	GP	HD	HD	HD	XHD	XHD	XHD
Capacity ISO 7451	m³ yd³	10.60 13.9	9.60 12.6	9.60 12.6	8.80 11.5	8.00 10.5	8.80 11.5	8.00 10.5	6.80 8.9
Suitable for material up to a specific weight of	t/m³ lb/yd³	1.5 2,528	1.7 2,865	1.6 2,697	1.8 3,034	2.0 3,371	1.7 2,865	1.9 3,203	2.3 3,877
Weight	kg lb	7,700 16,976	7,440 16,402	8,280 18,254	7,810 17,218	7,630 16,821	8,650 19,070	8,350 18,409	7,950 17,527

GP: General purpose bucket with Liebherr Z10 teeth
HD: Heavy-duty bucket with Liebherr Z10 teeth
XHD: Heavy-duty rock bucket with Liebherr Z10 teeth

According to ISO 9248, measurements of general machinery dimensions, performances and capacities may vary within tolerances given by this norm.

Backhoe attachment

with boom 7.40 m / 24'3"



Digging envelope

Stick length	m ft in	3.40 11'2"
Max. digging depth	m ft in	7.80 25'6"
Max. reach at ground level	m ft in	13.30 43'6"
Max. dumping height	m ft in	8.60 28'2"
Max. teeth height	m ft in	13.00 42'7"

Forces

Max. digging force (ISO 6015)	kN lbf	522 117,350
Max. breakout force (ISO 6015)	kN lbf	603 135,560

Machine shown without option with a bucket for average material abrasiveness and 1.8 t/m³ (3,034 lb/yd³) density.
The characteristics of the material to be extracted and additionnal options can change the bucket volume, its shape, its radius and therefore may also change the work area reachable by the bucket.

Operating weight and ground pressure

The operating weight includes the basic machine with boom 7.40 m / 24'3", stick 3.40 m / 11'2" and bucket 9.60 m³ / 12.6 yd³.

Undercarriage		HD	
Pad width	mm ft in	600 2'	750 2'5"
Weight	kg lb	130,000 286,001	133,400 294,096
Ground pressure*	kg/cm² psi	1.90 27.02	1.56 22.19

* according to ISO 16754

Backhoe buckets

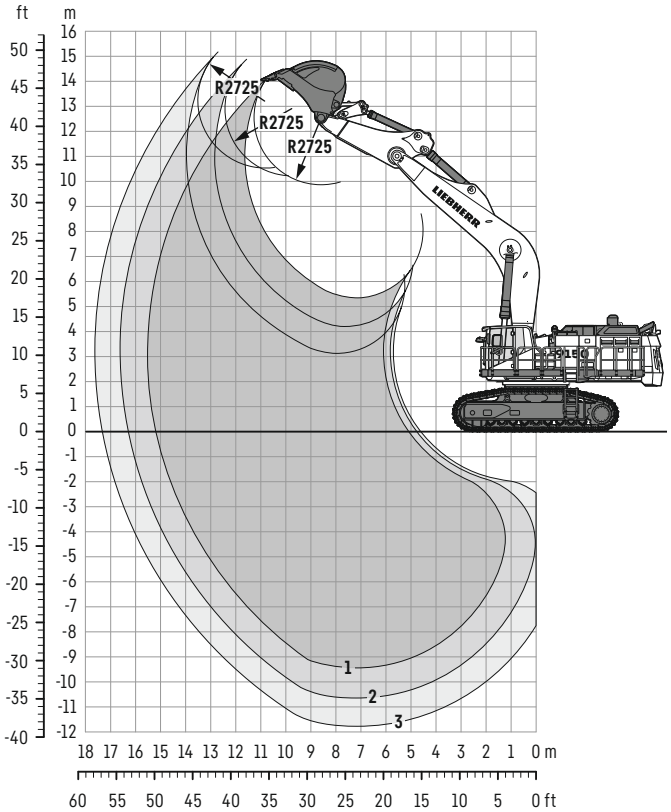
For materials class according to VOB, Section C, DIN 18300		< 5	< 5	5-6	5-6	5-6	7-8	7-8	7-8
Typical operation according to VOB, Section C, DIN 18300		GP	GP	HD	HD	HD	XHD	XHD	XHD
Capacity ISO 7451	m³ yd³	11.70 15.3	10.60 13.9	10.00 13.1	9.60 12.6	8.80 11.5	9.20 12.0	8.30 10.9	7.60 9.9
Suitable for material up to a specific weight of	t/m³ lb/yd³	1.5 2,528	1.7 2,865	1.7 2,865	1.8 3,034	2.0 3,371	1.8 3,034	2.0 3,371	2.2 3,708
Weight	kg lb	8,050 17,747	7,700 16,976	8,500 18,739	8,280 18,254	7,810 17,218	8,950 19,731	8,750 19,290	8,600 18,960

