

Stationary Electric Material Handlers

EP 934 C Working Radius: 42.8 – 65.7 yd³

EP 944 C Working Radius: 49.3 – 72.2 yd³

EP 954 C Working Radius: 52.6 – 78.9 yd³



LIEBHERR

EP 934 C

Working radius: 42.8 – 65.7 ft
Motor rating: 215 HP/160 kW
Weight: 84,000 – 86,200 lb

EP 944 C

Working radius: 49.3 – 72.2 ft
Motor rating: 268 HP/200 kW
Weight: 109,350 – 114,420 lb

EP 954 C

Working radius: 52.6 – 78.9 ft
Motor rating: 335 HP/250 kW
Weight: 142,200 – 145,100 lb



Performance

These new electric Material Handlers have been designed to meet the specific needs of industrial handling. A wide range of equipment and uppercarriages optimized for long working radius provide the ideal answer to all the demands which arise in the industry.

The performance of the kinematic chain formed from components from our in-house production, combined with the power of the electric motor, maximize the performance of the machine when it comes to lifting power, precision, and speed of operation.

Reliability

Backed by more than 30 years experience in the construction of electric excavators, Liebherr designed the new EP 934 C, EP 944 C and EP 954 C with the aim of providing top performance whatever the challenge might be. The structure of the machine, using components from our own manufacture for the electric drive, has been completely rethought, and so moves away from simply being an adaptation of a diesel-engine machine.

Being intended for key functions in the organization of industrial sites, Liebherr electric Material Handlers provide a very high level of reliability. The service life of the hydraulic components has also been increased, thanks to the smoother movement of the electric drive.

The concept of the single actuator (one single electric motor for all the hydraulic functions) allows for the risk area associated with the low voltage at the electric cabinet to be reduced even further.

Comfort

Helping the operator to concentrate on his work and get the best out of his machine is achieved by providing a comfortable driving position, good visibility, and a highly ergonomic layout of the controls. The new electric Material Handlers offer the same level of comfort as on the mobile excavators (arrangement of the controls, driver's seat, climate control, large window areas, etc.). The electric motor system adds a further layer of comfort thanks to the low noise emissions and absence of vibration.

For Liebherr, comfort also means ease of daily maintenance of the machine in terms of access to the service and inspection points, so as to minimize downtime.

Economy

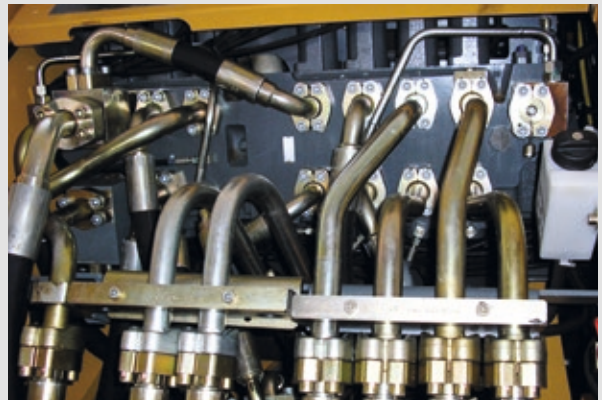
Investing in the acquisition of an electric Material Handler is a great long-term advantage. Constant increases in the costs of conventional energy sources are pushing up operating charges, and reducing profit margins considerably. Environmental criteria, in particular CO₂ emissions, are also playing a constantly greater part in the choice of power systems and working methods. With the electric drive, Liebherr offers an economical alternative to conventional diesel-engine machines, and a solution with real respect for the environment.





Ideal balance between power, speed, and precision

- When it comes to handling metals, timber, or any other application, a wide choice of equipment in a broad range of configurations means that the most varied demands can always be met by specific solutions
- Optimization of the Material Handlers goes well beyond just the choice of equipment. It even includes the adjustment of the hydraulics to meet the needs of the site and of the operator



Performance

These new electric Material Handlers have been designed to meet the specific needs of industrial handling. A wide range of equipment and uppercarriages optimized for a long operating radius provide the ideal answer to all the demands which arise in the industry.

The performance of the kinematic chain, formed from components from our own in-house production, combined with the power of the electric motor, maximize the performance of the Material handlers when it comes to lifting power, precision, and speed of operation.

Great lifting power

Thanks to the optimised rear offset and the broach kinematics of the equipment, the design concept of the new uppercarriages means they can operate at exceptional outreach whilst guaranteeing a good balance of forces and better absorption of mechanical stresses.

Excellent Working Radius

Tough and designed for the most demanding of applications, Liebherr equipment systems are the perfect answer to every requirement when it comes to lifting power and range of outreach. Components are optimised by the finite element calculation method.

Fast work cycles

The EP 934 C, EP 944 C and EP 954 C electric excavators are fitted with the Liebherr Torque Control system. The hydraulic guidance system on the excavator operates as a closed circuit, and does not affect the speed of movement of the equipment during the working cycle. The high torque and high oil delivery from the guide pump maximize the excavator rotation speed.

A two-pump hydraulic system allows for operating speeds to be reached which are unequalled anywhere. Regeneration on the circuits for the equipment allows for optimization of the hydraulic power available and minimizing response time to the operator's commands. This all results in a fluidity of movements which operators really appreciate.

Precision of work

The fine response of the hydraulic control allows for exceptional precision of work to be achieved at long outreach, which contributes to the comfort and convenience of the operator as well as achieving high performance results. Power is nothing without control.

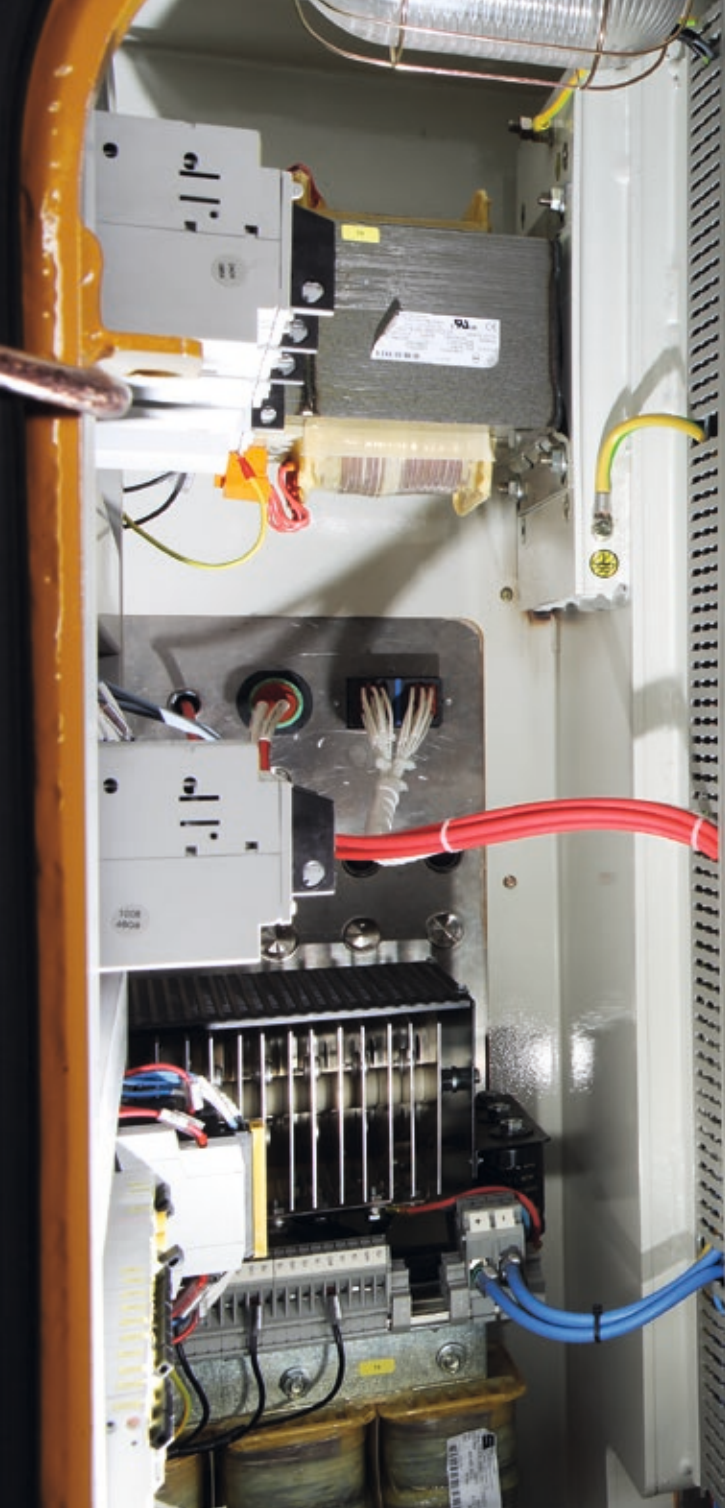
Distributor

- Fine response of hydraulic control for maximum working precision
- Immediate response to operator's commands
- Three-pump hydraulic system, one of which is a closed circuit dedicated to the slewing of the Material Handlers



Tough structure

- High strength steel sheet at points subject to severe stress, stands up to the most extreme demands
- Stable mounting of equipment elements
- Exceptional strength, even under intense loading



Reliability - Safety

- Automatic Power cut off if the cabinet doors are opened
- Automatic power cut off in the event of any anomalies (electric motor or its bearings overheating)
- Active safety on the transformers in the electric cabinet



Reliability

Backed by more than 30 years experience in the construction of electrically powered excavators, Liebherr designed the new EP 934 C, EP 944 C and EP 954 C with the aim of providing top performance whatever the challenge might be. The structure of the excavator, using components from our own manufacture for the electric drive, has been completely rethought, and so moves away from simply being an adaptation of the diesel-engine excavator.

Being intended for key functions in the organization of industrial sites, Liebherr electric Material Handlers provide a very high level of reliability. The service life of the hydraulic components has also been increased thanks to the smoother movement of the electric drive.

The concept of the single actuator (one single electric motor for all the hydraulic functions) allows for the risk area associated with the low voltage at the electric cabinet to be reduced even further.

Electrical system

Totally integrated into the structure of the uppercarriages and accommodated in a metal container, the electric cabinet provides a three-fold level of protection to the components of the electrical system:

- Mechanical (insulation from vibrations and from the possible impact of falling objects)
- Heat (maintains a constant temperature thanks to the heating resistors which prevent corrosion from condensation)
- Electrical earthing of the structure and disconnection from current is controlled from the cab by way of a motorised circuit-breaker.

Protected electric cabinet

The electric cabinet, like the rotating joint, provides IP55 class protection. A double filtration system (accessible from the outside) places the cabinet under pressure, which avoids any dust penetration and, with permanent ventilation, ensures the thermal balance of all the components.

Electric motor

Liebherr electric excavators are equipped with motors especially designed for really tough applications. The dimensions of the motor allow for the full power to be drawn from the kinematic chain, and so maximises the performance of the machine. The motor can resist a momentary overload of up to +25 % of its rated capacities.

Protected against penetration by water and dust, its properties correspond to protection class IP55.

