Mining Excavator R 9350

Operating Weight with Backhoe Attachment:	**302,000 kg / 665,800 lb**
Operating Weight with Shovel Attachment:	**310,000 kg / 683,400 lb**
Engine Output:	**1,120 kW / 1,500 hp**
Bucket Capacity:	**15.30 - 20.00 m³ / 20.0 - 26.2 yd³**
Shovel Capacity:	**15.30 - 20.50 m³ / 20.0 - 26.8 yd³**

LIEBHERR

R 9350

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Productivity and Efficiency

Liebherr's R 9350 mining excavator integrates the latest technology to perform efficiently in all types of mining environments. Even under the hardest conditions, it achieves high productivity. Always ready for job, the R 9350 is your key to the lowest operating and owning cost per tonne.

Reliability

More than 50 years of experience in designing and manufacturing hydraulic excavators are the basis for the outstanding reliability of the R 9350. This excavator combines innovative solutions, excellent design and Liebherr long-life components, ensuring maximum availability and performance throughout the whole equipment life.

Customer Support

On site, Liebherr's customer support delivers tailor-made professional solutions to your project specifics and site requirements. Liebherr offers a partnership with the goal of mining more for less.

Operating and Servicing

The R 9350's operator cab creates a comfortable and ergonomic working environment. The electronic machine controls assure the best operator performance throughout each shift. Furthermore, the ergonomic component access and long service intervals assist the service team to ensure more uptime.

Safety and Environment

The Liebherr R 9350 provides uncompromising safety for operators and maintenance crews, with innovative technologies integrated into the machine.

Electronic Cylinder End Position Control

- Patented system based on electronic control
- Smooth attachment movements even when working close to cylinder end position
- No shocks when reaching attachment end position
- No oil heating when reaching cylinder end position
- Energy saving by limiting the oil flow
- Allows the operator to focus on loading

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Reach a New Level of Productivity

Liebherr Electronic Machine Control Litronic

Liebherr's electronic machine control Litronic contributes to fast loading cycles and easy control, even if multiple movements are required at the same time. The electronic control of the hydraulic system enhances pressure and flow distribution as a function of the machine movement. Thanks to the electronic cylinder end position control the operator can fully focus on the job.

High Digging Forces

The production-tailored attachment kinematics combined with a mining-optimized bucket shape ensure the highest crowd and breakout forces. Even under tough conditions Liebherr's R 9350 high digging force allows easy bucket penetration and high bucket fill factors achieving high productivity.

Closed Loop Swing Circuit

With an independent swing circuit the machine allows the maximum swing torque whilst retaining the full oil flow for the working circuit.

Compact Machine Design

Liebherr's excavator design is well-balanced and provides best machine stability. The high weight distribution towards the undercarriage contributes to an efficient utilization of the strong digging forces and a favorable power to weight ratio of the upperarriage and attachment.

Efficiency for Less Cost

Efficient Cooling System

Liebherr's large dimensioned cooling system reduces fan power consumption and ensures an ideal machine temperature. The hydrostatic fans operate always on the required level.

High Hydraulic Efficiency

The high pressure level of Liebherr hydraulic system together with the optimized pipe and hose layout maximize the usable power transmission. The Pressure Less Boom Down function combined with the oil regeneration on the attachment saves energy and reduces swing back time.

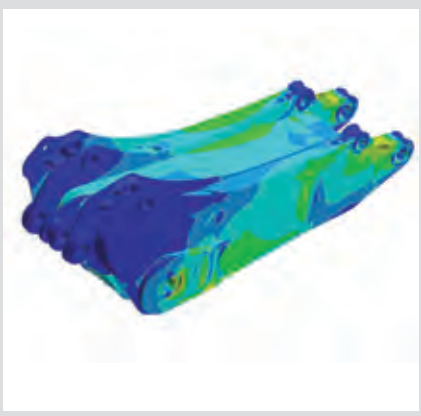
Automatic Idle Control

The electronic control of the hydraulic system and engine allows automatic idle mode contributing to:

- Less fuel consumption
- Load on the engine

Liebherr Buckets

- The right size for each application
- Robust structural design adapted to machine's high digging and breakout forces
- Customized and site-specific wear packages configuration
- Face shovel and backhoe configuration available



Finite Element Analysis (FEM)

- Multibody simulations
- Fatigue calculations for longest possible lifetimes

Reliability

More than 50 years of experience in designing and manufacturing hydraulic excavators are the basis for the outstanding reliability of the R 9350. This excavator combines innovative solutions, excellent design and Liebherr long-life components, ensuring maximum availability and performance throughout the whole equipment life.

Experience Liebherr Quality

Over 50 Years of Experience

Since 1954, Liebherr has been designing, manufacturing and servicing crawler mounted excavators used in toughest applications. Like its predecessors, Liebherr's R 9350 benefits from this long-time experience in the customer-focused design with modern engineering solutions and extensive mining knowledge.

Quality Management

Liebherr's quality processes commence with the machine design and simulations. Liebherr meets the highest industry standards for special selections of steels and selection of special casting materials. During manufacturing and assembly, Liebherr quality management follows all manufacturing steps, ensuring highest quality of each machine delivered. Liebherr hydraulic excavator plants are ISO 9001 certified.

Heavy Duty Excavator

First-class components and machine steel structures ensure a high machine reliability, even in hard mining conditions.

Advanced Design of All Mining Applications

Machine Design

Liebherr's design processes include the latest and product specific numerical engineering tools, such as Finite Element Analyses, Fatigue Calculations, Torque and Displacement Analysis and Multibody Simulations. These modern techniques allow reliable engineering solutions for series and special applications.