GP: General purpose bucket with Liebherr Z10 teeth
HD: Heavy-duty bucket with Liebherr Z10 teeth
XHD: Heavy-duty rock bucket with Liebherr Z10 teeth

According to ISO 9248, measurements of general machinery dimensions, performances and capacities may vary within tolerances given by this norm.

Backhoe attachment

with boom 9.30 m / 30'5"



Digging envelope

		1	2	3
Stick length	m	3.40	4.60	5.70
	ft in	11'2"	15'1"	18'7"
Max. digging depth	m	9.45	10.65	11.80
	ft in	31'	34'9"	38'7"
Max. reach at ground level	m	15.20	16.30	17.35
	ft in	49'9"	53'5"	56'9"
Max. dumping height	m	9.85	10.20	10.50
	ft in	32'3"	33'5"	34'4"
Max. teeth height	m	14.15	14.90	15.20
	ft in	46'4"	48'9"	49'9"

Forces

		1	2	3
Max. digging force (ISO 6015)	kN	530	440	390
	lbf	119,149	98,916	87,676
Max. breakout force (ISO 6015)	kN	620	620	620
	lbf	139,382	139,382	139,382

Machine shown without option with a bucket for average material abrasiveness and 1.8 t/m³ (3,034 lb/yd³) density.
The characteristics of the material to be extracted and additionnal options can change the bucket volume, its shape, its radius and therefore may also change the work area reachable by the bucket.

Operating weight and ground pressure

The operating weight includes the basic machine with boom 9.30 m / 30'5", stick 4.60 m / 15'1" and bucket 5.00 m³ / 6.5 yd³.

Undercarriage		HD	
Pad width	mm	600	750
	ft in	2'	2'5"
Weight	kg	132,300	135,700
	lb	291,671	299,167
Ground pressure*	kg/cm²	1.93	1.59
	psi	27.45	22.62