Cooling system

- Generous dimensions for high cooling capacity
- Vertical arrangement for increased efficiency and minimal incursion of foreign bodies
- Powered by a thermostatically regulated hydraulic motor
- Hinged to allow for complete cleaning
- Reversible actuation of the fan (without time limit) as option



Elastic base

- Complete range of elastic bases especially designed for each model
- Absorption of mechanical stresses (normally transferred to the chassis of an excavator) if mounted on a rigid structure (anchored metal body, concrete body)
- Protection for the machine (in particular the elements of the rotation assembly), as well as for the load-bearing structure, against the axial and radial forces generated by the operating dynamics



Cab with control panel

- The command arrangement for putting the electrical system under voltage is progressive (3 functions) and the emergency stop button allows for the general cutting of the electric cabinet supply



Comfort



Helping the operator to concentrate on his work and get the best out of his machine is achieved by a driving position which provides comfort, good visibility, and a highly ergonomic layout of the controls. The new electric Material handlers offer the same level of comfort as on the mobile excavators (arrangement of the controls, driver's seat, climate control, large window areas, etc.). The electric motor system adds a further layer of comfort thanks to the low noise emissions and absence of vibration.

For Liebherr, comfort also means ease of daily maintenance of the machine in terms of access to the service and inspection points, so as to minimize downtime.

Driving position

Mounted as standard on a fixed platform of 3.11 ft (6.7 ft or hydraulic platform on request), the new cab on the electric excavators meets all safety standards in force (24 V supply in the operator's compartment), comfort, panoramic visibility, and ergonomic arrangement of the controls for perfect control of the machine.

Wide walkway with safety rail

Arranged on the upperdeck, combines safety and convenience for accessing all the maintenance points on the machine. Access to the lower structure (metallic base, concrete pedestal, chassis) can be tailor-made depending on the type of installation.

Low noise emissions

Liebherr electric excavators are really quiet in operation. Their measured acoustic level is from 4 to 5 dB lower than an equivalent diesel-engine version. The level of noise intensity from a Liebherr electric excavator represents less than a third of the noise generated by a diesel-engine unit.

Carbon gas emission

Zero grams of CO₂ emitted per tonne of product handled!

Climate control entirely automatic

- Automatic climate control ensures a level of comfort similar to a private car
- Two sensors for precise temperature regulation
- Ventilation flaps can be adjusted at the touch of a button
- Rapid demisting and defrosting of the windscreen thanks to the „reheat“ function



Easy maintenanc

- Optimum placement of components on the uppercarriage
- Wide service walkway
- Easy access to service points thanks to grouping together of inspection points
- Downtimes reduced to the minimum



Wide range of solutions

- Modular arrangement for rapid changeover
- Liebherr quick-coupling system, mechanical and hydraulic, for efficient equipment changeover
- Quick-coupling arrangement for hydraulic lines (Multi-Coupler)
- Complete range of grapples
- Range of different wood grapples and grab buckets from Liebherr



Economy

Investing in the acquisition of an electric excavator is a great long-term advantage. Constant increases in the costs of conventional energy sources are pushing up operating charges, and reducing profit margins considerably. Environmental criteria, in particular CO₂ emissions, are also playing a constantly greater part in the choice of power systems and working methods. With the electric drive, Liebherr offers an economical alternative to conventional diesel-engine machines, and a solution with real respect for the environment.

Flexibility and versatility Liebherr electric Material Handlers are multi-tasking machines. With a wide range of tools, which can be combined with Liebherr quick-coupling systems, they can create a degree of flexibility and versatility which has no comparison anywhere.

Energy costs cut The energy yield from an electric motor is greater than that of a diesel-engine. Delivering the same kW output in hydraulic power costs three to five times less with an electric excavator than with a diesel-engine unit. Liebherr excavators deliver the full power from their kinematic chain and at a lot less cost.

Increased service life The smooth actuation of the electric drive and the reliability of Liebherr hydraulic components mean that the maintenance costs of the excavator can be reduced considerably. The absence of vibrations and variations in output from a motor, which operates on a torque principle and at constant output, means that the stress on the kinematic chain can be reduced and the optional pre-heating of the hydraulic system allows for the hydraulic oil to be kept at an optimum temperature right from the start.

Maximum availability The costs associated with maintenance operations are reduced to a minimum, and that also cuts down-times. The electric motor does not require any maintenance beyond lubrication of the bearings every 3,000 hours. No filters (air, oil) to be changed and no draining of engine oil throughout the entire service life of the machine.

Kinematic chain made by Liebherr

- Constant provision of power for the kinematic chain
- Reduced wear of hydraulic components
- Optimum exploitation of the hydraulic power potential of the system



Battery

- Zero Grams emission of CO₂
- High yields
- Reduced costs
- Environmentally friendly

Technical Data



Electric Motor

Motor _____ asynchronous three-phase, cage rotor enclosed in cast iron envelope, special Liebherr design

Power rating (as per CEI 34-1) _____ 215 hp (160 kW) at 1,489 rpm

Rated voltage _____ 400 V – 50 Hz*

Number of poles _____ 4

Design type _____ horizontal axle B35 axle height 12" painting: RAL 7031

Standard degree of protection _____ IP55 – steel flange FF600

Insulation _____ class F, thermal loading: Class B, ambient temperature 104 °F

Starter star/delta

Heat protection for windings

Heat protection for bearings

Anti-condensation heating system resistors



Electric System

The 400 V electrical cabinet provides a degree of protection to IP55. This houses the following components:

- Main motorised isolator, controlled from the cab
- Star/delta starter for motor
- Outlets for supplying auxiliary elements: heating, climate control
- Various heat protection devices
- Resistors for controlling the temperature of the cabinet
- Booster pump integrated in the cabinet: cabinet air filtered (option)
- Transformers – rectifier for 24 V control circuit
- Motor protection attachment
- Auxiliary batteries: 2 x 135 Ah/12 V: secured functions: lighting for excavator/attachment position (option)



Hydraulic System

Hydraulic pumps for the attachment _____ two Liebherr swash plate pumps with variable output

Max. flow _____ 2 x 67 gpm

Max. pressure _____ 5,076 psi

Pump regulation _____ electro-hydraulic, with electronic regulation by power limit, minimum pump flow at max. pressure, distribution of oil to different receptor components proportional to demand

Hydraulic pump for the swing drive _____ reversible swash plate pump, in closed circuit

Max. flow _____ 45 gpm

Max. pressure _____ 5,366 psi

Hydraulic tank _____ 89.8 gal

Hydraulic system _____ 145.3 gal

Filtration _____ filter in the return circuit, with integrated fine filter elements (5 µm)

Cooling _____ radiator equipped with hydrostatic drive fan for cooling the hydraulic oil and climate control condenser

Liebherr Tool Control _____ 10 flow rates and pressures adjustable as option for optional accessories



Hydraulic Controls

Power distribution _____ with the aid of hydraulic distributors with integrated safety valves

Flow summation _____ to boom stick and stick

Closed-loop circuit _____ for uppercarriage swing drive mechanism

Control

Attachment and swing _____ proportional by handling element in cross operation

Travel _____ – proportional by pedals or by lever – speed pre-selection

Additional functions _____ proportional by pedals or by toggle switch



Swing Drive

Drive by _____ hydraulic swash plate motor with integrated brake valves

Transmission _____ Liebherr compact planetary reduction gear

Swing ring _____ Liebherr, sealed single race ball bearing swing ring, internal teeth

Swing speed _____ 0 – 9.4 rpm, stepless

Swing torque _____ 59,794 lbf ft

Holding brake _____ oil-bath disk brake (negative action)

Option _____ pedal controlled positioning brake



Operator's Cab

Cab _____ single shell concept with shaped profiles, resiliently mounted, sound insulated, tinted windows. Front window can be folded away under roof, door with sliding window

Operator's seat _____ shock absorbing suspension, adjustable to operator's weight, 6-way adjustable seat integrated into adjustable seat consoles

Controls _____ menu driven digital display of current operating conditions. Automatic monitoring, display, warning (audible and visual signal) and saving of machine malfunction data, such as overheating of windings, motor bearings, or low hydraulic oil level

Climate control _____ standard climate control system, combined cooler/heater, additional dust filter in the outside/fresh air circuit

Noise emission

ISO 6396 _____ L_{pA} (inside cab) = 66 dB(A)

2000/14/EC _____ L_{WA} (surround noise) = 102 dB(A)



Resilient Suspension

The resilient suspension consists of 12 resilient contact blocks. Its main function is to absorb the shocks and vibrations resulting from the movement of the excavator.

An electrical rotating joint is integrated into the resilient suspension and allows the electrical supply to the excavator to be assured. This meets the sealing requirements of IP55.



Attachment

Type _____ high-strength steel for extreme stresses. Bearings designed for optimum distribution of stresses

Hydraulic cylinders _____ Liebherr cylinders with end-of-travel shock absorbing, fitted with guide and sealing joints

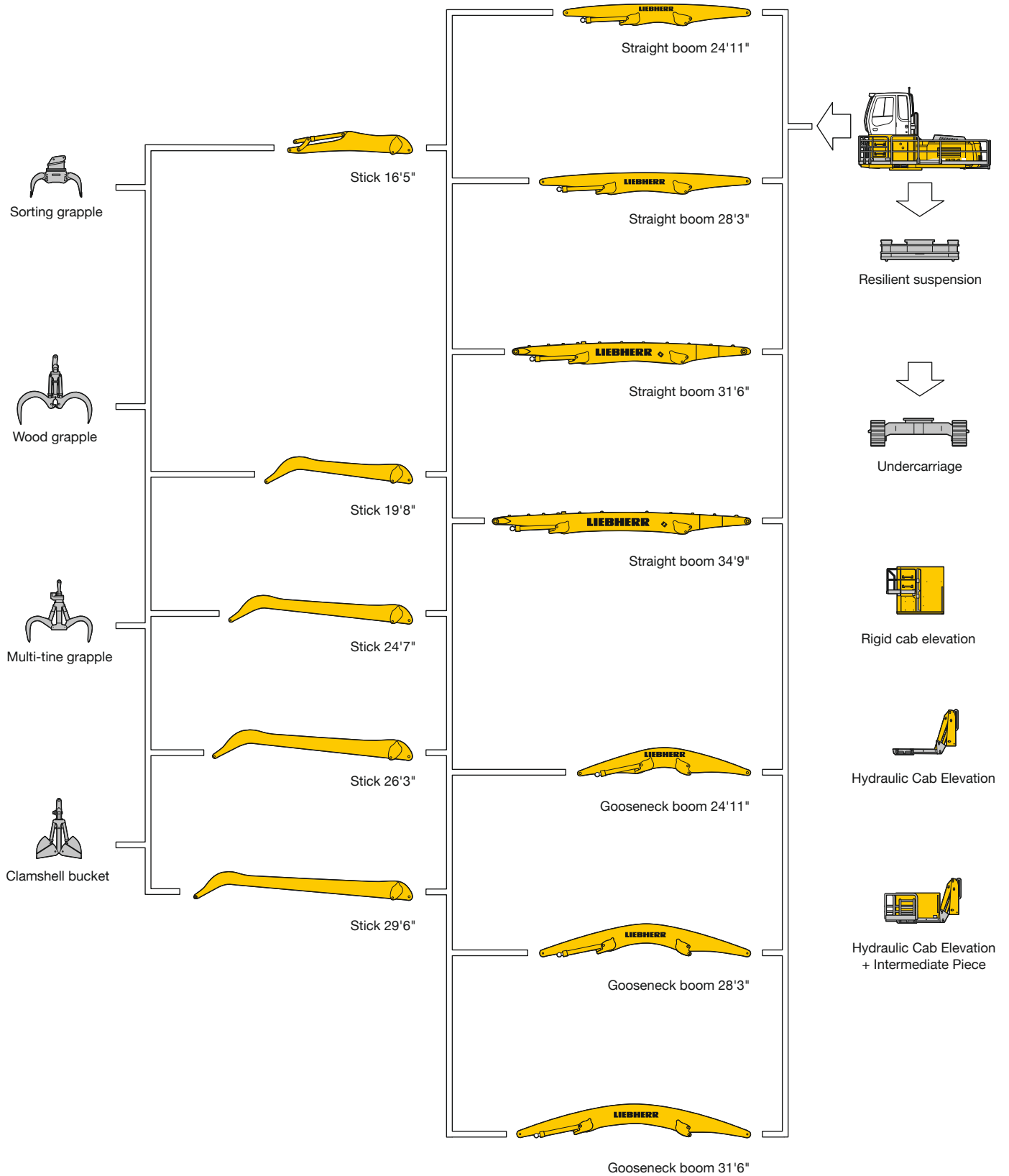
Pivots _____ sealed, low maintenance

Lubrication _____ centralised semi-automatic Liebherr lubrication system

VarioLiftPlus _____ variable boom mounting positions for optimized lift capacities

* Other voltages and frequencies possible on request.