Specific Solutions

As each project is unique, Liebherr is developing and supplying solutions to ensure performance and reliability in specific mining environments. Liebherr's R 9350 can be customized to operate in regions with temperatures of down to -40°C / -40°F or up to 55°C / 131°F, as well as in high-altitude regions of up to 4,500 m above sea level. Liebherr offers specific bucket-tailored solutions for each type of application also in direct digging conditions.

High Altitude Kit

Design to offer maximum reliability for operation in high altitude:

- Integration in machine structure
- Adapted engine
- Pressurized hydraulic tank
- Combination with cold kit possible

Liebherr Components

- Major components developed and manufactured in-house
- Designed specifically for mining operations
- Liebherr Service Exchange Program

Service Exchange Units (SEU)

Rebuild programs for components are conducted by Liebherr-certified repair shops, using best practice guidance to ensure:

- Maximum component life
- Long-term reliability
- High performance
- Cost-efficiency
- High quality

Customer Support

On site, Liebherr's customer support delivers tailor-made professional solutions to your project specifics and site requirements. Liebherr offers a partnership with the goal of mining more for less.

Your Mining Partner

Parts Logistics and Services

Liebherr parts and service follow the machine into the field with international logistics platforms ensuring parts supply and maintenance services worldwide.

Customized Service and Product Support

Depending on specific requirements, Liebherr offers tailored support solutions integrating parts exchange and management agreements, service and maintenance on site or maintenance management agreements.

Service Exchange Units

Rebuild programs for components are conducted by Liebherr-certified repair shops, ensuring rebuilt component life and reliability match new component performance expectations.

Complete Training Solutions

Dedicated to mining the Liebherr training team provides operator and maintenance staff training programs to allow cost-efficient and safe operations. Liebherr offers customized on-site training courses according to your needs.

Factory Support

Service Engineering

Liebherr design and field service engineers accompany the excavators throughout the whole machine life. Liebherr's sales and service organizations and the Liebherr factories' product engineering groups provides fast and proactive support to the mining industry.

Service Tools

Liebherr affords service tools for excavator-specific maintenance which ensure safe working even when hand-ling large excavator components.

Liebherr Service Tools

- Fast component replacement
- Designed specifically for requirements on Liebherr machines
- High operational safety
- Cost-efficiency for service operations
- Usable on different excavator sizes

Liebherr Training Programs

Competence-based training, employing an interdisciplinary learning strategy:

- Liebherr Mining Training Centers
- Available in different languages
- Customized training courses on site

Electronic Machine Controls & Diagnostics

- Electronic joysticks for easy machine operations
- LCD operator display for machine control and easy service diagnostic
- Each lubrication circuit can be set individually through operator's dashboard

Operating and Servicing

The R 9350's operator cab creates a comfortable and ergonomic working environment. The electronic machine controls assure the best operator performance throughout each shift. Furthermore, the ergonomic component access and long service intervals assist the service team to ensure more uptime.

Operator Workplace

Comfortable Working Environment

The R 9350's spacious cab offers ideal working condi-tions and first-class comfort. The adjust-able air suspen-sion seat fits to individual needs. Best visibility over the whole working environment is provided by the enhan-ced position of the cab. The hanging arch hose arrange-ment allows to oversee large areas of the uppercarriage. Addi-tionally a camera system shows areas that can't be observed directly. The cab's effective insulation creates a quiet working environment for maximum productivity.

Ergonomic Control Elements

The configuration and placement of operator control elements and monitoring displays are perfectly coor-dinated to support the productive performance. The electronic control is easy and intuitive to use. The dashboard and machine control panel are easy to ac-cess and arranged for fast overview on major machine functions.

Easy Serviceability

Ergonomic Service Access

The Liebherr R 9350 provides ergonomic compo-nent access for fast and efficient service. All service points are within reach through large catwalks and walkways. The centralized drop down flap allows easy and safe refilling and exchange of all service fluids, preventing spillage and reducing contamina-tion by dust. The electronic health monitoring system assists in trouble-shooting and maintenance tasks. Liebherr excavators are equipped with louvers for easy access of ground based support tools.

Extended Service Intervals

Designed for mining operations the R 9350 offers all features for extended machine services inter-vals. The filtration systems with integrated bypass hydraulic oil filters and the large grease systems are only two of them. The fuel tank enables an op-eration beyond 24 hours prior re-fuelling.

Comfort in Cab

- Tinted safety glass all-around with heavy duty sun louvers on all windows
- Pressurized to prevent dust penetration
- Low vibrating and soundproof
- Operator eye level of 6.60 m / 21'7" for clear view of truck body and overall digging area

Extended Service Intervals

- Large fuel tank capacity for 24 hours machine endurance
- Oil sample points oil analyses
- Air filter cyclone pre-cleaner with automatic dust ejection
- Automatic single-line central lubrication system

Safe Machine Access

- Powered access ladder with perforated steps
- Access ladders and catwalks feature handrails and slip-resistant surfaces
- Emergency egress with handrail at the front of the excavator
- Optional 45° stair access

Safety and Environment

The Liebherr R 9350 provides uncompromising safety for operators and maintenance crews, with innovative technologies integrated into the machine.

Safety Integrated Design

Easy and Safe Machine Access

All railings and catwalks are laid out to easily access all relevant machine areas. An optional 45° stair helps accessing the machine comfortably. In case of emergency stops the stair is automatically activated.

