Operating Weight
Backhoe Configuration
113 tonnes / 125 tons
Face Shovel Configuration
116 tonnes / 128 tons

Engine Power
565 kW / 757 HP

Standard Bucket
Backhoe Configuration
7.0 – 7.5 m³ / 9.2 – 9.8 yd³
Face Shovel Configuration
7.3 m³ / 9.6 yd³
### Operating Weight
- **Backhoe Configuration**: 113 tonnes / 125 tons
- **Face Shovel Configuration**: 116 tonnes / 128 tons

### Engine Power
- **565 kW / 757 HP**

### Standard Bucket
- **Backhoe Configuration**: 7.0 – 7.5 m³ / 9.2 – 9.8 yd³
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---

**Productivity**
- Working Harder and Faster

**Efficiency**
- Moving More for Less

**Reliability**
- Ready to Work
- When You Need It
Working Harder and Faster

Efficient and effective by design, the R 9100 B sets a new standard in job performance and functions as the optimal tool for loading 50 t up to 100 t off-highway trucks.
Fast and Precise Movement

**Liebherr Engine V12**
The R 9100 B is equipped with the long-lasting and proven Liebherr V12 diesel engine specifically designed to withstand extreme outside temperatures and high altitudes with low atmospheric pressure. Integrating the latest engine management system, the R 9100 B is built for extreme conditions.

**Fast Cycle Time**
Like all other Liebherr mining excavators, the R 9100 B uses a closed-loop swing circuit. The main hydraulic circuit comprises a combination of three independent main valves fed by three working pumps, providing unrivaled flexibility of attachment control and force distribution, while allowing full oil flow integration for fast movement and lowest cycle times.

**Precise Machine Motions**
The R 9100 B’s hydraulic control system is optimized in order to improve combined machine motions. The ergonomically mounted joysticks on the suspended seat armrests allow the operator to precisely position the machine.

High Digging and Lifting Capabilities

**High Digging Forces**
Designed for the best mechanical force distribution, the production-tailored attachment delivers tough digging and lifting forces. Integrating Liebherr-made cylinders and a wide range of buckets with mining optimized GET, the R 9100 B’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 9100 B’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.

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**Liebherr Diesel Engine**
- V12 by Liebherr
- US EPA Tier 2, US EPA Tier 4f / EU Stage V compliant
- Automatic idle control
- Max. altitude without derating: 3,600 m
- Eco-Mode selector

**Liebherr Site-Specific Bucket**
- 4 to 5 passes to load a 50 t off-highway truck
- 3 types of wear package
- Maximal bucket fill factor
- Integrated approach on machine capabilities
- Customized solutions according to customer application

**Exclusive EVO Bucket Solution**
- Liebherr patented EVO design to maximize the loading capacity
- Optimized Liebherr GET and wear package according to customer application
- Ensures optimal penetration efficiency
- Single GET hammerless locking system for safe and easy maintenance
- Fully patented GET system design for optimal penetration/lifetime
- 4 tooth profiles available for various range of applications
Moving More for Less

The R 9100 B follows the Liebherr design philosophy of maximizing a machine’s performance by improving the efficiency of all individual subsystems. Engineered for easy serviceability, the machine is designed to ensure maximum uptime. The R 9100 B’s modern cab creates a comfortable working environment, ensuring peak operator performance at every shift.
Hydraulic System Efficiency
Liebherr advanced hydraulic technology contributes to the R 9100 B's energy optimization. The high-pressure hydraulic system and the optimized pipe and hose layout maximize usable power transmission. The hydraulic pumps are 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.

Closed Loop Swing Circuit
The Liebherr Mining excavators are all equipped with a closed loop swing circuit. The kinematic energy is recovered when the swing motion is used during deceleration, to drive the main and auxiliary pumps, reducing fuel consumption and allowing faster boom lift motion.

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

Built for Maximum Profitability

Comfortable Cab for Efficient Work

Superior Operator Comfort
The modern large cab provides ideal working conditions and optimal operator's comfort. Mounted on silent blocks, the R 9100 B's cab design reduces vibrations. The new headliner limits noise pollution to provide a quiet working environment.

Extended Components Lifetime
The R 9100 B's hydraulic oil filtration systems remove fluid contaminants to offer the highest rate of hydraulic components durability. To maintain oil quality, all return hydraulic oil flow goes through a fine filtration system (15/5 μm) and oil tank is sized to considerably extend the time between service intervals.