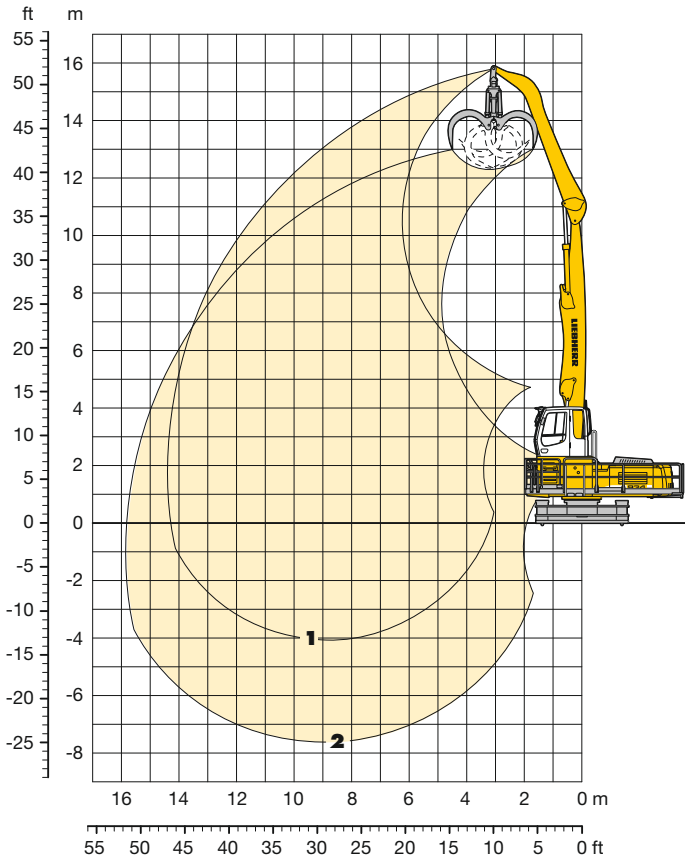
The right attachment for every application



Industrial Attachment

with Industrial-Type Straight Boom 28'3"

EP 934 C



Attachment Envelope

Kinematic variants 3A/3B

- 1 with industrial stick 19'8" (3B)
- 2 with industrial stick 19'8" and grapple model 65 (3B)

Operating Weight

Operating weight includes basic machine with rigid cab elevation 3'11", counterweight 16,500 lb, handrails, industrial-type straight boom 28'3", industrial stick 19'8" and grapple model 70 C with 5 semi-closed tines 0.78 yd³.

Weight 84,000 lb

Lift Capacities

with Industrial-Type Straight Boom 28'3"

Industrial Stick 19'8" (Variant 3B)

ft	Under-carriage	10 ft		15 ft		20 ft		25 ft		30 ft		35 ft		40 ft		45 ft		50 ft		55 ft		60 ft		65 ft		70 ft		75 ft		ft	
70	Ponton																														
65	Ponton																														
60	Ponton																														
55	Ponton																														
50	Ponton			20,7*	20,7*																								18,7*	18,7*	16,68
45	Ponton					19,7*	19,7*	16,4*	16,4*																				14,2*	14,2*	26,55
40	Ponton					18,3*	18,3*	16,6*	16,6*	15,6*	15,6*																		12,5*	12,5*	32,81
35	Ponton							16,2*	16,2*	15,0*	15,0*	14,2*	14,2*																11,5*	11,5*	37,35
30	Ponton					18,0*	18,0*	16,3*	16,3*	15,0*	15,0*	14,1*	14,1*	12,7*	12,7*														11,0*	11,0*	40,77
25	Ponton					19,1*	19,1*	17,0*	17,0*	15,4*	15,4*	14,2*	14,2*	13,3*	13,3*														10,7*	10,7*	43,33
20	Ponton			25,2*	25,2*	20,9*	20,9*	18,1*	18,1*	16,1*	16,1*	14,6*	14,6*	13,4*	13,4*	11,1*	11,1*												10,6*	10,6*	45,20
15	Ponton	35,2*	35,2*	30,1*	30,1*	23,5*	23,5*	19,6*	19,6*	17,0*	17,0*	15,1*	15,1*	13,7*	13,7*	12,5*	12,5*												10,6*	10,6*	46,44
10	Ponton			35,8*	35,8*	26,4*	26,4*	21,2*	21,2*	17,9*	17,9*	15,7*	15,7*	14,0*	14,0*	12,6*	12,6*												10,8*	10,8*	47,11
5	Ponton			13,2*	13,2*	28,7*	28,7*	22,6*	22,6*	18,8*	18,8*	16,2*	16,2*	14,2*	14,2*	12,5*	12,5*												11,1*	11,1*	47,24
0	Ponton			10,5*	10,5*	30,0*	30,0*	23,5*	23,5*	19,3*	19,3*	16,5*	16,5*	14,3*	14,3*	12,3*	12,3*												11,4*	11,4*	46,83
- 5	Ponton			11,9*	11,9*	26,2*	26,2*	23,6*	23,6*	19,4*	19,4*	16,4*	16,4*	14,0*	14,0*	11,6*	11,6*												11,6*	11,6*	45,06
- 10	Ponton					26,2*	26,2*	22,9*	22,9*	18,9*	18,9*	15,8*	15,8*																13,2*	13,2*	39,97
- 15	Ponton																														
- 20	Ponton																														
- 25	Ponton																														
- 30	Ponton																														
- 35	Ponton																														

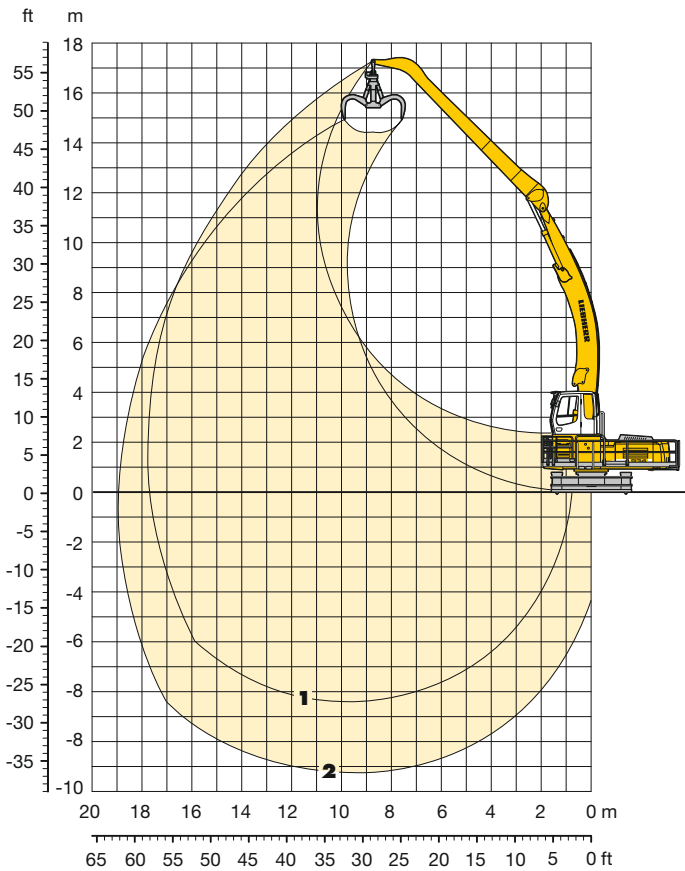
Height Can be slewed through 360° In longitudinal position of undercarriage Max. reach * Limited by hydr. capacity

The lift capacities are stated in lb x 1,000 on the lifting gear's stick tip, and can be lifted 360°.

Industrial Attachment

with Industrial-Type Gooseneck Boom 31'6"

EP 934 C



Attachment Envelope

Kinematic variants 3C/3D

- 1 with industrial stick 29'6" (3D)
- 2 with industrial stick 29'6" and grapple model 65 (3D)

Operating Weight

Operating weight includes basic machine with rigid cab elevation 3'11", counterweight 16,500 lb, handrails, industrial-type gooseneck boom 31'6", industrial stick 29'6" and grapple model 65 with 5 semi-closed tines 0.78 yd³.

Weight 86,200 lb

Lift Capacities

with Industrial-Type Gooseneck Boom 31'6"