Protected Operator and Service Crew

The cab has an integrated FOPS structure. The armored front and attachment side windows create a safe working environment for operators. All other windows are of laminated safety glass. Emergency stop arrangements in the cab as well as in the pump compartment, valve bank, engine compartment and at ground level ensure safe maintenance tasks. Safety standards are achieved by a separated engine and pump compartment, heat insulation on turbochargers and on the exhaust system as well as by the use of heavy duty high resistant hydraulic hoses.

Environmental Care

Ecological Features

Throughout the whole design and manufacturing process of Liebherr machines, environmental protection is given high priority. Material used for machine assembly is recyclable at 95 %. The hydraulic system allows the use of biodegradable hydraulic oils. The automatic idle mode contributes to less fuel consumption and less load on the engine resulting in reduced CO_2 emissions.

Electrical Drive for Even More Power and Efficiency

Liebherr's fully integrated optional electrical drive system allows for high operating efficiency and additional power. Due to the long service intervals of electrical motors, uptime can be enhanced while maintenance costs are decreased. The silent electrical drive contributes to health and safety requirements.

Operation under Sound Restriction

Liebherr provides solutions for operations close to residential areas with machine-specific sound attenuation packages. The approach is based on both removal of noise at the source and passive sound attenuation resulting in low machine noise emissions.

Electric Motor

- High efficiency
- Long service intervals
- Reduced maintenance costs
- Higher component lifetime due to less vibration
- Silent electric drive contributes to health, safety and environmental care

Sound Attenuation Kit

- Full integration into machine structure
- Noise-optimised fan regulation
- Increased mufflers, additional silencers and tail pipe absorbers
- Long life sound attenuation on doors and walls
- Sound attenuation louvers

Technical Data

Engine

1 Cummins diesel engine

Rating per SAE J 1995	1,120 kW/1,500 hp at 1,800 rpm
Model	QSK45 (Tier 1)
Type	12 cylinder turbocharged V-engine after-cooler two separate water cooling circuits direct injection system
Displacement	45 l/2,745 in³
Bore/Stroke	159/190 mm/6.26/7.48 in
Engine cooling system	fans driven via hydraulic piston motor
Air cleaner	dry-type air cleaner with pre-cleaner, with automatic dust ejector, primary and safety elements
Fuel tank	5,815 l/1,536 gal
Electrical system	
Voltage	24 V
Batteries	4 (+ 2) x 170 Ah/12 V
Alternator	24 V/260 Amp
Engine idling	sensor controlled
Electronic engine control system	engine speed sensing over the entire engine RPM range. Provides integration of engine with other machine systems

Electric Motor (optional)

1 electric motor

Power output	1,200 kW/1,610 hp
Type	3 phase AC squirrel cage motor
Voltage	voltage on request
Frequency	50 Hz (or 60 Hz – dependent on country)
Revolutions	1,500 rpm or 1,800 rpm
Motor cooling	integrated air-to-air heat exchanger
Starting method	reduction of inrush current

Hydraulic System

Hydraulic pumps for attachment and travel drive	4 variable flow axial piston pumps
Max. flow	4 x 754 l/min./4 x 199 gpm
Max. hydr. pressure	320 bar/4,640 psi
Hydraulic pump for swing drive	2 reversible swash plate pumps, closed-loop circuit
Max. flow	2 x 390 l/min./2 x 103 gpm
Max. hydr. pressure	350 bar/5,076 psi
Pump management	electronically controlled pressure and flow management with oil flow optimisation
Hydraulic tank capacity	2,200 l/581 gal
Hydraulic system capacity	4,200 l/1,110 gal
Hydraulic oil filter	1 high pressure safety filter after each high pressure pump + fine filtration of entire return flow
Hydraulic oil cooler	2 separate coolers, 2 temperature controlled fans driven via hydraulic piston motor

Hydraulic Controls

Servo circuit	independant, electric over hydraulic proportional controls of each function
Emergency control	via accumulator for all attachment functions with stopped engine
Power distribution	via monoblock control valves with integrated primary relief valves and flanged on secondary valves
Flow summation	to attachment and travel drive
Control functions	
Attachment and swing	proportional via joystick levers
Travel	proportional via foot pedals or hand levers
Bottom dump bucket	proportional via foot pedals

Electric System

Electric isolation	easy accessible battery isolations
Working lights	high brightness halogen lights: – 2 on working attachment – 1 on RHS of uppercarriage – 3 on LHS of uppercarriage – 2 on counterweight Xenon lights in option
Emergency stop switches	at ground level, in hydraulic compartment, in engine compartment and in operator cab
Electrical wiring	heavy duty execution in IP 65 standard for operating conditions of – 50 °C to 100 °C/ – 58 °F to 212 °F

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 – 3.9 rpm
Swing-holding brake	hydraulically released, maintenance-free, multi-disc brakes integrated in each swing gear

Uppercarriage

Design	torque resistant designed upper frame in box type construction for superior strength and durability
Attachment mounting	parallel longitudinal main girders in box-section construction
Machine access	on the cab side with a hydraulically driven access ladder, additional emergency ladder in front of the cab

