

A 922 Rail Litronic

LIEBHERR

Railroad excavator



Generation
6

Operating weight
20,400 – 23,400 kg

Engine
120 kW / 163 HP
Stage V
Tier 4 Final
Stage IIIA (compliant)

Performance

Compact, flexible – perfect combination for maximum performance

Economy

A sound investment – optimum economy and environmentally friendly

Reliability

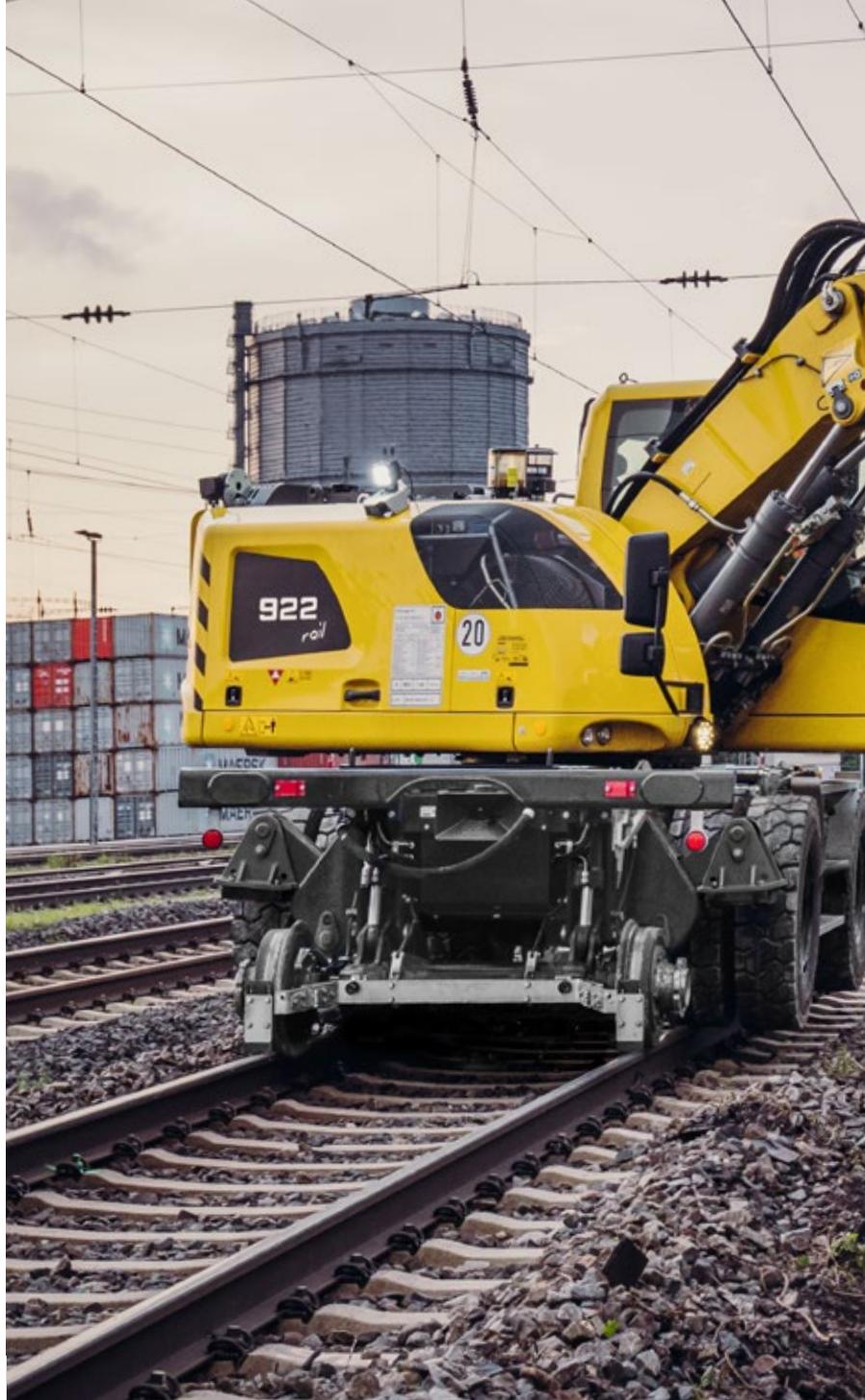
Competence, consistency, innovation – proven experience