Industrial Stick 29'6" (Variant 3D)

ft	Under-carriage	10 ft		15 ft		20 ft		25 ft		30 ft		35 ft		40 ft		45 ft		50 ft		55 ft		60 ft		65 ft		70 ft		75 ft		ft											
70	Ponton																																								
65	Ponton																																								
60	Ponton																																								
55	Ponton									9,4*	9,4*																				8,6*	8,6*	31.33								
50	Ponton											9,5*	9,5*																			7,6*	7,6*	38.13							
45	Ponton											9,7*	9,7*	9,2*	9,2*																		7,1*	7,1*	43.28						
40	Ponton													9,2*	9,2*	8,5*	8,5*																	6,7*	6,7*	47.34					
35	Ponton													9,1*	9,1*	8,8*	8,8*	7,0*	7,0*																6,5*	6,5*	50.58				
30	Ponton											9,6*	9,6*	9,2*	9,2*	8,8*	8,8*	8,5*	8,5*																	6,4*	6,4*	53.14			
25	Ponton											10,0*	10,0*	9,4*	9,4*	9,0*	9,0*	8,6*	8,6*	6,5*	6,5*																6,4*	6,4*	55.13		
20	Ponton											10,5*	10,5*	9,8*	9,8*	9,2*	9,2*	8,7*	8,7*	8,0*	8,0*																6,4*	6,4*	56.60		
15	Ponton										12,4*	12,4*	11,2*	11,2*	10,3*	10,3*	9,5*	9,5*	8,9*	8,9*	8,4*	8,4*															6,5*	6,5*	57.59		
10	Ponton										13,5*	13,5*	12,0*	12,0*	10,8*	10,8*	9,9*	9,9*	9,1*	9,1*	8,5*	8,5*															6,6*	6,6*	58.13		
5	Ponton	20,1*	20,1*	29,5*	29,5*	21,8*	21,8*	17,4*	17,4*	14,7*	14,7*	12,8*	12,8*	11,3*	11,3*	10,2*	10,2*	9,4*	9,4*	8,6*	8,6*																6,9*	6,9*	58.24		
0	Ponton	7,3*	7,3*	20,8*	20,8*	24,3*	24,3*	19,0*	19,0*	15,7*	15,7*	13,5*	13,5*	11,8*	11,8*	10,6*	10,6*	9,5*	9,5*	8,7*	8,7*																	7,2*	7,2*	57.91	
- 5	Ponton	6,9*	6,9*	13,6*	13,6*	26,1*	26,1*	20,2*	20,2*	16,6*	16,6*	14,0*	14,0*	12,2*	12,2*	10,8*	10,8*	9,7*	9,7*	8,6*	8,6*																	7,6*	7,6*	57.13	
- 10	Ponton	7,9*	7,9*	12,5*	12,5*	22,7*	22,7*	20,9*	20,9*	17,1*	17,1*	14,4*	14,4*	12,4*	12,4*	10,9*	10,9*	9,6*	9,6*	8,4*	8,4*																		8,2*	8,2*	55.90
- 15	Ponton	9,0*	9,0*	12,8*	12,8*	20,4*	20,4*	21,0*	21,0*	17,2*	17,2*	14,5*	14,5*	12,4*	12,4*	10,8*	10,8*	9,4*	9,4*																				8,2*	8,2*	54.17
- 20	Ponton			13,6*	13,6*	20,1*	20,1*	20,6*	20,6*	16,9*	16,9*	14,2*	14,2*	12,1*	12,1*	10,4*	10,4*	8,8*	8,8*																				8,2*	8,2*	51.72
- 25	Ponton					20,7*	20,7*	19,4*	19,4*	16,0*	16,0*	13,5*	13,5*	11,4*	11,4*																								9,9*	9,9*	44.08
- 30	Ponton																																								
- 35	Ponton																																								

Height Can be slewed through 360° In longitudinal position of undercarriage Max. reach * Limited by hydr. capacity

The lift capacities are stated in lb x 1,000 on the lifting gear's stick tip, and can be lifted 360°.

Technical Data



Electric Motor

Motor	asynchronous three-phase. cage rotor enclosed in cast iron envelope. special Liebherr design
Power rating (as per CEI 34-1)	268 hp (200 kW) at 1,485 rpm
Rated voltage	400 V – 50 Hz*
Number of poles	4
Form of construction	horizontal axis B35 axle height 12" painting: RAL 7031
Standard degree of protection	IP55 – steel flange FF600
Insulation	class F, thermal loading: Class B, ambient temperature 104 °F
Starter star/delta	
Heat protection for windings	
Heat protection for bearings	
Anti-condensation heating system resistors	



Electric System

The 400 V electrical cabinet provides a degree of protection to IP55. This houses the following components:

- Main motorised isolator, controlled from the cab
- Star/delta starter for motor
- Outlets for supplying auxiliary elements: heating, climate control
- Various heat protection devices
- Resistors for controlling the temperature of the cabinet
- Booster pump integrated in the cabinet: cabinet air filtered (option)
- Transformers – rectifier for 24 V control circuit
- Motor protection attachment
- Auxiliary batteries: 2 x 135 Ah/12 V: secured functions: lighting for excavator/attachment position (option)



Hydraulic System

Hydraulic pumps for the attachment	two Liebherr swash plate pumps with variable output
Max. flow	2 x 81 gpm
Max. pressure	5,076 psi
Pump regulation	electro-hydraulic, with electronic regulation by power limit, minimum pump flow at max. pressure, distribution of oil to different receptor components proportional to demand
Hydraulic pump for the swing drive	reversible swash plate pump, in closed circuit
Max. flow	54 gpm
Max. pressure	5,366 psi
Hydraulic tank	121,5 gal
Hydraulic system	187,6 gal
Filtration	2 filters in the return circuit, with integrated fine filter elements (5 µm)
Cooling	radiator equipped with hydrostatic drive fan for cooling the hydraulic oil and climate control condenser
Liebherr Tool Control	10 flow rates and pressures adjustable as option for optional accessories



Hydraulic Controls

Power distribution	with the aid of hydraulic distributors with integrated safety valves
Flow summation	to boom stick and stick
Closed-loop circuit	for uppercarriage swing drive mechanism
Control	
Attachment and swing	proportional by handling element in cross operation
Travel	– proportional by pedals or by lever – speed pre-selection
Additional functions	proportional by pedals or by toggle switch



Swing Drive

Drive by	hydraulic swash plate motor with integrated brake valves
Transmission	Liebherr compact planetary reduction gear
Swing ring	Liebherr, sealed single race ball bearing swing ring, internal teeth
Swing speed	0 – 7.9 rpm, stepless
Swing torque	87,770 lbf ft
Holding brake	oil-bath disk brake (negative action)
Option	pedal controlled positioning brake



Operator's Cab

Cab	single shell concept with shaped profiles, resiliently mounted, sound insulated, tinted windows, Front window can be folded away under roof, door with sliding window
Operator's seat	shock absorbing suspension. adjustable to operator's weight. 6-way adjustable seat integrated into adjustable seat consoles
Controls	menu driven digital display of current operating conditions. Automatic monitoring, display, warning (audible and visual signal) and saving of machine malfunction data, such as overheating of windings, motor bearings, or low hydraulic oil level
Monitoring	standard climate control system. combined cooler/heater, additional dust filter in the outside/fresh air circuit
Climate control	
Noise emission	
ISO 6396	L_{pA} (inside cab) = 65 dB(A)
2000/14/EC	L_{WA} (surround noise) = 103 dB(A)



Resilient Suspension

The resilient suspension consists of 12 resilient contact blocks. Its main function is to absorb the shocks and vibrations resulting from the movement of the excavator. An electrical rotating joint is integrated into the resilient suspension and allows the electrical supply to the excavator to be assured. This meets the sealing requirements of IP55.

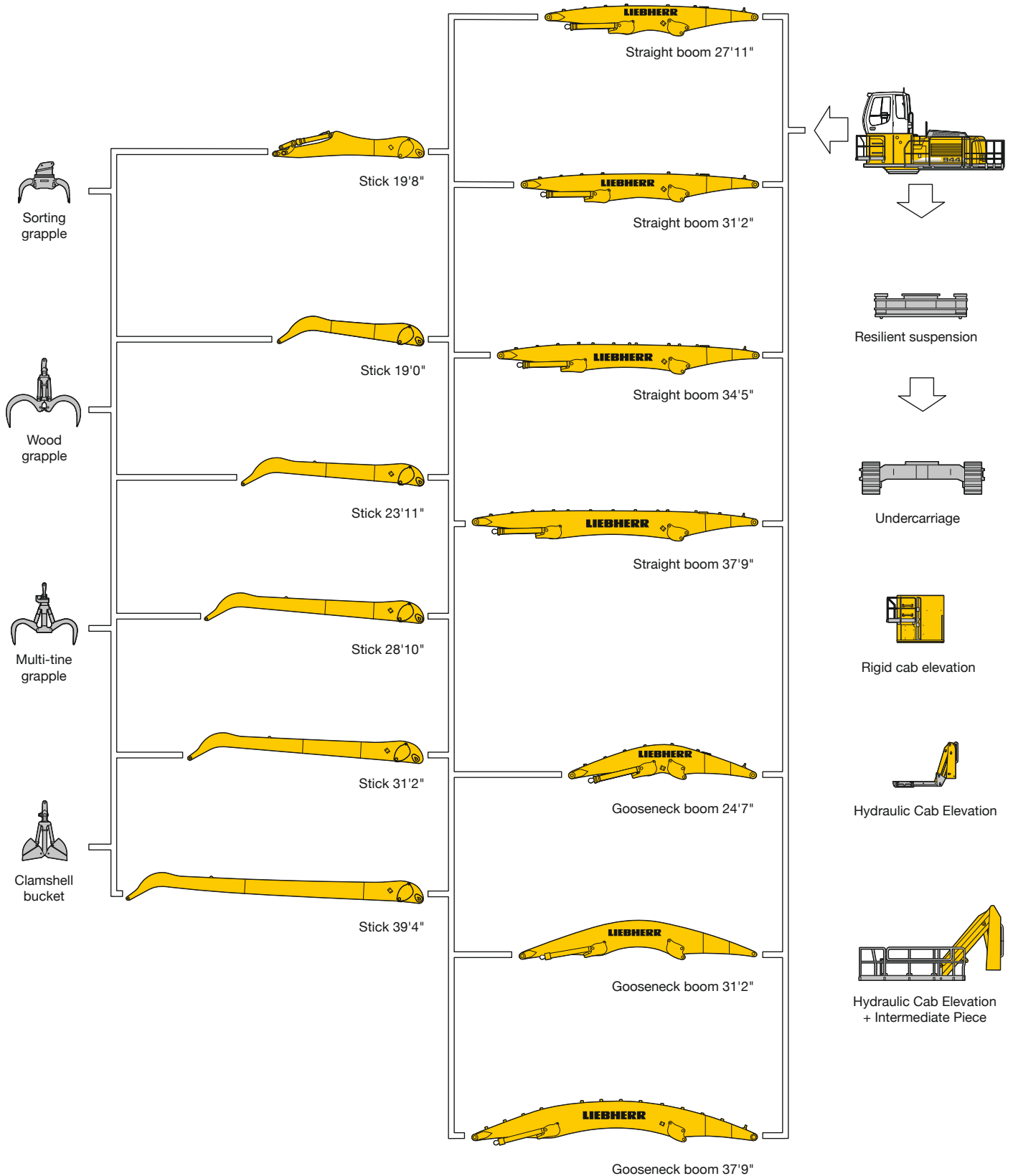


Attachment

Type	high-strength steel for extreme stresses. Bearings designed for optimum distribution of stresses.
Hydraulic cylinders	Liebherr cylinders with end-of-travel shock absorbing, fitted with guide and sealing joints
Pivots	sealed, low maintenance
Lubrication	centralised semi-automatic Liebherr lubrication system
VarioLiftPlus	variable boom mounting positions for optimized lift capacities

* Other voltages and frequencies possible on request.