Service Flap

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

Other coupler type on request

Technical Data

Operator's Cab

Design	resiliently mounted, sound insulated, large windows for all around visibility, integrated falling object protection FOPS
Operator's seat	suspended, body-contoured with shock absorber, adjustable to operator's weight
Cabin windows	20.5 mm/0.8 in tinted armored glass for front window and right hand side windows, all other windows in tinted safety glass, high pressure windshield-washer system 75 l/20 gal watertank, steel sun louvers on all windows in heavy duty design
Heating system/ Air conditioning	1 heating system + air conditioning (double unit optionally available)
Cabin pressurization	ventilation with filter
Controls	joystick levers integrated into armrest of seat
Monitoring	via LCD-Display, data memory
Rear vision system	camera installation on counterweight and right-hand side of the uppercarriage displayed over an additional LCD-display
Automatic engine shut off	engine self-controlled shut off
Destroking of main pumps	in case of low hydraulic oil level
Safety functions	aditional 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) = 76 dB(A) with oil/water fans at 100 % and AC fan at 65 % Electric: L_{pa} (inside cab) = 74,7 dB(A) with oil/water fans at 100 % and AC fan at 65 %

Undercarriage

Design	3-piece undercarriage, box type structures for center piece and side frames (stress relieved steel work component as a standard)
Hydraulic motor	2 axial piston motors per side frame
Travel gear	Liebherr planetery reduction gear
Travel speed	0 – 2.5 – 3.3 km/h / 0 – 1.60 – 2.00 mph
Parking brake	spring engaged, hydraulically pressure released wet multi-disc brakes for each travel motor, maintenance-free
Track components	D 12, maintenance-free, forged double grouser pad
Track rollers/ Carrier rollers	9/2
Automatic track tensioner	pressurized hydraulic cylinder with accumulator and grease tensioner
Transport	undercarriage side frames are removable

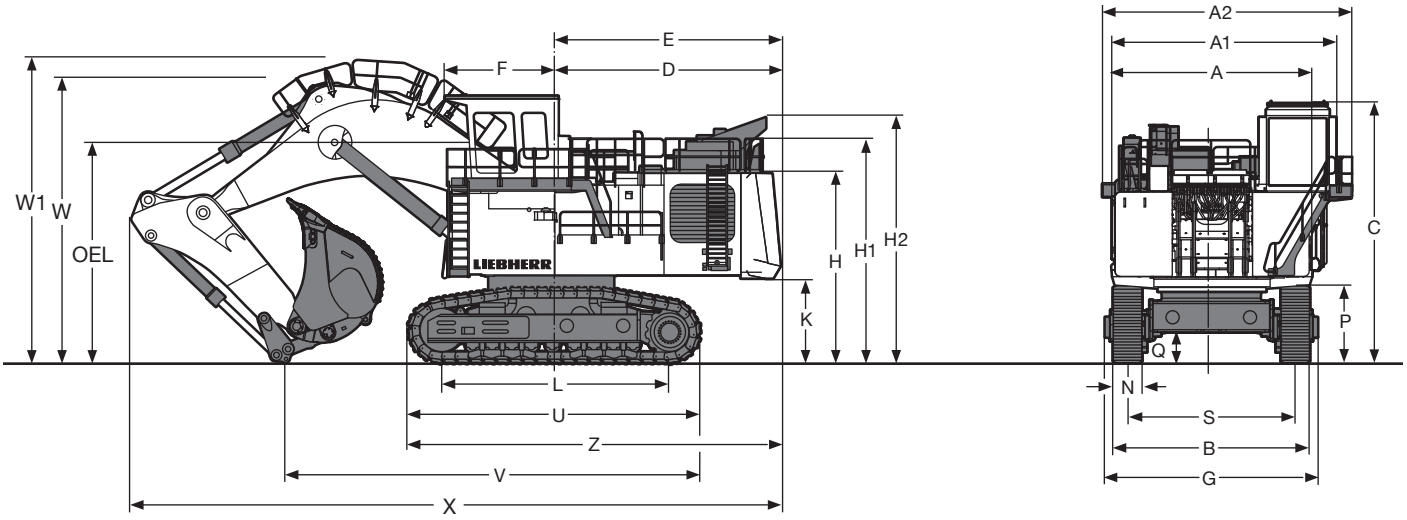
Central Lubrication System

Type	Lincoln Centromatic lubrication system, for the entire attachment/swing ring bearing and teeth
Grease pumps	Lincoln Powermaster pump plus separate pump for swing ring teeth
Capacity	200 l/53 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, fill line with grease filters