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

First-Class Service Arrangements
Service friendly design allows easy and fast maintenance for maximum uptime:
- Service from one-side
- Large catwalks and walkways
- Refillable grease tanks instead of drums to be changed
- Centralized lubrication system
- Enhanced single-line lubrication system

Comfort-Oriented Cab Design
- Tinted laminated safety glass
- Armored front window
- Adjustable air suspended seat
- A/C with dust filter in fresh/recirculated air
- Pressurization to prevent dust penetration (optional)
- Optional Operator Comfort Kit: sun blinds, bottle cooler, reading light, premium seat with cooling/airing system, electronic weight adjustment
- Pre-heating system (optional)
With over 50 years of innovative thinking, engineering and manufacturing excellence, Liebherr sets the industry standard for advanced equipment design and technology tools to provide the most up-to-date product, responding to the requirements of mining customers.
Structure Made Exclusively for Mining
Liebherr mining excavators are conceptualised, designed and dedicated to the mining industry. The engineering department uses specific 3D solution in order to meet possible requirements, such as Finite Element and Fatigue Life Analysis. In combination, the manufacturing department uses advanced welding techniques to strategically reinforce the structure. The synergy of our skills allows to obtain maximal machine availability.

Reinforced Undercarriage Structure
Specifically designed for extreme mining conditions, the rugged R 9100 B undercarriage represents the basis for the stability of the machine. Developed and built for both shovel and backhoe configurations, the enlarged undercarriage offers an efficient ground bearing pressure management providing the necessary stability and reliability. The access to the travel motors and brakes has been designed to provide maximum protection to the components, while providing easy and fast service access.

Maximized Components Lifetime
The R 9100 B is equipped with an automatic single line lubrication system for the entire attachment and swing ring. All greasing points are suitably protected against external damages, extending component life and ensuring constant performance over the excavator’s operational life.

Liebherr Components Integration
As an OEM, Liebherr has built a solid reputation for its development and production of high quality strategic mining components. The R 9100 B integrates robust and reliable mining optimized components that are developed, manufactured and controlled by Liebherr, ensuring reliability and high performance for the entire machine.

Quality: the Liebherr Trademark

Long-lasting Job Performances

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

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

Arctic Package (optional)
Designed for reliability in regions with temperatures of down to –50 °C/–58 °F:
- Integrated into machine structure
- Start up easily even at very low temperatures
- Increases machine availability and components lifetime
- Optimum operator comfort even in harsh temperature conditions
- Facilitate machine servicing
World-Class Support, Everywhere, Every Day

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

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

Complete Training Programs
The Liebherr Mining Training System provides blended training sessions for operator and maintenance staff to 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.

Remanufacturing

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

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

Genuine Parts

Performance
Using genuine Liebherr components ensures the best interaction within your machine, encouraging optimal performance and most effective machine operation. For all major components, Liebherr relies on its Liebherr Maintenance Management System to follow and monitor service life while predicting maintenance activities.

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

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

Connectivity Kit
• Machine is serially equipped with GSM data transmission functionalities
• Collection of operating parameters + error codes/machine faults
• Data access through the Liebherr-Mining Data platform (LMD)
• Customized reports accessible on LMD to track & analyze machine data
• Monitor & follow your fleet
• Maintenance prediction, machine troubleshooting and uptime optimization

MyLiebherr Customer Portal
• Easy access parts online
• Available any time anywhere
• User friendly interface
• Online ordering
• Save time and money
Protecting Your Most Important Assets

The Liebherr R 9100 B provides uncompromising safety for operators and maintenance crew. As it is designed to be serviced from one side, the R 9100 B allows effortless access facilities to the major service points for quick and safe maintenance. The R 9100 B offers numerous features for operator safety.
Safe Service Access
The R 9100 B is fitted with ergonomic access for fast and safe maintenance. All service points are within reach from one side and at machine level. The R 9100 B’s upperstructure is accessible via a robust fixed ladder and integrates one large central platform equipped with slip resistant surfaces. The wide catwalks facilitate maintenance and ensure comfort during all the operations.

Secure Maintenance
All components have been located to allow for effortless inspection and replacement. Numerous service lights are perfectly located in the service areas to guaranty suitable maintenance conditions, day or night. Emergency stops have been strategically placed in the cab and engine compartment (at ground level in option). The R 9100 B eliminates hazards to ensure a safe environment for the service staff during maintenance.