The right attachment for every application

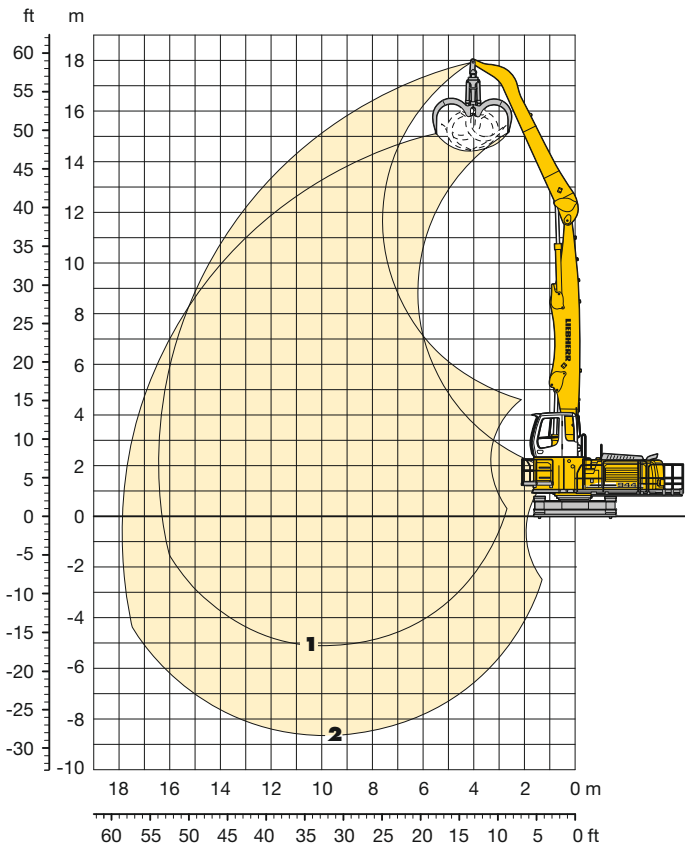


EP 944 C

Industrial Attachment

with Industrial-Type Straight Boom 31'2"

EP 944 C



Attachment Envelope

Kinematic variants 3A/3B

- 1 with industrial stick 23'11" (3B)
- 2 with industrial stick 23'11" and grapple model 70 C (3B)

Operating Weight

Operating weight includes basic machine with rigid cab elevation 3'11", counterweight 24,250 lb, handrails, industrial-type straight boom 31'2", industrial stick 23'11" and grapple model 70 C with 5 semi-closed tines 1.44 yd³.

Weight 109,350 lb

Lift Capacities

with Industrial-Type Straight Boom 31'2"

Industrial Stick 23'11" (Variant 3B)

ft	Under-carriage	10 ft		15 ft		20 ft		25 ft		30 ft		35 ft		40 ft		45 ft		50 ft		55 ft		60 ft		65 ft		70 ft		75 ft		ft
		ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	
70	Ponton																													
65	Ponton																													
60	Ponton																													
55	Ponton					26,2'	26,2'																							
50	Ponton							24,0'	24,0'	21,2'	21,2'																			
45	Ponton							22,7'	22,7'	21,0'	21,0'	19,9'	19,9'																	
40	Ponton							22,1'	22,1'	20,5'	20,5'	19,3'	19,3'	18,4'	18,4'															
35	Ponton							22,1'	22,1'	20,5'	20,5'	19,2'	19,2'	18,1'	18,1'	16,9'	16,9'													
30	Ponton							22,8'	22,8'	20,9'	20,9'	19,4'	19,4'	18,2'	18,2'	17,2'	17,2'													
25	Ponton							24,2'	24,2'	21,9'	21,9'	20,0'	20,0'	18,6'	18,6'	17,4'	17,4'	16,3'	16,3'											
20	Ponton					30,4'	30,4'	26,2'	26,2'	23,2'	23,2'	20,9'	20,9'	19,1'	19,1'	17,7'	17,7'	16,5'	16,5'											
15	Ponton	32,7'	32,7'	44,5'	44,5'	34,6'	34,6'	28,7'	28,7'	24,7'	24,7'	21,9'	21,9'	19,7'	19,7'	18,0'	18,0'	16,6'	16,6'											
10	Ponton			53,4'	53,4'	39,1'	39,1'	31,3'	31,3'	26,4'	26,4'	22,9'	22,9'	20,4'	20,4'	18,4'	18,4'	16,7'	16,7'											
5	Ponton			16,5'	16,5'	43,0'	43,0'	33,7'	33,7'	27,9'	27,9'	23,9'	23,9'	21,0'	21,0'	18,7'	18,7'	16,8'	16,8'											
0	Ponton	3,5'	3,5'	13,0'	13,0'	36,5'	36,5'	35,3'	35,3'	28,9'	28,9'	24,6'	24,6'	21,4'	21,4'	18,9'	18,9'	16,7'	16,7'											
- 5	Ponton			14,5'	14,5'	29,9'	29,9'	35,9'	35,9'	29,4'	29,4'	24,9'	24,9'	21,5'	21,5'	18,7'	18,7'	16,2'	16,2'											
- 10	Ponton					29,7'	29,7'	35,3'	35,3'	29,1'	29,1'	24,6'	24,6'	21,1'	21,1'	18,1'	18,1'													
- 15	Ponton							33,6'	33,6'	27,9'	27,9'	23,5'	23,5'	20,0'	20,0'															
- 20	Ponton																													
- 25	Ponton																													
- 30	Ponton																													
- 35	Ponton																													

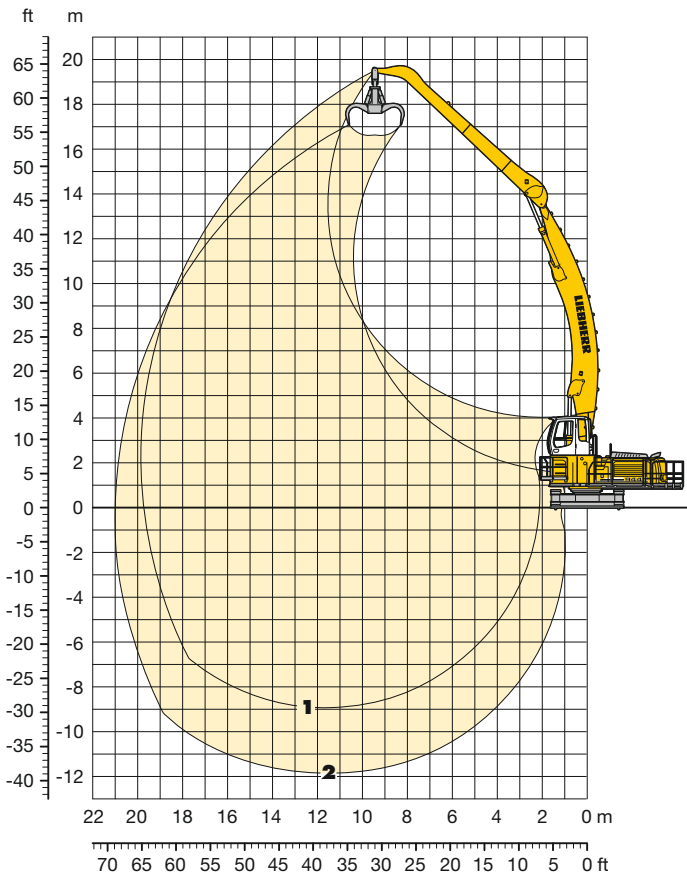
Height Can be slewed through 360° In longitudinal position of undercarriage Max. reach * Limited by hydr. capacity

The lift capacities are stated in lb x 1,000 on the lifting gear's stick tip, and can be lifted 360°.

Industrial Attachment

with Industrial-Type Gooseneck Boom 37'9"

EP 944 C



Attachment Envelope

Kinematic variants 3C/3D

- 1 with industrial stick 39'4" (3D)
- 2 with industrial stick 39'4" and grapple model 70 C (3D)

Operating Weight

Operating weight includes basic machine with rigid cab elevation 3'11", counterweight 24,250 lb, handrails, industrial-type gooseneck boom 37'9", industrial stick 39'4" and grapple model 70 C with 5 semi-closed tines 1.44 yd³.

Weight 114,420 lb

Lift Capacities

with Industrial-Type Gooseneck Boom 37'9"

Industrial Stick 39'4" (Variant 3D)

ft	Under-carriage	10 ft		15 ft		20 ft		25 ft		30 ft		35 ft		40 ft		45 ft		50 ft		55 ft		60 ft		65 ft		70 ft		75 ft		ft			
		ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft			
70	Ponton																													8,7*	8,7*	43.57	
65	Ponton																														8,0*	8,0*	49.61
60	Ponton																10,1*	10,1*													8,0*	8,0*	49.61
55	Ponton																9,7*	9,7*	9,4*	9,4*											7,5*	7,5*	54.52
50	Ponton																	9,1*	9,1*	8,8*	8,8*										7,2*	7,2*	58.58
45	Ponton																	9,0*	9,0*	8,7*	8,7*	8,3*	8,3*								7,0*	7,0*	61.98
40	Ponton																	9,0*	9,0*	8,6*	8,6*	8,3*	8,3*								6,8*	6,8*	64.80
35	Ponton																9,5*	9,5*	9,1*	9,1*	8,7*	8,7*	8,3*	8,3*	8,0*	8,0*					6,7*	6,7*	67.13
30	Ponton																9,8*	9,8*	9,3*	9,3*	8,8*	8,8*	8,4*	8,4*	8,1*	8,1*					6,7*	6,7*	69.01
25	Ponton																10,2*	10,2*	9,6*	9,6*	9,0*	9,0*	8,6*	8,6*	8,1*	8,1*	7,2*	7,2*			6,8*	6,8*	70.49
20	Ponton											11,5*	11,5*			10,6*	10,6*	9,9*	9,9*	9,3*	9,3*	8,7*	8,7*	8,3*	8,3*	7,9*	7,9*			7,0*	7,0*	72.31	
15	Ponton											13,4*	13,4*	12,2*	12,2*	11,2*	11,2*	10,3*	10,3*	9,6*	9,6*	8,9*	8,9*	8,4*	8,4*	7,9*	7,9*			7,0*	7,0*	72.31	
10	Ponton									16,6*	16,6*	14,6*	14,6*	13,0*	13,0*	11,7*	11,7*	10,7*	10,7*	9,9*	9,9*	9,2*	9,2*	8,6*	8,6*	8,0*	8,0*			7,2*	7,2*	72.68	
5	Ponton	56,4*	56,4*	36,6*	36,6*	27,3*	27,3*	21,8*	21,8*	18,2*	18,2*	15,7*	15,7*	13,8*	13,8*	12,3*	12,3*	11,2*	11,2*	10,2*	10,2*	9,4*	9,4*	8,7*	8,7*	8,1*	8,1*			7,4*	7,4*	72.70	
0	Ponton	11,8*	11,8*	39,3*	39,3*	31,0*	31,0*	24,1*	24,1*	19,8*	19,8*	16,8*	16,8*	14,6*	14,6*	12,9*	12,9*	11,6*	11,6*	10,5*	10,5*	9,6*	9,6*	8,9*	8,9*	8,2*	8,2*			7,7*	7,7*	72.38	
- 5	Ponton	8,2*	8,2*	17,3*	17,3*	33,8*	33,8*	26,0*	26,0*	21,1*	21,1*	17,7*	17,7*	15,3*	15,3*	13,5*	13,5*	12,0*	12,0*	10,8*	10,8*	9,8*	9,8*	9,0*	9,0*	8,2*	8,2*			7,9*	7,9*	71.70	
- 10	Ponton	8,4*	8,4*	14,0*	14,0*	25,3*	25,3*	27,4*	27,4*	22,2*	22,2*	18,5*	18,5*	15,9*	15,9*	13,9*	13,9*	12,3*	12,3*	11,0*	11,0*	10,0*	10,0*	9,0*	9,0*	8,1*	8,1*			8,0*	8,0*	70.66	
- 15	Ponton	9,3*	9,3*	13,5*	13,5*	21,3*	21,3*	28,3*	28,3*	22,9*	22,9*	19,1*	19,1*	16,3*	16,3*	14,2*	14,2*	12,5*	12,5*	11,2*	11,2*	10,0*	10,0*	9,0*	9,0*					8,1*	8,1*	69.24	
- 20	Ponton	10,3*	10,3*	13,9*	13,9*	20,1*	20,1*	28,6*	28,6*	23,2*	23,2*	19,4*	19,4*	16,5*	16,5*	14,4*	14,4*	12,6*	12,6*	11,2*	11,2*	9,9*	9,9*	8,8*	8,8*					8,2*	8,2*	67.41	
- 25	Ponton	11,4*	11,4*	14,7*	14,7*	20,0*	20,0*	28,3*	28,3*	23,1*	23,1*	19,3*	19,3*	16,5*	16,5*	14,3*	14,3*	12,5*	12,5*	11,0*	11,0*	9,6*	9,6*	8,3*	8,3*					8,2*	8,2*	65.15	
- 30	Ponton					20,4*	20,4*	27,4*	27,4*	22,5*	22,5*	18,9*	18,9*	16,1*	16,1*	13,9*	13,9*	12,1*	12,1*	10,5*	10,5*	9,0*	9,0*							8,6*	8,6*	61.22	
- 35	Ponton							25,9*	25,9*	21,4*	21,4*	18,0*	18,0*	15,4*	15,4*	13,2*	13,2*	11,4*	11,4*											10,7*	10,7*	51.87	

Height Can be slewed through 360° In longitudinal position of undercarriage Max. reach * Limited by hydr. capacity

The lift capacities are stated in lb x 1,000 on the lifting gear's stick tip, and can be lifted 360°.