Attachment

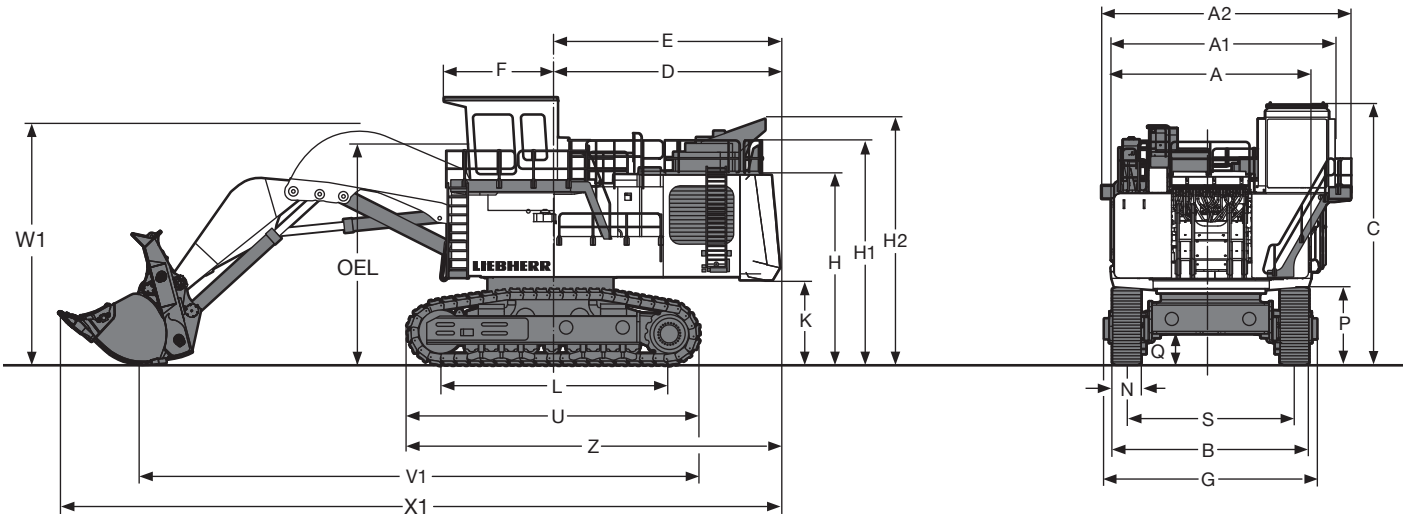
Design	box-type structure with large steel castings in all high-stress areas
Pivots	sealed with double side centering with 1 single floating pin per side, all bearings with wear resistant steel bushings, bolts hardened and chrominium-plated
Hydraulic cylinder	Liebherr design, all cylinders located in well protected areas
Hydraulic connections	pipes and hoses equipped with SAE split-flange connections
Kinematics	Liebherr parallel face shovel attachment geometry, electronic controlled end-cushioning

Dimensions



	mm/ft in
A	5,800/19’
A1	6,720/22’
A2	7,400/24’ 3”
C	7,800/25’ 7”
D	6,395/20’11”
E	6,395/20’11”
F	3,100/10’ 2”
H	5,480/17’11”
H1	6,500/21’ 3”
H2	7,075/23’ 2”
K	2,280/ 7’ 5”
L	6,400/20’11”
P	2,494/ 8’ 2”

		mm/ft in
Q		982/ 3’2”
S		5,000/16’4”
U		8,334/27’4”
Z		10,470/34’4”
N		850/ 2’9”
B		5,850/19’2”
G		6,340/20’9”
V		11,800/38’8”
W		8,100/26’6”
W1		8,700/28’6”
X		18,450/60’6”
OEL	Operator’s Eye Level	6,600/21’7”



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K	2,280/ 7’ 5”
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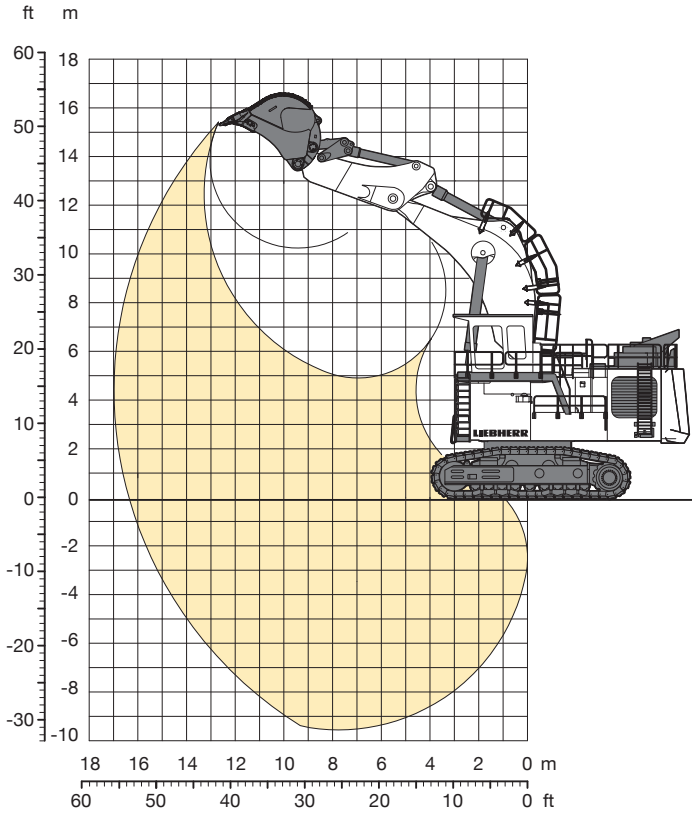
		mm/ft in
P		2,494/ 8’ 2”
Q		982/ 3’ 2”
S		5,000/16’ 4”
U		8,334/27’ 4”
Z		10,470/34’ 4”
N		850/ 2’ 9”
B		5,850/19’ 2”
G		6,340/20’ 9”
V1		15,900/52’ 1”
W1		7,100/23’ 3”
X1		20,700/67’10”
OEL	Operator’s Eye Level	6,600/21’ 7”

Backhoe Attachment

with Gooseneck Boom 9.30 m/30’6”



Digging Envelope

Stick length	4.20 m/13’9”
Max. reach at ground level	16.30 m/53’5”
Max. teeth height	15.40 m/50’6”
Max. dump height	10.20 m/33’5”
Max. digging depth	9.50 m/31’1”
Max. digging force (SAE)	880 kN/197,832 lbf
Max. breakout force (SAE)	1,020 kN/229,305 lbf

Operating Weight and Ground Pressure

The operating weight includes the basic machine with backhoe attachment and a 18.00 m³/23.5 yd³ bucket.