Comfort

Ergonomic excellence – superior cabin design for operator comfort and wellbeing

Maintainability

Service every step of the way – simple, fast and reliable





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Performance



Compact, flexible – perfect combination for maximum performance

Decades of experience, consistent development work and striving to deliver maximum efficiency and performance have resulted in the A 922 Rail. The new generation continues the successful concept of its predecessor with new ideas and improvements. The basis is provided by the powerful construction machinery engine with its high torque which drives Liebherr's powerful, flexible variable-displacement pumps. This means consistently high power is available in every situation.

Maximum performance

Maximum performance

A sophisticated machine concept is essential to deliver optimal performance in payloads, stability and flexibility. The new A 922 Rail generation delivers continued, familiar, intelligent superstructure design with a separate boom cylinder mounting and a solid rail chassis to ensure reliable stability and maximum load capacity for track operations. In addition to standard ballasting, a revised heavy ballast weight with a reduced rear swivel radius of 2,000 mm is now also available. The maximum payloads can also be increased by a Power Lift mode and an optional 4-point support.

Liebherr undercarriage

The A 922 Rail is available with a range of undercarriage versions with different gauges, rail wheels and suspension systems enabling it to be used on tracks anywhere in the world. An independent variable-displacement pump for the rail chassis delivers outstanding traction and reliable drive power at all times. The permanent level regulation of the rail chassis enables the machine to travel smoothly on rails.



Constant power

- Powerful and robust construction machinery motor for continuous use at full load
- 4.5 l long-stroke engine for high torque and fuel-efficient work at low speeds
- Efficient turbo loader with intercooling – high output at low fuel consumption



Improved rail chassis

- Large rail wheels reduce wear and increase the machine's stability
- Easily interchangeable rail wheels make the machine suitable for a wide range of uses



Time-tested travel drive

- Time-tested travel drive with high traction for high travel speeds on the level and on gradients
- Drive power through direct contact between the rubber tyres and the rail delivers massive traction for towing trailers / wagons
- Newly developed drive shaft protection

Precise work

Powerful hydraulic concept

The design concept of the A 922 Rail Litronic was developed to deliver maximum performance and flexibility. The new 120 kW / 163 HP construction machinery engine and the perfectly coordinated hydraulic system enables the machine to achieve even higher working speeds with the familiar fluid equipment movements. To achieve greater performance when using attachments, the flow volume of the time-tested double variable-displacement pump (with independent regulating circuits) has been increased to 2 x 220 l/min. Furthermore, the capacity can also be used as the sum of both hydraulic circuits (for example for pile-driving) as in the past. A second high pressure circuit means that three hydraulic functions can be controlled directly on special attachments (for example on tamping devices).

Working with precision

Many years of experience in the development and production of hydraulic excavators and systems allow us to harmonize the components perfectly. As a result, Liebherr hydraulic excavators feature rapid, fluid movements combined with high precision.

Economy



A sound investment – optimum economy and environmentally friendly

Liebherr rail machines combine high productivity and flexibility with economy in factory-standard configurations. The A 922 Rail Litronic is specifically designed to be compatible with a variety of versatile attachments. The machine can work independently and flexibly even on inaccessible sections of track. On request, the efficiency of each wheeled excavator can be further boosted with a Liebherr quick coupling system, resulting in more return from each machine operator hour.

Maximum efficiency

Available all over the world

The new A 922 Rail Litronic railroad excavator delivers higher performance data with its new engine coupled with lower fuel consumption and can be supplied with an appropriate exhaust system to meet various national emissions regulations. In the future, this means that the machine will be available in countries with both high and low level regulations. To meet emissions stage V, Liebherr uses a newly developed SCRT system, consisting of an SCR catalytic converter system and a standard particulate filter.

Engine idling

The standard automatic idling function reduces the engine speed to idle as soon as the operator takes his hand from the joystick so that no hydraulic function is activated. Proximity sensors in the joystick levers restore the original engine speed as soon as the operator's hand is moved towards the lever again. This ensures that the set engine speed is available immediately. The result is a combination of fuel saving and reduced noise level.