EP 944 C

Technical Data



Electric Motor

Motor	asynchronous three-phase, cage rotor enclosed in cast iron envelope, special Liebherr design
Power rating (as per CEI 34-1)	335 hp (250 kW) at 1,489 rpm
Rated voltage	400 V – 50 Hz*
Number of poles	4
Design type	horizontal axle B35 axle height 12" painting: RAL 7031
Standard degree of protection	IP55 – steel flange FF600
Insulation	class F, thermal loading: Class B, ambient temperature 104 °F
Starter star/delta	
Heat protection for windings	
Heat protection for bearings	
Anti-condensation heating system resistors	



Electric System

The 400 V electrical cabinet provides a degree of protection to IP55. This houses the following components:

- Main motorised isolator, controlled from the cab
- Star/delta starter for motor
- Outlets for supplying auxiliary elements: heating, climate control
- Various heat protection devices
- Resistors for controlling the temperature of the cabinet
- Booster pump integrated in the cabinet: cabinet air filtered (option)
- Transformers – rectifier for 24 V control circuit
- Motor protection attachment
- Auxiliary batteries: 2 x 135 Ah/12 V: secured functions: lighting for excavator/attachment position (option)



Hydraulic System

Hydraulic pumps for the attachment	two Liebherr swash plate pumps with variable output
Max. flow	2 x 90 gpm
Max. pressure	5,366 psi
Pump regulation	electro-hydraulic, with electronic regulation by power limit, minimum pump flow at max. pressure, distribution of oil to different receptor components proportional to demand
Hydraulic pump for the swing drive	reversible swash plate pump, in closed circuit
Max. flow	54 gpm
Max. pressure	5,366 psi
Hydraulic tank	116.2 gal
Hydraulic system	208.7 gal
Filtration	2 filters in the return circuit, with integrated fine filter elements (5 µm)
Cooling	radiator equipped with hydrostatic drive fan for cooling the hydraulic oil and climate control condenser
Liebherr Tool Control	10 flow rates and pressures adjustable as option for optional accessories



Hydraulic Controls

Power distribution	with the aid of hydraulic distributors with integrated safety valves
Flow summation	to boom stick and stick
Closed-loop circuit	for uppercarriage swing drive mechanism
Control	
Attachment and swing	proportional by handling element in cross operation
Travel	– proportional by pedals or by lever – speed pre-selection
Additional functions	proportional by pedals or by toggle switch



Swing Drive

Drive by	hydraulic swash plate motor with integrated brake valves
Transmission	Liebherr compact planetary reduction gear
Swing ring	Liebherr, sealed single race ball bearing swing ring, internal teeth
Swing speed	0 – 5.6 rpm, stepless
Swing torque	123,343 lbf ft
Holding brake	oil-bath disk brake (negative action)
Option	pedal controlled positioning brake



Operator's Cab

Cab	single shell concept with shaped profiles, resiliently mounted, sound insulated, tinted windows. Front window can be folded away under roof, door with sliding window
Operator's seat	shock absorbing suspension, adjustable to operator's weight, 6-way adjustable seat integrated into adjustable seat consoles
Controls	menu driven digital display of current operating conditions. Automatic monitoring, display, warning (audible and visual signal) and saving of machine malfunction data, such as overheating of windings, motor bearings, or low hydraulic oil level
Monitoring	
Climate control	standard climate control system. combined cooler/heater, additional dust filter in the outside/fresh air circuit
Noise emission	
ISO 6396	L_{pA} (inside cab) = 67 dB(A)
2000/14/EC	L_{WA} (surround noise) = 105 dB(A)



Resilient Suspension

The resilient suspension consists of 15 resilient contact blocks. Its main function is to absorb the shocks and vibrations resulting from the movement of the excavator. An electrical rotating joint is integrated into the resilient suspension and allows the electrical supply to the excavator to be assured. This meets the sealing requirements of IP55.

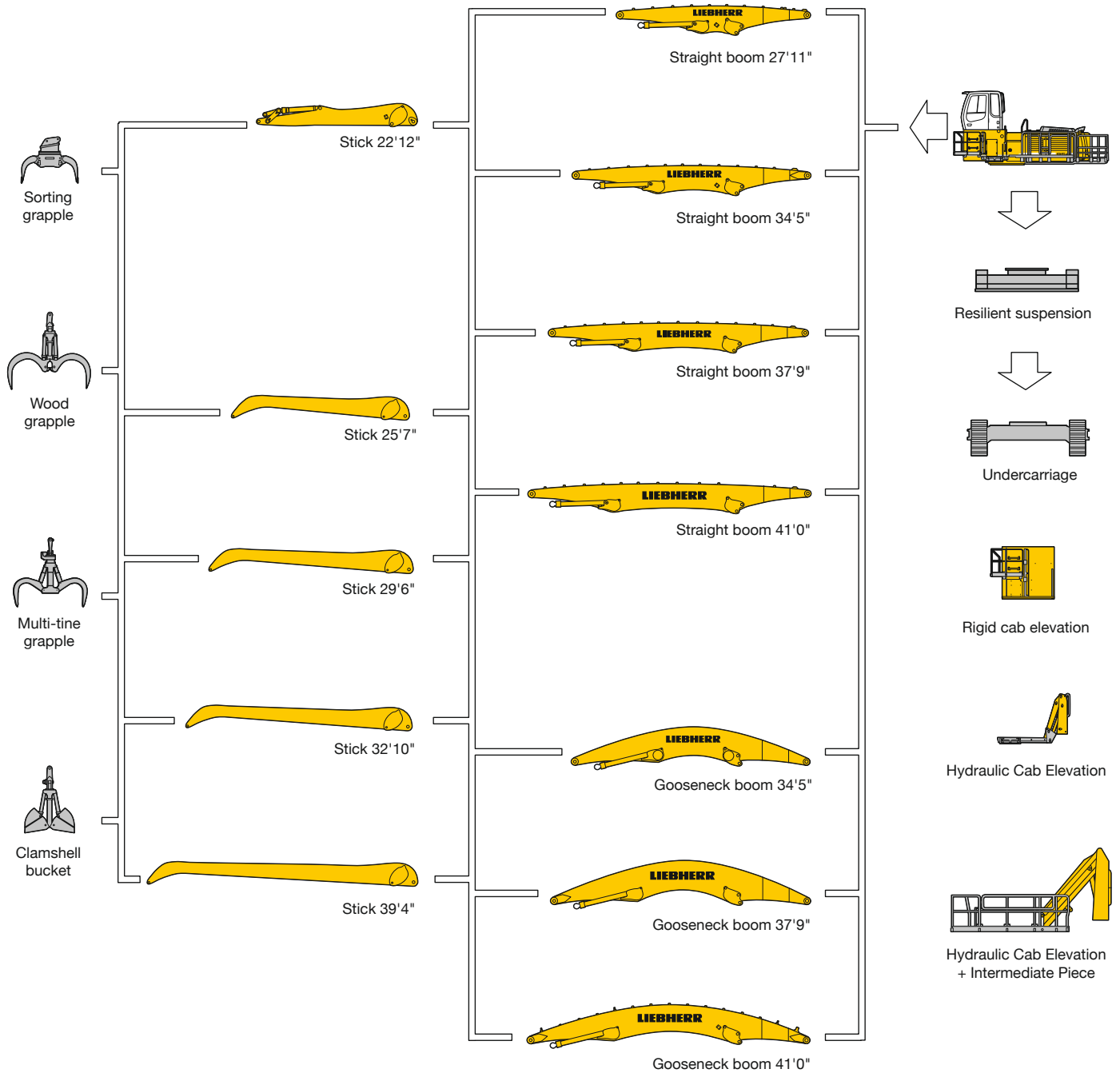


Attachment

Type	high-strength steel for extreme stresses. Bearings designed for optimum distribution of stresses
Hydraulic cylinders	Liebherr cylinders with end-of-travel shock absorbing, fitted with guide and sealing joints
Pivots	sealed, low maintenance
Lubrication	centralised semi-automatic Liebherr lubrication system
VarioLiftPlus	variable boom mounting positions for optimized lift capacities

* Other voltages and frequencies possible on request.

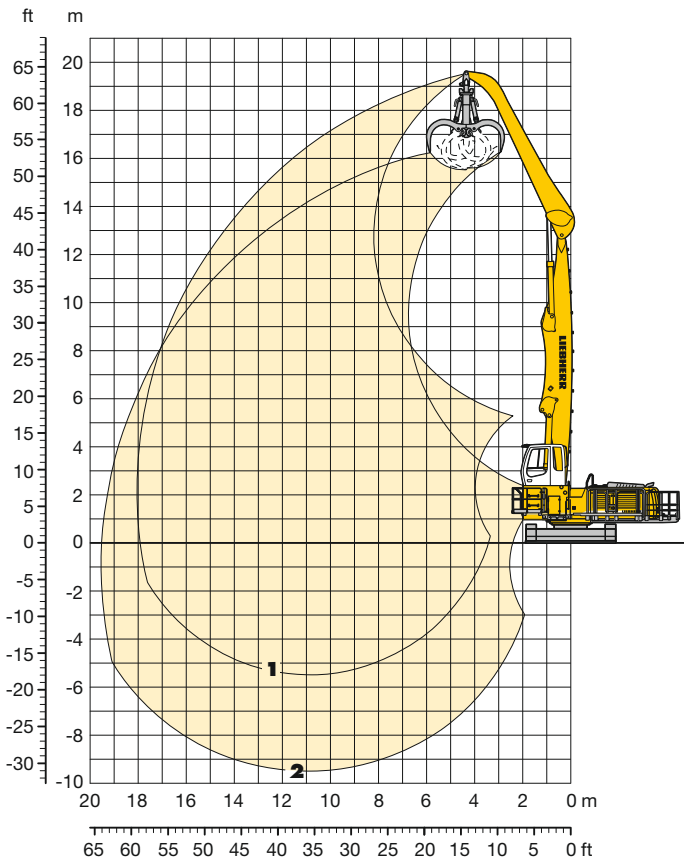
The right attachment for every application



Industrial Attachment

with Industrial-Type Straight Boom 34'5"

EP 954 C



Attachment Envelope

Kinematic variants 3A/3B

- 1 with industrial stick 25'7" (3B)
- 2 with industrial stick 25'7" and grapple model 72 C (3B)

Operating Weight

Operating weight includes basic machine with rigid cab elevation 3'11", counterweight 31,970 lb, handrails, industrial-type straight boom 34'5", industrial stick 25'7" and grapple model 72 C with 5 semi-closed tines 1.83 yd³.