Pad width	mm/ft in	850/2’9”
Weight	kg/lb	302,000/665,795
Ground pressure	kg/cm²/psi	2.51/35.70

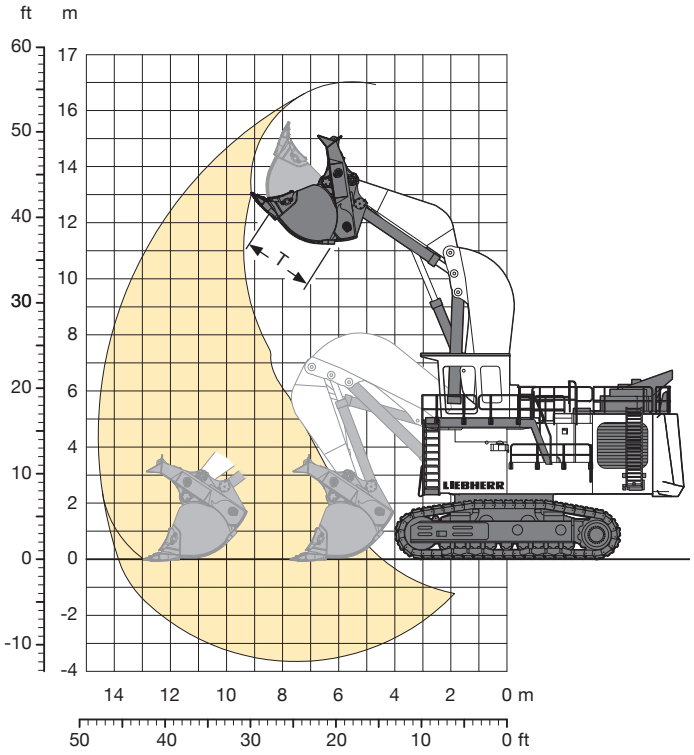
Buckets

For materials classe according to VOB, Section C, DIN 18300		< 5	5 – 6	5 – 6	5 – 6	7 – 8
Typical operation according to VOB, Section C, DIN 18300		GP	HD	HD	HD	XHD
Capacity ISO 7451	m³	20.00	17.00	18.00	19.00	15.30
	yd³	26.16	22.24	23.54	24.85	20.01
Suitable for material up to a specific weight of	t/m³	1.7	1.9	1.8	1.6	1.9
	lb/yd³	2,867	3,204	3,035	2,698	3,204
Cutting width	mm	3,700	3,400	3,400	3,600	3,400
	ft in	12’1”	11’1”	11’1”	11’9”	11’1”
Weight	kg	16,150	18,250	18,350	19,600	20,350
	lb	35,605	40,234	40,455	43,211	44,864

GP: General purpose bucket with Esco S95 teeth
HD: Heavy-duty bucket with Esco S95 teeth
XHD: Heavy-duty rock bucket with Esco S95 teeth

Shovel Attachment

with Shovel Boom 6.75 m/22’1”



Digging Envelope

Stick length	4.20 m/13’9”
Max. reach at ground level	13.75 m/45’1”
Max. dump height	11.20 m/36’8”
Max. crowd length	5.20 m/17’
Bucket opening width T	2.50 m/ 8’2”
Crowd force at ground level	1040 kN/233,801 lbf
Max. crowd force	1300 kN/292,252 lbf
Max. breakout force	1060 kN/238,297 lbf

Operating Weight and Ground Pressure

The operating weight includes the basic machine with shovel attachment and a 18.00 m³/23.5 yd³ bucket.

Pad width	mm/ft in	850/2’9”
Weight	kg/lb	310,000/683,432
Ground pressure	kg/cm²/psi	2.58/36.70

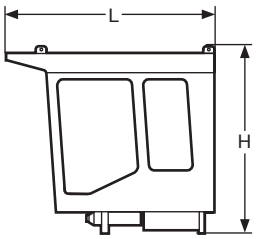
Bottom Dump Buckets

For materials classe according to VOB, Section C, DIN 18300		< 5	< 5	< 5	5 – 6	5 – 6	7 – 8	7 – 8
Typical operation according to VOB, Section C, DIN 18300		GP	GP	GP	HD	HD	XHD	XHD
Capacity ISO 7546	m³	15.30	17.00	20.50	17.00	18.00	15.30	16.50
	yd³	20.01	22.24	26.81	22.24	23.54	20.01	21.58
Suitable for material up to a specific weight of	t/m³	2.2	2.0	1.6	1.9	1.8	1.9	1.7
	lb/yd³	3,710	3,373	2,698	3,204	3,035	3,204	2,867
Cutting width	mm	4,100	4,100	4,100	4,100	4,100	4,100	4,100
	ft in	13’5”	13’5”	13’5”	13’5”	13’5”	13’5”	13’5”
Weight	kg	29,900	30,600	31,000	31,620	31,900	35,000	35,950
	lb	65,918	67,461	68,343	69,710	70,327	77,162	79,256
Wear kit level		I	I	I	II	II	III	III

GP: General purpose bucket with Esco 85SV2 teeth
HD: Heavy-duty bucket with Esco 85SV2 teeth
XHD: Heavy-duty rock bucket with Esco 85SV2 teeth

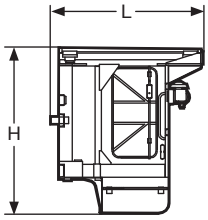
Level I: For non-abrasive materials, such as limestone, without flint inclusion, shot material or easily breakable rock, i.e., deteriorated rock, soft limestone, shale, etc.
Level II: For preblasted heavy rock, or deteriorated, cracked material (classification 5 to 6, according to DIN 18300)
Level III: For highly-abrasive materials such as rock with a high silica content, sandstone etc.