Increased productivity

Liebherr attachments and LIKUFIX

To boost the productivity of its construction machines, Liebherr offers a broad range of attachments for different fields of application. Furthermore, the hydraulic excavators can also be equipped with the Liebherr LIKUFIX hydraulic quick coupling system. The combination of a hydraulic Liebherr quick coupling system with the LIKUFIX coupling block permits fast safe changing of mechanical and hydraulic attachments from the operator's cabin. This boosts productivity on average by 30%. The construction process is accelerated, and orders are completed faster. That enables more turnover to be achieved per machine.

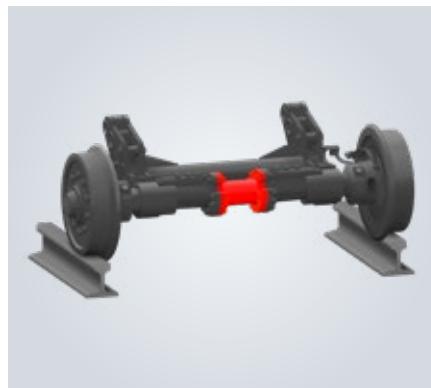
Efficient management

LiDAT, Liebherr's own data transmission and positioning system, facilitates efficient management, monitoring and control of the entire fleet in terms of machinery data recording, data analysis, fleet management and service. All of the important machinery data can be viewed at any time in a web browser. LiDAT provides you comprehensive work deployment documentation, greater availability thanks to shorter downtimes, faster support from the manufacturer, quicker detection of strain / overload and subsequently a longer service life of the machine as well as greater planning efficiency.



Wagon braking system

- Availability of various wagon braking systems for safe railway operation
- Can be configured flexibly depending on wagon type (hydraulic / pneumatic / single or dual circuit)



Adjustable gauge axle

- Can be adjusted to various gauges (narrow, standard and wide gauge)
- Simple adjustment of gauge
- Suitable for worldwide use



Liebherr quick coupling system LIKUFIX

- Faster and safer changing of mechanical and hydraulic attachments from the cab
- Extended applications and control due to signal contact strip between the attachment and the hydraulic excavator
- Optical and acoustic check of the correct closure of the locking mechanism on the attachment to the quick coupler unit using two proximity sensors

Reliability



Competence, consistency, innovation – proven experience

Reliability contributes to safety and safety influences the success of a project. Liebherr stands for safety with reliable railroad machines used on rail, in rough terrain or on the road. Our comprehensive security functionality pays off.

More safety

Quality and competence

Liebherr has been developing and manufacturing hydraulic excavators since 1954 and has built railroad excavators since 1967. Our product experience, our understanding of technical design and feedback from customers, sales and service personnel formed the basis for our construction of pioneering ideas and have been part of our successful recipe throughout the company history. Key components such as electronic parts, the slewing ring, slewing drive and hydraulic cylinders are developed and manufactured in-house. Our great production depth guarantees maximum quality and ensures that the components are perfectly coordinated with each other.

Robust construction

All the steel components are designed and manufactured by Liebherr. High strength steel sheets designed to withstand the harshest requirements guarantee high torsion resistance and excellent absorption of forces to ensure a long service life.



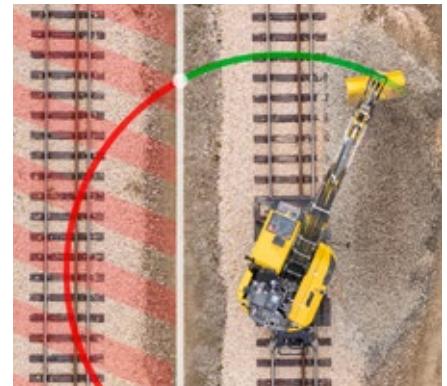
QPDM – Quality and process data management

- QPDM allows production data to be logged, documented and evaluated
- Automation of documentation and test specifications
- Ability to handle large quantities and maintain uniform high quality