Weight 142,200 lb

Lift Capacities

with Industrial-Type Straight Boom 34' 5"

Industrial Stick 25'7" (Variant 3B)

ft	Under-carriage	10 ft		15 ft		20 ft		25 ft		30 ft		35 ft		40 ft		45 ft		50 ft		55 ft		60 ft		65 ft		70 ft		75 ft		ft
70	Ponton																													
65	Ponton																													
60	Ponton			34,3°	34,3°	28,5°	28,5°																					27,0°	27,0°	25.99
55	Ponton					31,7°	31,7°	28,8°	28,8°																			22,7°	22,7°	34.60
50	Ponton							27,3°	27,3°	25,4°	25,4°	22,0°	22,0°														20,5°	20,5°	40.77	
45	Ponton							26,6°	26,6°	24,7°	24,7°	23,2°	23,2°	20,3°	20,3°												19,1°	19,1°	45.54	
40	Ponton							26,4°	26,4°	24,5°	24,5°	22,9°	22,9°	21,7°	21,7°												18,3°	18,3°	49.32	
35	Ponton							26,8°	26,8°	24,7°	24,7°	23,0°	23,0°	21,7°	21,7°	20,6°	20,6°										17,7°	17,7°	52.34	
30	Ponton					30,9°	30,9°	27,8°	27,8°	25,4°	25,4°	23,4°	23,4°	21,8°	21,8°	20,6°	20,6°										17,4°	17,4°	54.73	
25	Ponton					33,1°	33,1°	29,2°	29,2°	26,3°	26,3°	24,1°	24,1°	22,2°	22,2°	20,7°	20,7°	19,5°	19,5°								17,3°	17,3°	56.56	
20	Ponton		37,0°	37,0°	43,0°	43,0°	36,0°	36,0°	31,1°	31,1°	27,6°	27,6°	24,9°	24,9°	22,8°	22,8°	21,1°	21,1°	19,6°	19,6°							17,4°	17,4°	57.90	
15	Ponton		65,5°	65,5°	48,8°	48,8°	39,4°	39,4°	33,3°	33,3°	29,0°	29,0°	25,8°	25,8°	23,4°	23,4°	21,4°	21,4°	19,7°	19,7°							17,6°	17,6°	58.77	
10	Ponton		15,6°	15,6°	54,7°	54,7°	42,8°	42,8°	35,4°	35,4°	30,4°	30,4°	26,8°	26,8°	24,0°	24,0°	21,8°	21,8°	19,9°	19,9°							17,9°	17,9°	59.20	
5	Ponton		6,5°	6,5°	29,8°	29,8°	45,6°	45,6°	37,3°	37,3°	31,7°	31,7°	27,6°	27,6°	24,5°	24,5°	22,1°	22,1°	19,9°	19,9°							18,0°	18,0°	59.19	
0	Ponton		7,0°	7,0°	20,4°	20,4°	47,4°	47,4°	38,6°	38,6°	32,6°	32,6°	28,2°	28,2°	24,9°	24,9°	22,2°	22,2°	19,8°	19,8°							17,8°	17,8°	58.75	
- 5	Ponton		9,6°	9,6°	19,5°	19,5°	41,4°	41,4°	39,2°	39,2°	33,0°	33,0°	28,5°	28,5°	24,9°	24,9°	22,0°	22,0°	19,2°	19,2°							17,4°	17,4°	57.87	
- 10	Ponton				21,1°	21,1°	38,0°	38,0°	38,8°	38,8°	32,8°	32,8°	28,2°	28,2°	24,5°	24,5°	21,3°	21,3°									18,6°	18,6°	54.34	
- 15	Ponton					38,5°	38,5°	37,4°	37,4°	31,7°	31,7°	27,2°	27,2°	23,5°	23,5°												21,5°	21,5°	47.80	
- 20	Ponton																													
- 25	Ponton																													
- 30	Ponton																													
- 35	Ponton																													

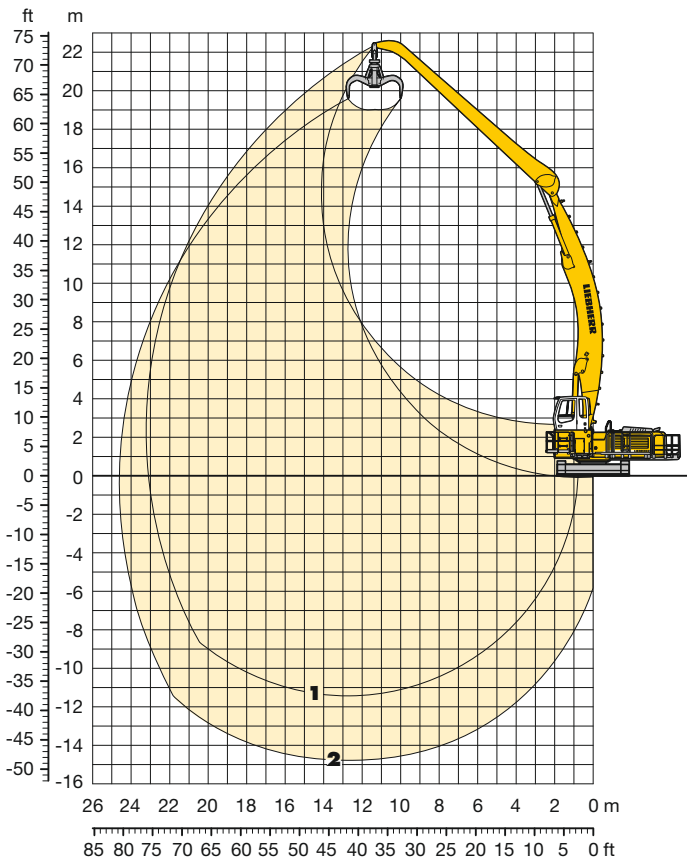
Height Can be slewed through 360° In longitudinal position of undercarriage Max. reach * Limited by hydr. capacity

The lift capacities are stated in lb x 1,000 on the lifting gear's stick tip, and can be lifted 360°.

Industrial Attachment

with Industrial-Type Gooseneck Boom 41'

EP 954 C



Attachment Envelope

Kinematic variants 3C/3D

- 1** with industrial stick 39'4" (3D)
- 2** with industrial stick 39'4" and grapple model 72 C (3D)

Operating Weight

Operating weight includes basic machine with rigid cab elevation 3'11", counterweight 31,970 lb, handrails, industrial-type gooseneck boom 41', industrial stick 39'4" and grapple model 72 C with 5 semi-closed tines 1.83 yd³.

Weight	145,100 lb
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Lift Capacities

with Industrial-Type Gooseneck Boom 41'

Industrial Stick 39'4" (Variant 3D)

ft	Under-carriage	10 ft		15 ft		20 ft		25 ft		30 ft		35 ft		40 ft		45 ft		50 ft		55 ft		60 ft		65 ft		70 ft		75 ft		ft						
		ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft							
70	Ponton														14,1*	14,1*														12,3*	12,3*	42.77				
65	Ponton																13,6*	13,6*												11,2*	11,2*	49.46				
60	Ponton																13,2*	13,2*	12,4*	12,4*											10,5*	10,5*	54.86			
55	Ponton																		12,1*	12,1*	11,5*	11,5*									10,0*	10,0*	59.33			
50	Ponton																		12,0*	12,0*	11,3*	11,3*	10,8*	10,8*							9,7*	9,7*	63.08			
45	Ponton																		11,9*	11,9*	11,2*	11,2*	10,7*	10,7*	10,2*	10,2*					9,5*	9,5*	66.23			
40	Ponton																		12,0*	12,0*	11,3*	11,3*	10,7*	10,7*	10,1*	10,1*					9,3*	9,3*	68.87			
35	Ponton																											9,7*	9,7*			9,3*	9,3*	71.05		
30	Ponton																											9,7*	9,7*			9,3*	9,3*	72.81		
25	Ponton																												9,8*	9,8*			9,4*	9,4*	74.19	
20	Ponton																												9,9*	9,9*	9,3*	9,3*	9,3*	9,3*	75.21	
15	Ponton																													9,4*	9,4*	9,3*	9,3*	9,3*	9,3*	75.88
10	Ponton																													9,5*	9,5*	9,3*	9,3*	9,3*	9,3*	76.21
5	Ponton	10,0*	10,0*	47,1*	47,1*	39,7*	39,7*	30,8*	30,8*	25,2*	25,2*	21,3*	21,3*	18,5*	18,5*	16,3*	16,3*	14,6*	14,6*	13,2*	13,2*	12,1*	12,1*	11,1*	11,1*	10,3*	10,3*	9,5*	9,5*	9,4*	9,4*	9,4*	9,4*	76.20		
0	Ponton	4,9*	4,9*	13,8*	13,8*	36,4*	36,4*	33,1*	33,1*	26,8*	26,8*	22,4*	22,4*	19,3*	19,3*	16,9*	16,9*	15,1*	15,1*	13,6*	13,6*	12,3*	12,3*	11,3*	11,3*	10,4*	10,4*	9,6*	9,6*	9,4*	9,4*	9,4*	9,4*	75.86		
- 5	Ponton	5,2*	5,2*	10,4*	10,4*	20,6*	20,6*	35,0*	35,0*	28,1*	28,1*	23,4*	23,4*	20,0*	20,0*	17,5*	17,5*	15,5*	15,5*	13,9*	13,9*	12,6*	12,6*	11,5*	11,5*	10,5*	10,5*	9,5*	9,5*	9,5*	9,5*	9,5*	9,5*	75.19		
- 10	Ponton	6,3*	6,3*	10,1*	10,1*	16,9*	16,9*	30,2*	30,2*	29,1*	29,1*	24,2*	24,2*	20,6*	20,6*	17,9*	17,9*	15,8*	15,8*	14,1*	14,1*	12,7*	12,7*	11,6*	11,6*	10,5*	10,5*			9,6*	9,6*	9,6*	9,6*	74.16		
- 15	Ponton	7,7*	7,7*	10,7*	10,7*	16,0*	16,0*	25,3*	25,3*	29,7*	29,7*	24,7*	24,7*	21,0*	21,0*	18,3*	18,3*	16,1*	16,1*	14,3*	14,3*	12,8*	12,8*	11,6*	11,6*	10,4*	10,4*			9,7*	9,7*	9,7*	9,7*	72.77		
- 20	Ponton	9,0*	9,0*	11,7*	11,7*	16,1*	16,1*	23,6*	23,6*	29,9*	29,9*	24,9*	24,9*	21,2*	21,2*	18,4*	18,4*	16,2*	16,2*	14,3*	14,3*	12,8*	12,8*	11,4*	11,4*	10,1*	10,1*			9,8*	9,8*	9,8*	9,8*	71.00		
- 25	Ponton			12,7*	12,7*	16,7*	16,7*	23,2*	23,2*	29,6*	29,6*	24,8*	24,8*	21,1*	21,1*	18,3*	18,3*	16,1*	16,1*	14,2*	14,2*	12,5*	12,5*	11,1*	11,1*					9,9*	9,9*	9,9*	9,9*	68.81		
- 30	Ponton					17,5*	17,5*	23,5*	23,5*	28,8*	28,8*	24,2*	24,2*	20,7*	20,7*	17,9*	17,9*	15,7*	15,7*	13,7*	13,7*	12,0*	12,0*	10,3*	10,3*					10,3*	10,3*	10,3*	10,3*	65.02		
- 35	Ponton									27,4*	27,4*	23,2*	23,2*	19,8*	19,8*	17,2*	17,2*	14,9*	14,9*	12,9*	12,9*									12,7*	12,7*	12,7*	12,7*	55.72		