Component Dimensions and Weights



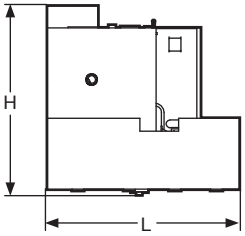
Cab

L	Length	mm/ft in	3,600/11’9”
H	Height	mm/ft in	2,900/ 9’6”
	Width	mm/ft in	2,315/ 7’7”
	Weight	kg/lb	3,500/7,716



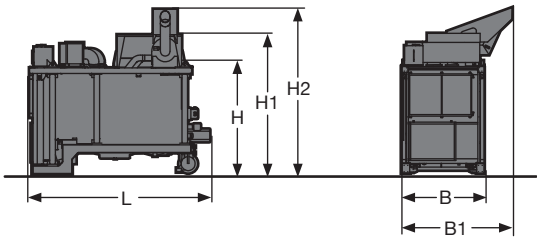
Cab Elevation

L	Length	mm/ft in	2,415/7’11”
H	Height	mm/ft in	2,550/8’ 4”
	Width	mm/ft in	2,550/8’ 4”
	Weight	kg/lb	3,500/7,716



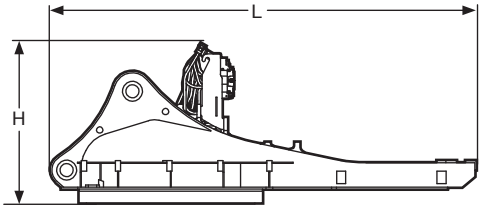
Fuel Tank

L	Length	mm/ft in	2,970/9’ 8”
H	Height	mm/ft in	2,930/9’ 7”
	Width	mm/ft in	2,130/6’11”
	Weight	kg/lb	3,700/8,157



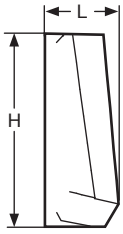
Powerplant

L	Length	mm/ft in	4,800/15’ 8”
H	Height	mm/ft in	3,000/ 9’10”
H1	Height	mm/ft in	3,700/12’ 1”
H2	Height	mm/ft in	4,400/14’ 5”
B	Width	mm/ft in	2,200/ 7’ 2”
B1	Width	mm/ft in	2,950/ 9’ 8”
	Weight	kg/lb	17,500/38,581



Rotation Deck (with swing ring, swing gears, control valve bracket engine with pumps)

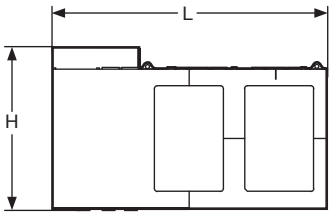
L	Length	mm/ft in	8,100/26’6”
H	Height	mm/ft in	3,882/12’8”
	Width	mm/ft in	3,700/12’1”
	Weight	kg/lb	42,700/94,137



Counterweight

L	Length	mm/ft in	1,100/ 3’7”
H	Height	mm/ft in	3,250/10’7”
	Width	mm/ft in	6,000/19’8”
	Weight	kg/lb	25,320/55,821

Component Dimensions and Weights

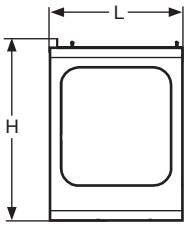


Hydraulic Tank

L	Length	mm/ft in	4,920/16’ 1”
H	Height	mm/ft in	2,900/ 9’ 6”
	Width	mm/ft in	1,820/ 5’11”
	Weight	kg/lb	7,870/17,350

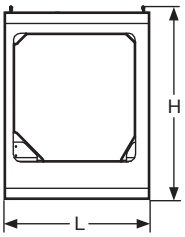
Hydraulic Oil

	Weight	kg/lb	2,940/6,482



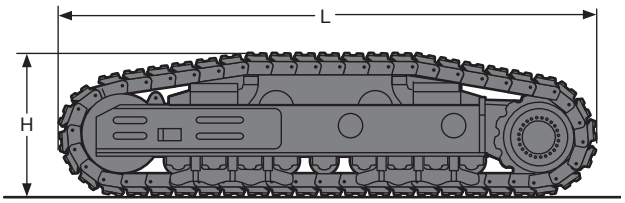
Catwalk Box Left

L	Length	mm/ft in	2,140/7’
H	Height	mm/ft in	2,960/9’8”
	Width	mm/ft in	700/2’3”
	Weight	kg/lb	1,900/4,189



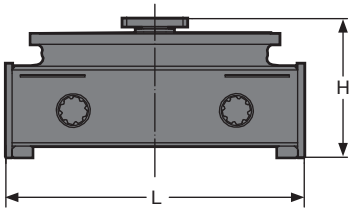
Catwalk Box Right

L	Length	mm/ft in	2,120/6’11”
H	Height	mm/ft in	2,960/9’ 8”
	Width	mm/ft in	950/3’ 1”
	Weight	kg/lb	800/1,764



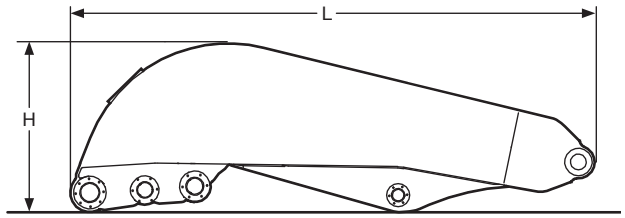
Side Frame (two)