Rail wheel brakes

- Standard integral brakes in the rail wheels reduce the braking distance in every situation to enhance safety on the tracks
- The brakes are also effective when the machine is raised



Safety systems

Straight from the manufacturer

- The basic machine, rail undercarriage and safety systems all come from a single source
- The safety concept includes technologies such as load torque limitation, lift limitation in height, swivel limitation and the virtual wall
- Specially developed for use on rails

High machine availability

Safety

Besides the performance and efficiency of a railroad excavator, the safety of the operator and the machine must always be paramount. Numerous equipment features such as the standard pipe fracture safety valves on the lifting and stick cylinders, electronic lift limitation, electronic swivel limitation, load moment limitation according to EN 15746-2, laminated safety glass smash-resistant, rollover protection structure (ROPS) and an emergency exit through the rear window provide maximum safety in all operations.

Light and durable

Various LED lights illuminate the working area to deliver excellent visibility and a high level of safety for both man and machine. Our LED lights not only look good, but also deliver excellent luminosity and an extremely long service life. To comply with the appropriate standards in the various destination countries, the machine can be fitted with additional railway-specific lighting at the factory.

Comfort



Ergonomic excellence – superior cabin design for operator comfort and wellbeing

The modern interior design of the large Liebherr double cab with standard roll-over protection system (ROPS) provides conditions to work in comfort, which enhances concentration and productivity. Thanks to the double seat layout, the cab supports two-man operation required in many countries in which another person monitors the rear and can press a horn or emergency stop switch in an emergency situation. Access to the cab is made easy for both seats by entry lighting. Clarity, ergonomics and safety are the properties we strive for when creating the control concept. That means we avoid time-consuming re-familiarisation phases and allow the operator to work efficiently in the machine straight away.

First-class cab

Automatic air conditioning

The automatic air conditioning offers intuitive operation. Temperature, blower settings and the various air nozzles in the head, chest and foot areas are set using the touch screen on the indicating unit. The defrost/defog one button function clears fogged up windows in the shortest possible time. The filter for the cab air can be changed easily and conveniently from the outside.

Operator seats

The Standard, Comfort and Premium operator's seat versions deliver maximum comfort. Even the standard operator seat offers an extensive range of features such as air suspension, seat heating, headrest, lumbar support and many more. Luxuries which we believe every construction machine should provide.

Low noise levels

The use of viscoelastic mounts, good insulation and low-noise diesel engines minimises noise emissions and vibrations. The noise levels are just 70 dB(A) in the operator's cab and 101 dB(A) outside.



Joystick with proportional control

- Good functionality with streamlined, ergonomic design
- 4 way mini joystick enables versatile control possibilities without having to encompass, for example, steering, outriggers or attachments
- Two buttons and a rocker switch also increase the number of functions

Easy access

- Convenient, safe entry and exit into and out of the cab thanks to greater width provided by the folding arm console
- Three standard steps with non-slip galvanised plates to enhance safety
- LED entry lighting can be controlled from outside

Intuitive operation

- Display of the machine data and camera image on two 9-inch displays with touch screen and direct access via menu bar
- 20 user-programmable memory slots for attachments, which can be used for quickly and easily setting the oil pressure and oil flow at the push of a button when changing attachments
- Quick access keys can be programmed by the machine operator for frequently used menu items

Comfortable operation

Radio with hands-free device

The optional Liebherr radio is MP3-compatible, has a USB connection and can be used as interface for the integral hands-free kit. If the machine operator connects his smartphone to the radio using Bluetooth, the touchscreen can be used to control phone calls. This means that all media, including the radio, MP3 or phone calls, are controlled using a central unit which provides greater clarity, simplicity and comfort.

Excellent all around vision

The familiar large windows combined with the standard rear and side cameras deliver excellent visibility of the working and slewing areas. This visibility enhances the operator's safety and ensures that the machine can be handled safely at all times.

Maintainability



Service every step of the way – simple, fast and reliable

Liebherr railroad excavators are not only powerful, robust, precise and efficient, they also have an impressive service-oriented design. Maintenance is performed quickly, simply and safe. This reduces maintenance costs and keeps machine downtimes to a minimum.