Protection Against Fire Ignition
The engine compartment integrates a bulkhead wall that separates the engine from the hydraulic pumps. This reduces the risk of hydraulic oil entering the engine compartment. The turbochargers and exhaust systems are heat shielded, and all the hydraulic hoses are made from a fire resistant material.

Automatic Fire Suppression System
The R 9100 B can be equipped with a fully integrated fire suppression, employing a dual agent solution to prevent and protect the machine. The fire suppression system has both automatic and manual release capabilities, E-stops devices are strategically located in the cab and over the machine to be easily accessible in any case by the operator or maintenance.

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

Working Environment Control
- Rear and side camera system
- LCD color screen to display cameras view
- 9 long-range working LED lights located on attachment and upperstructure

Commitment to Employees Safety
- Safe and protected access to the components
- Major components centralized to be easily accessible
- Optional ground-level fluid maintenance hub
- E-stops located for the operator and maintenance staff
- FOPS: Falling Object Protective Structure (optionnal)
Liebherr considers the conservation and preservation of the environment as a major challenge for the present and future. Liebherr are considerate of environmental issues in designing, manufacturing and managing machine structures, providing solutions that allow customers to balance performance with environmental consciousness.
Minimized Impact on Life

Optimized Energy Consumption, Fewer Emissions
Constant power regulation of the hydraulic system and engine output optimize equipment fuel efficiency, depending on the application. In “Eco-Mode” setting, the machine is set up to reduce engine load, significantly improve fuel consumption and reduce emissions.

Controlled Emission Rejection
The R 9100 B is powered by a high horsepower diesel engine which complies with the US EPA Tier 2 or US EPA Tier 4f/EU Stage V compliant emission limits. This power drive makes the R 9100 B cost effective without compromising productivity and reduces the machines impact on the environment.

Sustainable Design and Manufacturing Process

Certified Environment Management Systems
Subject to the stringent European program for the regulation of the use of chemical substances in the manufacturing process REACH*, Liebherr undertakes a global evaluation to minimize the impacts of hazardous material, pollution control, water conservation, energy and environmental campaigns.

Extended Components and Fluids Lifetime
Liebherr is constantly working on ways to extend component life. Through the Liebherr-Mining Remanufacturing Program, superior lubrication systems and the reinforcement of parts under stress, Liebherr can reduce frequency of part replacement. The result minimizes environmental impact and lowers the overall total cost of ownership.

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

The Liebherr-Mining Remanufacturing Program
- Reduced environmental impact
- Second life for your components
- Reduced costs and investment
- Liebherr certified workshops
- Alternative to purchase brand-new replacement components

Eco-Mode
The Eco-Mode can be manually selected by the operator when maximal power is not required according to job need for:
- An improved fuel efficiency
- Less load on the engine
- Less noise pollution
- Less dioxide carbon emissions

Automatic Idle Control
Electronic idle control of the engine results in:
- Less fuel consumption
- Less load on the engine
- Reduced emissions
- More comfort to the operator (reduced noise pollution)
Technical Data

Engine

1 Liebherr diesel engine
Rating per ISO 9249 565 kW (757 HP) at 1,800 rpm
Model Liebherr D9512 (US EPA Tier 2, US EPA Tier 4f / EU Stage V compliant)
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, hydrostatic fan drive
Air cleaner dry-type air cleaner with pre-cleaner, primary and safety elements, automatic dust discharge
Fuel tank capacity 1,478 l / 390 gal (2,580 l / 682 gal optional)
Engine idling electronically controlled
Electrical system Voltage 24 V
Batteries 4 x 75 Ah / 12 V
Starter 24 V / 2 x 8.4 kW
Alternator 24 V / 140 A
RPM adjustment brushless adjustment of engine output via rpm selector

Hydraulic System

Hydraulic pump for attachment and travel drive 3 Liebherr variable flow axial piston pumps
Max. flow 3 x 435 l/min. / 3 x 115 gpm
Max. pressure 350 bar / 5,076 psi
for swing drive 1 Liebherr reversible swashplate pump, closed-loop circuit
Max. flow 420 l/min. / 111 gpm
Max. pressure 350 bar / 5,076 psi
Pump management electronically controlled pressure and flow management with oil flow optimisation
Hydraulic tank capacity 1,000 l / 264 gal
Hydraulic system capacity 1,500 l / 396 gal
Hydraulic oil filter 1 high pressure safety filter after each high pressure pump + extra-fine filtration of entire return flow with integrated by-pass filtration (15 / 5 μm) + dedicated leak-oil filtration
Hydraulic oil cooler 1 separated cooler, temperature controlled fan driven via 1 hydraulic piston motor
MODE selection adjustment of machine performance and the hydraulics via a mode selector to match application
ECO for economical operation (can be combined with fuel optimized setting)
POWER for maximum digging power and heavy duty jobs