* according to ISO 16754

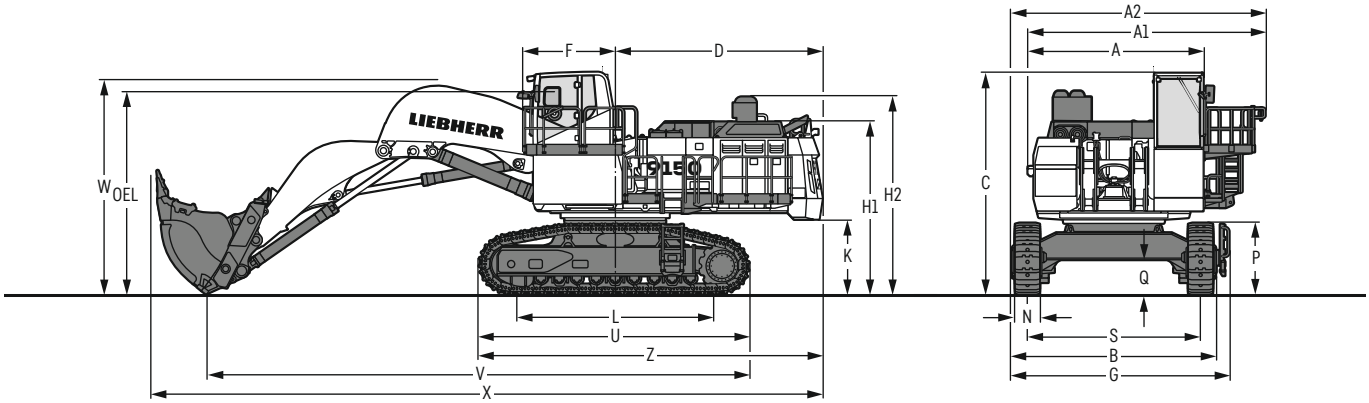
Backhoe buckets

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	m³	5.50	6.50	4.20	5.00	6.00	4.20
	yd³	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/m³	–	1.6	–	2.2	1.8	2.2
with stick 11'2"	lb/yd³	–	2,697	–	3,708	3,034	3,708
with stick 4.60 m	t/m³	1.6	1.3	2.1	1.8	1.3	2.0
with stick 15'1"	lb/yd³	2,697	2,191	3,540	3,034	2,191	3,371
with stick 5.70 m	t/m³	1.4	–	1.8	1.5	–	1.6
with stick 18'7"	lb/yd³	2,360	–	3,034	2,528	–	2,697
Weight	kg	6,500	7,000	6,600	6,800	7,200	7,300
	lb	14,330	15,432	14,551	14,991	15,873	16,094

GP: General purpose bucket with Liebherr Z10 teeth
HD: Heavy-duty bucket with Liebherr Z10 teeth
XHD: Heavy-duty rock bucket with Liebherr Z10 teeth

According to ISO 9248, measurements of general machinery dimensions, performances and capacities may vary within tolerances given by this norm.

Dimensions



	mm / ft in
A	4,318 / 14'2"
A1	5,702 / 18'7"
A2	6,105 / 20'
B	4,995 / 16'4"
C	5,430 / 17'8"
D	5,060 / 16'6"

	mm / ft in
F	2,233 / 7'3"
G	5,355 / 17'6"
H1	4,225 / 13'9"
H2	4,930 / 16'2"
K	1,840 / 6'
L	5,200 / 17'1"

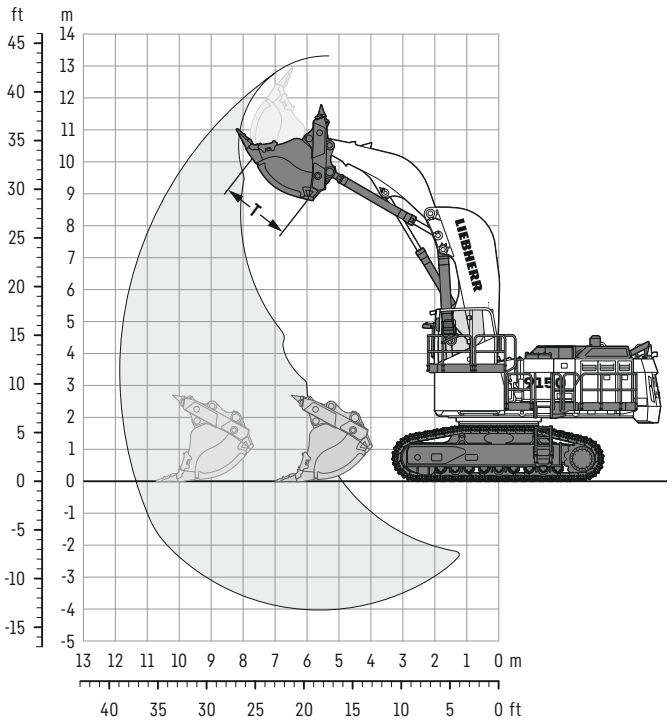
	mm / ft in
N	500 / 1'6" 600 / 2' 750 / 2' 5"
P	1,748 / 5'7"
Q	852 / 2'8"
S	4,230 / 13'9"

	mm / ft in
U	6,610 / 21'7"
V1	13,250 / 43'5"
W1	5,265 / 17'3"
X1	16,400 / 53'8"
Z	8,365 / 27'4"
OEL (Operator's eye level)	4,814 / 15'8"

According to ISO 9248, measurements of general machinery dimensions, performances and capacities may vary within tolerances given by this norm.