Simplified maintenance concept

Service-based machine design

The service-based machine design guarantees short servicing times, thus minimising maintenance costs due to less downtime. All the maintenance points are easily accessible from the ground and easy to reach due to the large, wide-opening service doors. With the new generation, the accessibility to important components is even further improved. Air, oil and fuel filters, the main battery switch, the lubricating nipple for the oscillating axle and the pilot valves for emergency actuation are much easier to access. This means that service work can be completed even more quickly and efficiently.

Hydraulic oils with added value

Liebherr hydraulic oils achieve a service life of 6,000 operating hours plus. Instead of having defined change intervals, the results of the oil analysis (every 1,000 operating hours or after one year) determine when the oil needs to be changed. The unique Liebherr Hydraulic Plus oil can even achieve a service life of 8,000 operating hours and more at the same time as reducing fuel consumption by up to 5%.



Lubricating during work

- Fully automatic central lubrication system for the equipment and slewing ring
- Can be optionally expanded to the connecting link and quick coupler
- The grease tank of the central lubrication system is located behind the left service door
- Works without interrupting work for higher productivity



Maintenance without draining oil

- Standard shut-off valve for disconnecting the oil tank from the hydraulic system
- For simple maintenance work on the hydraulic components without draining the hydraulic oil
- Reduced maintenance time for higher machine availability



Rapid spare parts service

- 24-hour delivery: Spare parts service is available for our dealers around the clock
- Electronic spare parts catalogue: Fast and reliable selection and ordering via the Liebherr online portal
- With online tracking, the current processing status of your order can be viewed at any time

Your competent service partner

Remanufacturing

The Liebherr remanufacturing program offers cost-effective reconditioning of components to the highest quality standards. Various reconditioning levels are available including replacement components and general overhaul or repair. The customer receives components with original part quality at a reduced cost.

Competent advice and service

Competent advice is given at Liebherr. Experienced specialists provide advice for your specific requirements: application-oriented sales support, service agreements, cost effective repair alternatives, original parts management, as well as remote data transmission for machine planning and fleet management.

Railroad excavator

A 922 Rail Litronic overview

Superbly designed equipment for maximum reliability

- Second high pressure circuit
- Safety features such as load torque limitation, lift limitation in height, swivel limitation and the virtual wall
- Liebherr hydraulic cylinders
- Pipe fracture guards for hoisting, adjustment and stick cylinders
- Optimised bucket stick for application under electrical overhead lines
- Liebherr quick coupling systems (optional)
- Wide selection of Liebherr attachments (optional)
- Tool Control for attachments

Sophisticated maintenance concept for maximum productivity

- Fully automatic central lubrication system for uppercarriage and equipment
- Large, wide-opening service doors
- Central maintenance points accessible from the ground
- Shut-off device for hydraulic oil
- Liebherr hydraulic oil, biologically degradable (optional)
- Cab air filter can be replaced quickly and conveniently from outside
- Two lockable storage boxes
- Interchangeable rail wheels





Ergonomic operator's work station for maximum comfort

- Double cab with passenger seat
- Operator's seat Comfort or Premium (optional)
- Automatic air-conditioning system
- Two 9" high resolution colour display with touchscreen operation
- Operator profile, personalised
- Resonant arm console and ergonomic joysticks
- Proportional control with 4-way mini-joystick
- Large windows
- Windshield wiper with interval switching and washer, roof window and rear window
- Convenient radio operation with hands-free device
- LED headlights
- Rear and side camera monitoring
- Lighting for cabin access

Intelligent technology for maximum performance and economy

- Diesel engine with up to date emissions Stage V, Tier 4 Final and Stage IIIA (compliant)
- Dual-circuit load-sensing-control
- Liebherr-Power-Efficiency (LPE)
- MODE selection (Sensitive, ECO, Power, Power-Plus)
- Sensor-controlled automatic idling system
- Double variable-displacement pump (with independent regulating circuits)
- Different gauges and rail wheels possible
- Independent variable-displacement pump for the rail undercarriage
- Improved rear ballast (heavy) with 2,000 mm rear swivel radius (optional)