Swing Drive

Hydraulic motor 2 Liebherr axial piston motors
Swing gear 2 Liebherr planetary reduction gears
Swing ring Liebherr, sealed single race ball bearing swing ring, internal teeth
Swing speed 0 – 6.0 rpm
Swing-holding brake wet multi-disc brakes, spring applied, hydraulically released

Hydraulic Controls

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
Servo circuit
Attachment and swing proportional via hydraulic joystick levers
Travel proportional via hydraulic pedals or removable hand levers
Shovel flap functions proportional via hydraulic pedals

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### Operator’s Cab

**Design**
- sound insulated, tinted windows, front window armored glass, door with sliding window

**Operator’s seat**
- air suspended, body-contoured with shock absorber, adjustable to operator’s weight

**Joysticks**
- joystick levers integrated into armrest of seat, armrest adjusted to seat position

**Condition monitoring**
- machine condition monitoring system with error reporting and operational information

**Display**
- color LCD-display with low and high brightness settings, 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 CO₂, combined cooler/heater, additional dust filter in fresh air/recirculated

**Noise level (ISO 6396)**
- LₚA (inside cab) = 76 dB(A)

### 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/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

### Undercarriage

**Version HD**
- heavy duty

**Drive**
- Liebherr swashplate motors

**Travel gear**
- Liebherr planetary reduction gears

**Travel speed**
- 0 – 3.5 km/h/0 – 2.17 mph

**Track components**
- track pitch 280 mm/11.02 in, maintenance-free

**Track rollers/ Carrier rollers**
- 8/2 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

### Uppercarriage

**Design**
- torque resistant modular design upper frame

**Attachment mounting**
- parallel length girders

**Catwalks**
- large catwalk on the left-hand side

### Central Lubrication System

**Type**
- single line lubrication system, for the entire attachment/swing ring bearing and teeth

**Grease pumps**
- 1 hydraulic pump for attachment/swing ring bearing lubrication, 1 electric pump for swing teeth lubrication

**Capacity**
- 27 l/7.1 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

**Hydraulic connections**
- pipes and hoses equipped with SAE flange connections

**Pivots**
- sealed, low maintenance

**Pivots bucket-to-stick**
- O-ring sealed and completely enclosed

**Pivots bucket-to-link**
- O-ring sealed and completely enclosed
## Dimensions

<table>
<thead>
<tr>
<th></th>
<th>mm / ft in</th>
<th></th>
<th>mm / ft in</th>
<th></th>
<th>mm / ft in</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>4,059/13’3”</td>
<td><strong>A1</strong></td>
<td>5,443/17’9”</td>
<td><strong>A2</strong></td>
<td>5,856/19’2”</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>4,865/16’4”</td>
<td><strong>C</strong></td>
<td>5,340/17’5”</td>
<td><strong>D</strong></td>
<td>4,630/15’2”</td>
</tr>
<tr>
<td><strong>E</strong></td>
<td>2,107 / 6’9”</td>
<td><strong>F</strong></td>
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<td><strong>G</strong></td>
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</tr>
<tr>
<td><strong>H</strong></td>
<td>4,114/13’5”</td>
<td><strong>K</strong></td>
<td>1,805/5’9”</td>
<td><strong>L</strong></td>
<td>4,810/15’8”</td>
</tr>
</tbody>
</table>

**Stick length**

<table>
<thead>
<tr>
<th>mm / ft in</th>
<th>Mono boom 7.60 m / 24’9”</th>
<th>mm / ft in</th>
<th>Mono boom 9.20 m / 30’2”</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>V</strong></td>
<td>3.20/10’5”</td>
<td>9,660/31’7”</td>
<td>11,445/37’6”</td>
</tr>
<tr>
<td></td>
<td>4.50/14’8”</td>
<td>–/–</td>
<td>9,930/32’6”</td>
</tr>
<tr>
<td></td>
<td>5.60/18’4”</td>
<td>–/–</td>
<td>9,800/32’5”</td>
</tr>
<tr>
<td><strong>W</strong></td>
<td>3.20/10’5”</td>
<td>6,035/19’8”</td>
<td>6,210/20’4”</td>
</tr>
<tr>
<td></td>
<td>4.50/14’8”</td>
<td>–/–</td>
<td>6,800/22’3”</td>
</tr>
<tr>
<td></td>
<td>5.60/18’4”</td>
<td>–/–</td>
<td>7,550/24’8”</td>
</tr>
<tr>
<td><strong>X</strong></td>
<td>3.20/10’5”</td>
<td>14,560/47’8”</td>
<td>16,000/52’2”</td>
</tr>
<tr>
<td></td>
<td>4.50/14’8”</td>
<td>–/–</td>
<td>15,385/50’5”</td>
</tr>
<tr>
<td></td>
<td>5.60/18’4”</td>
<td>–/–</td>
<td>14,825/48’6”</td>
</tr>
</tbody>
</table>