Height Can be slewed through 360° In longitudinal position of undercarriage Max. reach * Limited by hydr. capacity

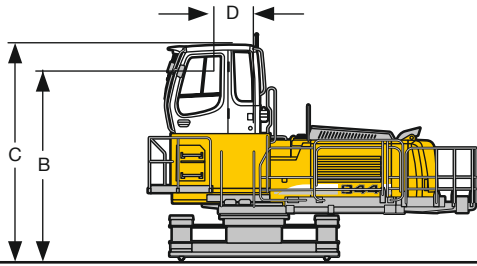
The lift capacities are stated in lb x 1,000 on the lifting gear's stick tip, and can be lifted 360°.

Choice of Cab Elevation and Cab Protection

EP 934 C

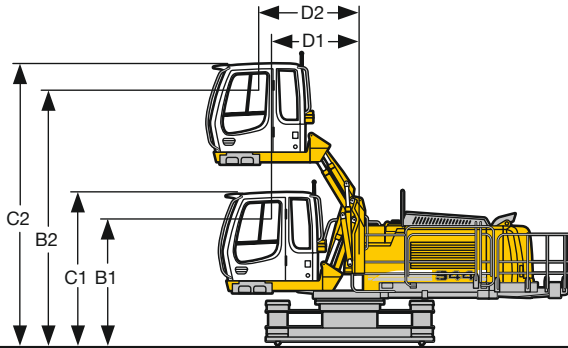
EP 944 C

EP 954 C



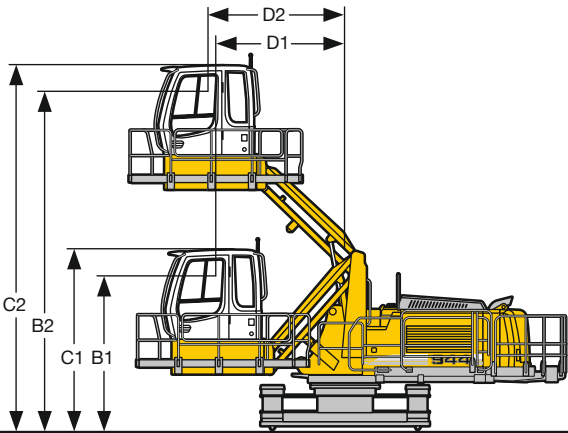
Rigid Cab Elevation

	934 ft in	944 ft in	954 ft in	934 ft in	944 ft in	954 ft in
Height	3'11"	3'11"	3'11"	6' 7"	6' 7"	6'7"
B	11' 7"	11' 9"	11'10"	14' 3"	14' 4"	14'5"
C	13' 3"	13' 4"	13' 5"	15'11"	15'12"	16'1"
D	2' 2"	2' 6"	3' 8"	2' 2"	2' 6"	3'8"



Hydraulic Cab Elevation

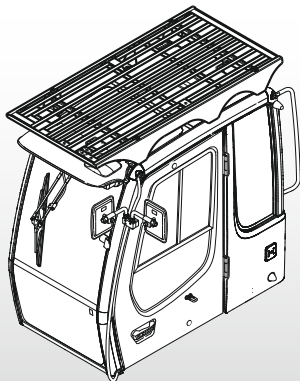
	934 ft in	944 ft in	954 ft in
B1	7' 8"	7' 9"	7' 9"
B2	15'11"	15'12"	15'12"
C1	9' 4"	9' 5"	9' 5"
C2	17' 6"	17' 7"	17' 7"
D1	4'10"	4' 9"	4' 9"
D2	5' 8"	5' 7"	5' 7"



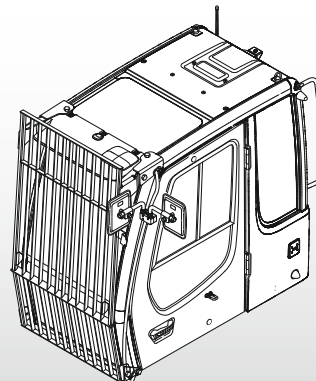
Hydraulic Cab Elevation Parallelogram + Intermediate Piece 1'8"

	934 ft in	944 ft in	954 ft in
B1	8'10"	9' 5"	9' 6"
B2	20' "	21' 2"	11' 2"
C1	10' 6"	11' "	21' 3"
C2	21' 8"	22'10"	22'11"
D1	7'10"	8' 2"	9' 6"
D2	7'10"	8' 6"	9' 9"

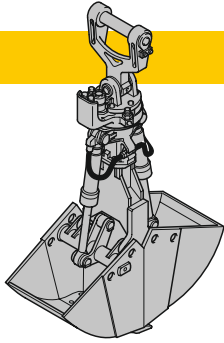
FOPS Guard



Front Guard



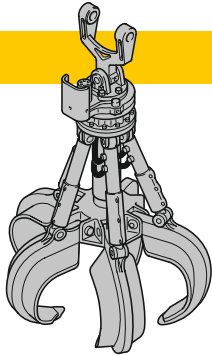
Variety of Tools



Shells for Loose Material **Clamshell Model 20 B**

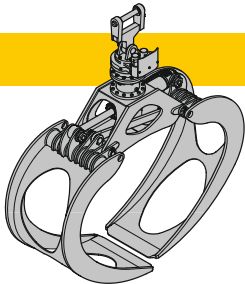
Shells for loose material with cutting edge (without teeth)

Cutting width of shells	ft in	3'3"	3'11"	5'3"
Capacity	yd ³	1.70	1.96	2.62
For loose material, specific weight up to	lb/yd ³	2,528	2,528	2,528
Weight	lb	2,987	3,120	3,417



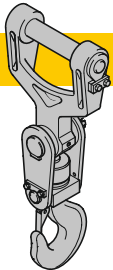
Multiple Tine Grapples

		open tines		semi-closed tines			closed tines			
Grapple Model 65 (5 tines)	Capacity	yd ³	0.52	0.78	0.52	0.78	0.52	0.78		
	Weight	lb	2,535	2,712	2,833	3,120	2,921	3,351		
Grapple Model 70 C (5 tines)	Capacity	yd ³	1.05	1.44	1.05	1.44	1.05	1.44		
	Weight	lb	3,274	3,505	3,759	4,100	4,299	4,398		
Grapple Model C (5 tines)	Capacity	yd ³	1.83	2.09	2.35	1.83	2.09	2.35		
	Weight	lb	5,400	5,512	5,622	6,283	6,393	6,504	6,504	6,724



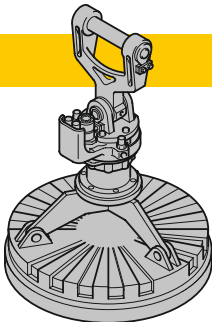
Wood Grapple

GM 20 B	Capacity	yd ³	1.70	1.96	2.75
	Weight	lb	3,691	3,801	4,299
GM 22 C	Capacity	yd ³	2.62	3.27	3.92
	Weight	lb	5,181	5,622	6,724
GMH 50	Capacity	yd ³	3.27	4.18	
	Weight	lb	4,758	5,408	



Crane Hook with Suspension

Max. load	lb	27,558
Height with suspension	ft in	3'1"
Weight	lb	212



Electro Magnets with Suspension

Magnet information on request

For further information see color brochure "Add-on tools for material-handling technology". To operate a magnet the installation of a generator is required; please contact your Liebherr dealer or the factory for further information.

Equipment



Uppercarriage

Junction box with active protection	•
Engine hood with pneumatic damping and mechanical stop	•
Lockable tool box	•
Handrails, non-slip surfaces	•
Complete tool set	•
Maintenance-free swing brake lock, integrated in the transmission	•
Sound insulation	•
Pedal controlled positioning swing brake	+
Special painting	+
Wide walkways and handrails	+
Extension of security system for access to the machine	+
Voltage other than 400 V	+
Frequency of 60 Hz	+



Hydraulics

Electronic regulation by power limit	•
Operating mode selector with continuous regulation	•
Pressure accumulator for controlled lowering of attachments with the engine turned off	•
Shut-off valve between hydraulic tank and pumps	•
Minimum flow at high pressure	•
Filter with integrated fine filter area (5 µm)	•
Measuring points for hydraulic circuit pressure	•
Supplementary hydraulic circuits	+
Filling with bio-degradable oil	+
Filter for secondary circuit	+
Liebherr Tool Control	+



Operator's Cab

Roof window and windshield in laminated glass	•
Panoramic tinted windows	•
Right-hand window without central mounting	•
Sliding window in door	•
Cab front roof	•
Windshield wipers and windshield wash	•
Emergency exit through rear window	•
Sun blind	•
Seat adjusted independently or in association with the console (6 adjustment positions)	•
Pocket storage space	•
Closed storage space	•
Coat hook	•
Floor mat	•
Interior lighting	•
Interior rear-view mirror	•
Cigar lighter and ashtray	•
Seat belt	•
Operating hours display, visible from the outside	•
Multi-function display	•
Automatic climate control with defrosting function	•
Radio pre-equipment	•
Radio unit	+
Electric cool box	+
Extra supply heating	+
Additional spotlights on cab roof (front/rear)	+
Wipers for front lower window	+
Wipers for roof window	+
Armored windshield (not movable)	+
Stone impact protection (FOPS)	+
Seat with pneumatic suspension, headrest and heating	+
Warning beacon	+
Extinguishers	+



Attachment

Operating spotlights	•
Hydraulic lines for supply to clamshell/grapple in stick	•
Sealed pivots and bearings	•
Liebherr semi-automatic centralised lubrication	•
Safety device to prevent hose rupture (lifting cylinder) with regeneration	•
Safety device to prevent hose rupture (stick cylinder) with regeneration	•
Hydraulic connections for quick coupling system	•
Cylinders with end of run damper	•
Lifting hook	+
Liebherr range of clamshells/grapples	+
Liebherr automatic centralised lubrication	+
Special painting	+
Overload warning	+

• = Standard, + = Option

Options and/or special attachments, supplied by vendors other than Liebherr, are only to be installed with the knowledge and approval of Liebherr to retain warranty.

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