Technical data

Diesel engine

Rating per ISO 9249	120 kW (163 HP) at 1,900 RPM
Model	D924 – FPT motor designed for Liebherr
Stage V / Tier 4 Final	Cummins QSB4.5
Stage IIIA (compliant)	4 cylinder in-line
Type	104/132 mm (FPT)
Bore / Stroke	107/124 mm (Cummins)
Displacement	4.5l
Engine operation	4-stroke diesel Common-Rail Turbo-charged and after-cooled Reduced emissions
Air cleaner	Dry-type air cleaner with pre-cleaner, primary and safety elements
Engine idling	Sensor controlled
Electrical system	
Voltage	24 V
Batteries	2 x 135Ah/12V
Alternator	Three-phase current 28V/140A (FPT) Three-phase current 28V/ 80A (Cummins)
Stage V	
Harmful emissions values	According to regulation (EU) 2016/1628
Emission control	Liebherr-SCRT technology
Fuel tank	250l
Urea tank	46l
Tier 4 Final	
Harmful emissions values	In accordance with 40CFR1039 (EPA) / 13CCR (CARB)
Emission control	Liebherr-SCR technology
Fuel tank	250l
Urea tank	46l
Stage IIIA (compliant)	
Harmful emissions values	In accordance with ECE-R.96 Power Band I
Fuel tank	250l

Cooling system

Diesel engine	Water-cooled Compact cooling system consisting cooling unit for water, hydraulic oil and charge air with stepless thermostatically controlled fan, fans for radiator cleaning can be completely folded away
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Hydraulic controls

Power distribution	Via control valves with integrated safety valves, simultaneous and independent actuation of chassis, swing drive and equipment
Servo circuit	With electro-proportional joystick levers
Equipment and swing	Electro-proportional via foot pedal, dedicated control and display unit for rail undercarriage operation
Chassis	
Additional functions	Via switch or electro-proportional foot pedals
Proportional control	Proportionally acting transmitters on the joysticks for additional hydraulic functions

Hydraulic system

Hydraulic pump	For equipment and travel drive
	2 Liebherr axial piston variable displacement pumps (double construction) 2 x 220l/min.
Max. flow	350bar / PowerLift 375 bar
Max. pressure	Liebherr-Synchron-Comfort-system (LSC) with electronic engine speed sensing regulation, pressure and flow compensation, torque controlled swing drive priority
Hydraulic pump regulation and control	
Hydraulic tank	130l
Hydraulic system	max. 340l
Filtration	1 main return filter with integrated partial micro filtration (5 µm)
MODE selection	Adjustment of engine and hydraulic performance via a mode pre-selector to match application, e.g. for especially economical and environmentally friendly operation or for maximum digging performance and heavy-duty jobs
S (Sensitive)	Mode for precision work and lifting through very sensitive movements
E (Eco)	Mode for especially economical and environmentally friendly operation
P (Power)	Mode for high performance with low fuel consumption
P+ (Power-Plus)	Mode for highest performance and for very heavy duty applications, suitable for continuous operation
Engine speed and performance setting	Stepless alignment of engine output and hydraulic power via engine speed Tool Control: 20 pre-adjustable pump flows and pressures for add-on attachments

Swing drive

Drive	Liebherr axial piston motor with integrated brake valve and torque control, Liebherr planetary reduction gear
Swing ring	Liebherr, sealed race ball bearing swing ring, internal teeth
Swing speed	0-9.0RPM stepless
Swing torque	54 kNm
Holding brake	Wet multi-disc (spring applied, pressure released) Pedal controlled positioning swing brake