**Operator’s eye level**

<table>
<thead>
<tr>
<th>mm / ft in</th>
<th></th>
<th>mm / ft in</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
<td>4,733/15’5”</td>
<td><strong>P</strong></td>
<td>1,805 / 5’9”</td>
</tr>
<tr>
<td><strong>Q</strong></td>
<td>3,900/12’8”</td>
<td><strong>S</strong></td>
<td>812 / 2’7”</td>
</tr>
<tr>
<td><strong>U</strong></td>
<td>6,107 / 20’</td>
<td><strong>Z</strong></td>
<td>7,683/25’2”</td>
</tr>
</tbody>
</table>

**Operator’s eye level**

<table>
<thead>
<tr>
<th>mm / ft in</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>500/1’6” 600/2’</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>3,20 / 10’5”</td>
</tr>
<tr>
<td><strong>Q</strong></td>
<td>4,965/16’4”</td>
</tr>
<tr>
<td><strong>H</strong></td>
<td>4,114/13’5”</td>
</tr>
<tr>
<td><strong>K</strong></td>
<td>1,805/5’9”</td>
</tr>
<tr>
<td><strong>L</strong></td>
<td>4,810/15’8”</td>
</tr>
</tbody>
</table>

**Mono boom 6.60 m / 22’2”**

<table>
<thead>
<tr>
<th>mm / ft in</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>5,443/17’9”</td>
</tr>
<tr>
<td><strong>A1</strong></td>
<td>5,856/19’2”</td>
</tr>
<tr>
<td><strong>A2</strong></td>
<td>6,210/20’4”</td>
</tr>
</tbody>
</table>

**Stick length**

<table>
<thead>
<tr>
<th>mm / ft in</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>4,059/13’3”</td>
</tr>
<tr>
<td><strong>A1</strong></td>
<td>5,443/17’9”</td>
</tr>
<tr>
<td><strong>A2</strong></td>
<td>5,856/19’2”</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>5,340/17’5”</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>4,630/15’2”</td>
</tr>
<tr>
<td><strong>F</strong></td>
<td>2,107 / 6’9”</td>
</tr>
<tr>
<td><strong>G</strong></td>
<td>4,965/16’4”</td>
</tr>
<tr>
<td><strong>H</strong></td>
<td>4,114/13’5”</td>
</tr>
<tr>
<td><strong>K</strong></td>
<td>1,805/5’9”</td>
</tr>
<tr>
<td><strong>L</strong></td>
<td>4,810/15’8”</td>
</tr>
</tbody>
</table>

**Operator’s eye level**

<table>
<thead>
<tr>
<th>mm / ft in</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
<td>500/1’6” 600/2’</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>1,863 / 5’5”</td>
</tr>
<tr>
<td><strong>Q</strong></td>
<td>3,900/12’8”</td>
</tr>
<tr>
<td><strong>S</strong></td>
<td>6,107 / 20’</td>
</tr>
<tr>
<td><strong>Z</strong></td>
<td>7,683/25’2”</td>
</tr>
</tbody>
</table>

**Operator’s eye level**

<table>
<thead>
<tr>
<th>mm / ft in</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>500/1’6” 600/2’</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>1,663 / 5’5”</td>
</tr>
<tr>
<td><strong>Q</strong></td>
<td>3,900/12’8”</td>
</tr>
<tr>
<td><strong>S</strong></td>
<td>6,107 / 20’</td>
</tr>
<tr>
<td><strong>Z</strong></td>
<td>7,683/25’2”</td>
</tr>
</tbody>
</table>
Backhoe Attachment (Standard)
with Boom 7.60 m/24'9"