L	Length	mm/ft in	8,334/27’ 4”
H	Height	mm/ft in	2,360/ 7’ 8”
	Width over travel drive	mm/ft in	2,055/ 6’ 8”
	Width without travel drive	mm/ft in	1,485/ 4’10”
	Weight	kg/lb	2 x 43,350/2 x 95,570



Undercarriage Central Girder

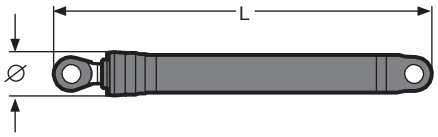
L	Length	mm/ft in	3,670/12’
H	Height	mm/ft in	2,482/ 8’1”
	Width	mm/ft in	3,670/12’
	Weight	kg/lb	25,600/56,438



Shovel Boom

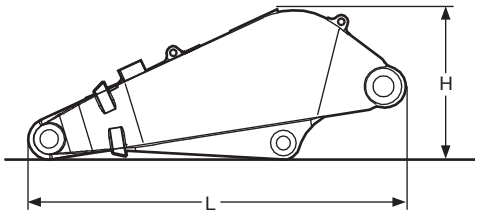
L	Length	mm/ft in	7,250/23’ 9”
H	Height	mm/ft in	2,350/ 7’ 8”
	Width	mm/ft in	2,400/ 7’10”
	Weight	kg/lb	25,200/55,556

Component Dimensions and Weights



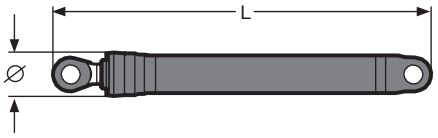
Shovel Hoist Cylinder (two)

L	Length	mm/ft in	4,690/15'4"
Ø	Diameter	mm/ft in	550/ 1'9"
	Weight	kg/lb	2 x 3,510/2 x 7,738



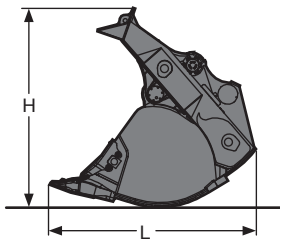
Shovel Stick

L	Length	mm/ft in	4,700/15'4"
H	Height	mm/ft in	1,900/ 6'2"
	Width	mm/ft in	2,250/ 7'4"
	Weight	kg/lb	12,750/28,109



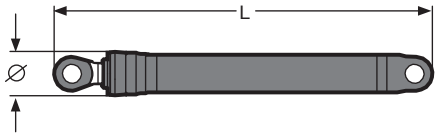
Crowd Cylinder (two)

L	Length	mm/ft in	3,350/10'11"
Ø	Diameter	mm/ft in	400/ 1' 3"
	Weight	kg/lb	2 x 1,470/2 x 3,241



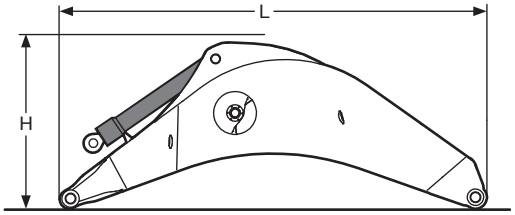
Bottom Dump Bucket

Application		HD
Capacity ISO 7451	m^3/yd^3	18.00/23.54
L Length	mm/ft in	4,200/13'9"
H Height	mm/ft in	3,800/12'5"
Width	mm/ft in	4,200/13'9"
Weight	kg/lb	31,500/69,446



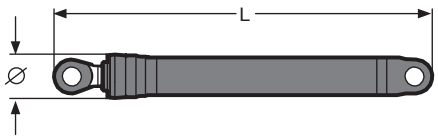
Bucket Tilt Cylinder (two)

L	Length	mm/ft in	3,950/12'11"
Ø	Diameter	mm/ft in	450/1' 5"
	Weight	kg/lb	2 x 2,015/2 x 4,442



Gooseneck Boom with Stick Cylinders

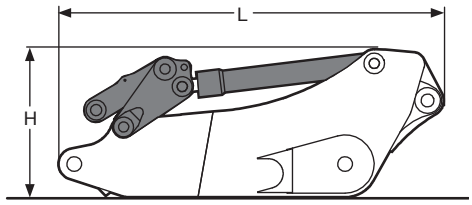
L	Length	mm/ft in	9,800/32'1"
H	Height	mm/ft in	3,900/12'9"
	Width	mm/ft in	2,200/ 7'2"
	Weight	kg/lb	30,700/67,682



Backhoe Hoist Cylinders (two)

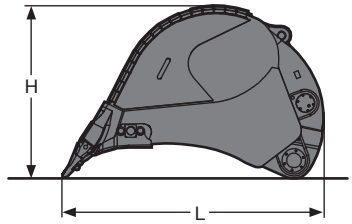
L	Length	mm/ft in	4,680/15'4"
Ø	Diameter	mm/ft in	550/ 1'9"
	Weight	kg/lb	2 x 3,800/2 x 8,378

Component Dimensions and Weights



Stick with Bucket Cylinders

L	Length	mm/ft in	6,000/19’ 8”
H	Height	mm/ft in	2,400/ 7’10”
	Width	mm/ft in	1,750/ 5’ 8”
	Weight	kg/lb	18,940/41,756



Backhoe Bucket

Application			HD
Capacity ISO 7451		m^3/yd^3	18.00/23.54
L	Length	mm/ft in	4,200/13’9”
H	Height	mm/ft in	2,800/ 9’2”
	Width	mm/ft in	3,500/11’5”
	Weight	kg/lb	18,155/40,025

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