Cab

Double cabin	ROPS safety cab structure (roll-over protection system for complete operator's cab), shock-absorbing suspension, sound damping insulating, electrically unlockable door, two-piece retractable front windscreen, tinted laminated safety glass, separate window shades for the sunroof window and windscreen, roof window and front windscreen wipers, work headlights integrated in the ceiling, ambient lighting for night operations in addition to interior lighting, access lighting outside, operator's door with a sliding window (can be opened on both sides), large stowing and depositing possibilities, 12V / 24V electrical connections
Operator's seat Standard	Air cushioned operator's seat with 3D-adjustable armrests, headrest, lap belt, seat heater, manual weight adjustment, adjustable seat cushion inclination and length and mechanical lumbar vertebrae support
Operator's seat Comfort (Option)	In addition to operator's seat standard: lockable horizontal suspension, automatic weight adjustment, adjustable suspension stiffness, pneumatic lumbar vertebrae support and passive seat climatisation with active coal
Operator's seat Premium (Option)	In addition to operator's seat comfort: active electronic weight adjustment (automatic readjustment), pneumatic low frequency suspension and active seat climatisation with active coal and ventilator
Two-man operation	Ergonomical co-operator's seat with lap belt as well as signal horn and emergency stop
Arm consoles	Joysticks with control consoles and swivel seat, folding left control console
Operation and displays	Large high-resolution operating unit with touchscreen control, self-explanatory, numerous setting, control and monitoring options, e.g. air conditioning control, fuel consumption, machine and attachment parameters as well as safety functions such as load display, load torque limitation, lift and swivel limitation or virtual wall, separate display for rear view and side view monitoring, dedicated control and display unit for rail undercarriage operation with emergency stop function
Air-conditioning	Complete air-conditioning for operator and co-operator, automatic air-conditioning, recirculated air function, fast de-icing and demisting at the press of a button, air vents can be operated via a menu; recirculated air and fresh air filters can be easily replaced and are accessible from the outside; heating-cooling unit, designed for extreme outside temperatures, sensors for solar radiation, inside and outside temperatures
Refrigerant	R134a
Global warming potential	1,430
Quantity at 25°C	1,300g
CO ₂ equivalent	1.859t
Vibration emission*	
Hand / arm vibrations	< 2.5 m/s ²
Whole-body vibrations	< 0.5 m/s ²
Measuring inaccuracy	According with standard EN 12096:1997

Undercarriage

Drive	Oversized two speed power shift transmission with additional creeper speed, Liebherr axial piston motor with functional brake valve on both sides
Pulling force	117 kN
Travel speed	0- 3.5 km/h stepless (creeper speed off-road) 0- 7.0 km/h stepless (off-road) 0-13.0 km/h stepless (creeper speed on-road) 0-20.0 km/h stepless (road travel) 0-max. 25.0 or 37.0 km/h Speeder (option)
Driving operation	Automotive driving using accelerator pedal, cruise control function: storage of variable accelerator pedal positions, both off-road, on-road and on-rail
Axles	Manual or automatic hydraulically controlled front axle oscillation lock
Option	Axle with wheel head width 2,100 mm and differential lock 100%
Service brake	Two circuit travel brake system with accumulator; road axle wet and backlash-free disc brake; rail wheels with drum brake
Holding brake	Wet multi-disc (spring applied, pressure released)
Wagon braking system	1 circuit compressed air brake for railway wagon 2 circuit compressed air brake for trailer 2 circuit hydraulic brake for trailer
Rail guide	Standard gauge 1,435 mm
Option	Width gauge, narrow gauge type friction drive
Stabilization	Without outriggers Option Rear + front outriggers