Digging Envelope

<table>
<thead>
<tr>
<th>Parameter</th>
<th>m</th>
<th>ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stick length</td>
<td>3.20</td>
<td>10'5&quot;</td>
</tr>
<tr>
<td>Max. digging depth</td>
<td>7.15</td>
<td>23'5&quot;</td>
</tr>
<tr>
<td>Max. reach at ground level</td>
<td>13.00</td>
<td>42'7&quot;</td>
</tr>
<tr>
<td>Max. dumping height</td>
<td>8.65</td>
<td>28'4&quot;</td>
</tr>
<tr>
<td>Max. teeth height</td>
<td>12.70</td>
<td>41'7&quot;</td>
</tr>
</tbody>
</table>

Forces

<table>
<thead>
<tr>
<th>Force</th>
<th>kN</th>
<th>lbf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. digging force (ISO 6015)</td>
<td>415</td>
<td>93,296</td>
</tr>
<tr>
<td>Max. breakout force (ISO 6015)</td>
<td>kN</td>
<td>lbf</td>
</tr>
</tbody>
</table>

Operating Weight and Ground Pressure

The operating weight includes the basic machine with boom 7.60 m/24'9", stick 3.20 m/10'5" and bucket 7.50 m³/9.8 yd³.

<table>
<thead>
<tr>
<th>Undercarriage</th>
<th>mm / ft in</th>
<th>HD</th>
<th>600/2'</th>
<th>750/2'5&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pad width</td>
<td></td>
<td></td>
<td>112,717</td>
<td>113,733</td>
</tr>
<tr>
<td>Weight</td>
<td>kg / lb</td>
<td></td>
<td>248,498</td>
<td>250,738</td>
</tr>
<tr>
<td>Ground pressure*</td>
<td>kg/cm² / psi</td>
<td>1.79/25.46</td>
<td>1.44/20.48</td>
<td></td>
</tr>
</tbody>
</table>

* according to ISO 16754

Backhoe Buckets

<table>
<thead>
<tr>
<th>Capacity ISO 7451</th>
<th>&lt; 5</th>
<th>&lt; 5</th>
<th>&lt; 5</th>
<th>5 – 6</th>
<th>5 – 6</th>
<th>5 – 6</th>
<th>7 – 8</th>
<th>7 – 8</th>
<th>7 – 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>m³</td>
<td>9.00</td>
<td>8.40</td>
<td>7.70</td>
<td>8.00</td>
<td>7.00</td>
<td>7.50</td>
<td>7.00</td>
<td>7.50</td>
<td>7.50</td>
</tr>
<tr>
<td>yd³</td>
<td>11.8</td>
<td>11.0</td>
<td>10.1</td>
<td>10.5</td>
<td>9.2</td>
<td>9.8</td>
<td>9.2</td>
<td>8.8</td>
<td>8.5</td>
</tr>
<tr>
<td>Suitable for material up to a specific weight of</td>
<td>1.5</td>
<td>1.65</td>
<td>1.8</td>
<td>1.65</td>
<td>1.8</td>
<td>1.8</td>
<td>1.95</td>
<td>1.65</td>
<td>2.0</td>
</tr>
<tr>
<td>Weight kg</td>
<td>7,200</td>
<td>7,000</td>
<td>6,900</td>
<td>7,700</td>
<td>7,200</td>
<td>7,450</td>
<td>7,200</td>
<td>8,520</td>
<td>7,710</td>
</tr>
<tr>
<td>Weight lb</td>
<td>15,873</td>
<td>15,432</td>
<td>15,212</td>
<td>16,976</td>
<td>15,873</td>
<td>16,424</td>
<td>15,873</td>
<td>18,783</td>
<td>16,998</td>
</tr>
</tbody>
</table>

GP: General purpose bucket with Liebherr Z90 teeth
HD: Heavy-duty bucket with Liebherr Z100 teeth
XHD: Heavy-duty rock bucket with Liebherr Z100 teeth
Backhoe Attachment
with Boom 9.20 m / 30'2"