Face shovel attachment

with boom 5.30 m / 17'4"



Digging envelope

Stick length	m ft in	3.80 12'5"
Max. reach at ground level	m ft in	11.39 37'4"
Max. dumping height	m ft in	8.80 28'9"
Max. crowd length	m ft in	4.03 13'2"
Bucket opening width T	mm ft in	2,150 7'1"

Forces

Max. crowd force at ground level (ISO 6015)	kN lbf	640 143,878
Max. crowd force (ISO 6015)	kN lbf	750 168,607
Max. breakout force (ISO 6015)	kN lbf	630 141,630

Machine shown without option with a bucket for average material abrasiveness and 1.8 t/m³ (3,034 lb/yd³) density.
The characteristics of the material to be extracted and additionnal options can change the bucket volume, its shape, its radius and therefore may also change the work area reachable by the bucket.

Operating weight and ground pressure

The operating weight includes the basic machine with shovel attachment and bucket 8.30 m³ / 10.9 yd³.

Undercarriage		HD	
Pad width	mm ft in	600 2'	750 2'5"
Weight	kg lb	130,000 286,001	133,400 294,097
Ground pressure*	kg/cm² 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 yd³	9.30 12.2	8.90 11.6	8.90 11.6	8.30 10.9	7.70 10.1	7.00 9.2	8.30 10.9	7.70 10.1	7.00 9.2
Suitable for material up to a specific weight of	t/m³ lb/yd³	1.6 2,697	1.7 2,865	1.6 2,697	1.8 3,034	2.0 3,371	2.4 4,045	1.7 2,865	1.85 3,118	2.25 3,792
Cutting width	mm ft in	2,900 9'5"	2,900 9'5"	2,900 9'5"	2,900 9'5"	2,900 9'5"	2,600 8'5"	2,900 9'5"	2,900 9'5"	2,600 8'5"
Weight	kg lb	13.500 29,762	13.100 28,881	14.020 30,909	13.250 29,211	12.920 28,484	11.550 25,463	14.180 31,262	13.800 30,424	12.500 27,558

GP: General purpose bucket with Liebherr Z10 teeth
HD: Heavy-duty bucket with Liebherr Z10 teeth
XHD: Heavy-duty rock bucket with Liebherr Z10 teeth

According to ISO 9248, measurements of general machinery dimensions, performances and capacities may vary within tolerances given by this norm.

Optional equipment

Undercarriage

- Narrow track pad width
- Large track pad width
- Removable side frames
- Rock protection for travel drive
- 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
- Increased fuel tank capacity (24h operation)
- Grid protection for front headlights
- Semi-automatic swing brake with joystick control
- Rock protection for swing gear and grease lines
- Wiggins fast fueling system
- Wiggins fast fueling pressureless system with Multiflo Hydrau-Flo®
- Wiggins couplings for ground level access service
- Steel grease lines on swing ring
- Swing ring scrapers
- External grease refill station (hydraulic-powered)
- Hydraulic connection with quick coupler for external grease refill station
- Right-hand bumper
- External starting device

Hydraulic system

- Oil cooler inlet screen

Cab

- 4-point seat belt
- Cab elevation (500 mm / 1'6" / 1,200 mm / 3'9" / 1,600 mm / 5'3")
- Cab pressurization
- Cab pressurization with HEPA filter
- FOPS top guard with additional sun protection
- Operator comfort package
- Front protective grid
- Programmable pre-heating system for cab
- Roof glazing
- External louvers

Attachment

- Piston rod guard for bucket cylinder (BH)
- Piston rod guard for hoist cylinder (BH / FS)
- Piston rod guard for stick cylinder (FS)

Specific solutions

- Arctic package (different stages available)
- High altitude package

Safety

- Additional LED lighting with timer (for main access)
- Automatic fire fighting system
- Additional emergency stop (ground level)
- Travel alarm “Lynx shout”
- Isolation & energy dissipation system for uppercarriage – MDG 41 compliant

General

- Maritime transport packaging

IoMine

- Truck Loading Assistant
- Operational Analytics
- Bucket Filling Assistant

Notes

Notes

Quality commitment

- Liebherr-Mining Equipment Colmar, France, ISO 9001 certified
- Compliance of materials tested in laboratory
- Quality control during all stages of production
- CE certified, MDG 15 & MDG 41 compliant

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