Digging Envelope

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stick length (m)</td>
<td>3.20</td>
<td>4.50</td>
<td>5.60</td>
</tr>
<tr>
<td>ft in</td>
<td>10’5”</td>
<td>14’8”</td>
<td>18’4”</td>
</tr>
<tr>
<td>Max. digging depth (m)</td>
<td>9.64</td>
<td>10.94</td>
<td>11.90</td>
</tr>
<tr>
<td>ft in</td>
<td>31’6”</td>
<td>35’9”</td>
<td>39’</td>
</tr>
<tr>
<td>Max. reach at ground level (m)</td>
<td>15.02</td>
<td>16.20</td>
<td>17.20</td>
</tr>
<tr>
<td>ft in</td>
<td>49’3”</td>
<td>53’1”</td>
<td>56’4”</td>
</tr>
<tr>
<td>Max. dumping height (m)</td>
<td>8.40</td>
<td>8.90</td>
<td>9.40</td>
</tr>
<tr>
<td>ft in</td>
<td>27’6”</td>
<td>29’2”</td>
<td>30’8”</td>
</tr>
<tr>
<td>Max. teeth height (m)</td>
<td>13.16</td>
<td>13.60</td>
<td>13.90</td>
</tr>
<tr>
<td>ft in</td>
<td>43’2”</td>
<td>44’6”</td>
<td>45’6”</td>
</tr>
</tbody>
</table>

Forces

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. digging force (ISO 6015) (kN)</td>
<td>410</td>
<td>330</td>
<td>285</td>
</tr>
<tr>
<td>lbf</td>
<td>92,172</td>
<td>74,187</td>
<td>64,071</td>
</tr>
<tr>
<td>Max. breakout force (ISO 6015) (kN)</td>
<td>530</td>
<td>530</td>
<td>530</td>
</tr>
<tr>
<td>lbf</td>
<td>119,149</td>
<td>119,149</td>
<td>119,149</td>
</tr>
</tbody>
</table>

Operating Weight and Ground Pressure

The operating weight includes the basic machine with boom 9.20 m / 30’2”, stick 4.50 m / 14’8” and bucket 4.50 m³ / 5.9 yd³.

<table>
<thead>
<tr>
<th>Undercarriage</th>
<th>HD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pad width mm / ft in</td>
<td>600 / 2’</td>
</tr>
<tr>
<td>Weight kg / lb</td>
<td>112,464 / 247,941</td>
</tr>
<tr>
<td>Ground pressure* kg/cm² / psi</td>
<td>1.78 / 25.32</td>
</tr>
</tbody>
</table>

* according to ISO 16754

Backhoe Buckets

For materials class according to VOB, Section C, DIN 18300

<table>
<thead>
<tr>
<th>Capacity ISO 7451</th>
<th>&lt; 5</th>
<th>5 – 6</th>
<th>5 – 6</th>
<th>5 – 6</th>
<th>5 – 6</th>
<th>5 – 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>m³</td>
<td>6.50</td>
<td>5.80</td>
<td>5.50</td>
<td>4.50</td>
<td>3.80</td>
<td>3.20</td>
</tr>
<tr>
<td>yd³</td>
<td>8.5</td>
<td>7.6</td>
<td>7.2</td>
<td>5.9</td>
<td>5.0</td>
<td>4.2</td>
</tr>
</tbody>
</table>

Suitable for material up to a specific weight of

| with stick 3.20 m | t/m³ | 1.2   | 1.5   | 1.8   | 2.0   | 2.2   | –     |
| with stick 10’5” | t/m³ | –     | 2.023 | 2.528 | 3.034 | 3.371 | 3.708 |
| with stick 4.50 m | t/m³ | –     | 1.2   | 1.4   | 1.8   | 2.0   | 2.2   |
| with stick 14’8” | t/m³ | –     | 2.023 | 2.361 | 3.034 | 3.371 | 3.708 |
| with stick 18’4” | t/m³ | –     | –     | 1.2   | 1.5   | 1.8   | 2.0   |
| with stick 5.60 m | t/m³ | –     | –     | 2.023 | 2.528 | 3.034 | 3.371 |
| with stick 10’5” | lb/yd³ | –     | –     | 1.2   | 1.5   | 1.8   | 2.0   |
| with stick 4.50 m | lb/yd³ | –     | –     | 2.023 | 2.528 | 3.034 | 3.371 |
| with stick 14’8” | lb/yd³ | –     | –     | –     | 2.023 | 2.528 | 3.034 |
| with stick 18’4” | lb/yd³ | –     | –     | –     | –     | 2.023 | 2.528 |
| Weight kg       | 6,800| 7,100 | 6,300 | 5,300 | 4,600 | 4,000 |
| lb               | 14,991| 15,653| 13,889| 11,685| 10,141| 8,819 |

GP: General purpose bucket with Liebherr Z90 teeth
HD: Heavy-duty bucket with Liebherr Z100 teeth
Face Shovel Attachment
with Boom 5.30 m / 17'4"

Digging Envelope

<table>
<thead>
<tr>
<th>Stuck length</th>
<th>m</th>
<th>ft in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. reach at ground level</td>
<td>m</td>
<td>ft in</td>
</tr>
<tr>
<td>Max. dumping height</td>
<td>m</td>
<td>ft in</td>
</tr>
<tr>
<td>Max. crowd length</td>
<td>m</td>
<td>ft in</td>
</tr>
<tr>
<td>Bucket opening width T</td>
<td>mm</td>
<td>ft in</td>
</tr>
</tbody>
</table>

Forces

<table>
<thead>
<tr>
<th>Max. crowd force at ground level (ISO 6015)</th>
<th>kN</th>
<th>lbf</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. crowd force (ISO 6015)</td>
<td>kN</td>
<td>lbf</td>
</tr>
<tr>
<td>Max. breakout force (ISO 6015)</td>
<td>kN</td>
<td>lbf</td>
</tr>
</tbody>
</table>

Operating Weight and Ground Pressure

The operating weight includes the basic machine with shovel attachment and bucket 7.30 m³ / 9.6 yd³.

<table>
<thead>
<tr>
<th>Undercarriage</th>
<th>HD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pad width</td>
<td>mm / ft in</td>
</tr>
<tr>
<td>Weight</td>
<td>kg / lb</td>
</tr>
<tr>
<td>Ground pressure*</td>
<td>kg/cm² / psi</td>
</tr>
</tbody>
</table>

Face Shovel Buckets

For materials class according to VOB, Section C, DIN 18300

<table>
<thead>
<tr>
<th>Capacity ISO 7546</th>
<th>GP</th>
<th>GP</th>
<th>HD</th>
<th>HD</th>
<th>HD</th>
<th>HD</th>
<th>XD</th>
<th>XD</th>
<th>XD</th>
</tr>
</thead>
<tbody>
<tr>
<td>m³</td>
<td>9.00</td>
<td>7.80</td>
<td>7.80</td>
<td>7.30</td>
<td>6.70</td>
<td>5.90</td>
<td>7.30</td>
<td>6.70</td>
<td>5.80</td>
</tr>
<tr>
<td>yd³</td>
<td>11.8</td>
<td>10.2</td>
<td>10.2</td>
<td>9.6</td>
<td>8.8</td>
<td>7.7</td>
<td>9.6</td>
<td>8.8</td>
<td>7.6</td>
</tr>
<tr>
<td>t/m³</td>
<td>1.3</td>
<td>1.7</td>
<td>1.6</td>
<td>1.8</td>
<td>2.0</td>
<td>2.4</td>
<td>1.5</td>
<td>1.8</td>
<td>2.2</td>
</tr>
<tr>
<td>t/lb/yd³</td>
<td>2.191</td>
<td>2.865</td>
<td>2.697</td>
<td>3.034</td>
<td>3.371</td>
<td>4.045</td>
<td>2.528</td>
<td>3.034</td>
<td>3.708</td>
</tr>
<tr>
<td>Suitable for material up to a specific weight of</td>
<td>kg</td>
<td>lb</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

GP: General purpose bucket with Liebherr Z90 teeth
HD: Heavy-duty bucket with Liebherr Z100 teeth
XHD: Heavy-duty rock bucket with Liebherr Z100 teeth

* according to ISO 16754
## Optional Equipment

### Undercarriage
- Narrow track pad width
- Large track pad width
- Removable side frames
- HD travel gear for muddy applications
- Rock protection for idler wheel
- Protection for undercarriage center frame
- Full length chain guide

### Operator's 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
- Pre-heating system for cab
- Roof glazing
- External louvers

### Uppercarriage
- Increased fuel tank capacity (24h operation)
- Grid protection for front headlights
- Semi-automatic swing brake with joystick control
- Wiggins couplings for ground level access service
- Wiggins fast fueling system with Mutistio Hydra-Flo®
- Steel grease lines on swing ring
- Hydraulically operated 45° access stair
- Swing ring scrapers
- External grease refill station (hydraulic-powered)
- External starting device
- Rock protection for swing gear and grease lines

### Attachment
- Piston rod guard for bucket cylinder (BH)
- Piston rod guard for hoist cylinder (FS)
- Piston rod guard for stick cylinder (FS)
- Quick change coupling

### Specific Solutions
- Sound attenuation package
- Hydraulic arrangement for special application (hammer/shear/grapple/coupler)

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

### General
- Maritime transport packaging