Equipment

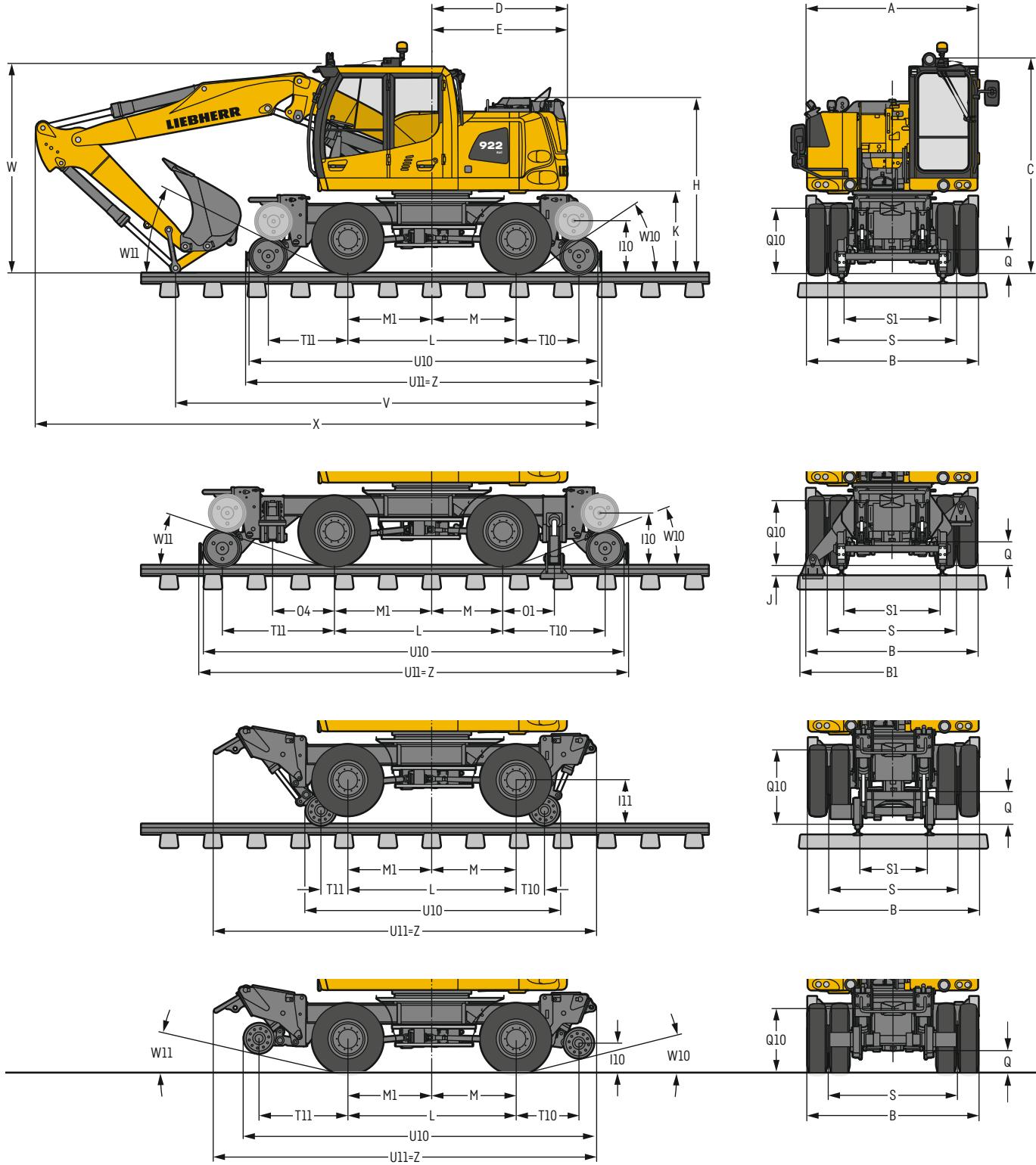
Type	High-strength steel plates at highly-stressed points for the toughest requirements. Complex and stable mountings of equipment and cylinders
Hydraulic cylinders	Liebherr cylinders with special sealing and guide system and, depending on cylinder type, shock absorption
Bearings	Sealed, low maintenance

Complete machine

Lubrication	Liebherr central lubrication system for uppercarriage and equipment, automatically
Noise emission	ISO 6396 2000/14/EC 70 dB(A) = L _{PA} (inside cab) 101 dB(A) = L _{WA} (surround noise)

* for risk assessment according to 2002/44/EC see ISO/TR 25398:2006

Dimensions



	without outriggers (Asym. / Sym. Rail)	Rear + front outriggers	Narrow gauge (Asym. / Sym. Rail)	Narrow gauge rail mm
	mm	mm	mm	mm
A	2,525	2,525	2,525	2,525
B	2,550	2,550	2,550	2,550
B1	—	2,700	—	—
C*	3,185	3,185	3,335	3,185
D	2,000	2,000	2,000	2,000
E	2,000	2,000	2,000	2,000
H	2,600	2,600	2,745	2,600
I10	780	780	—	440
I11	—	—	655	—
J	—	145	—	—
K	1,235	1,235	1,380	1,235
L	2,500	2,500	2,500	2,500
M	1,050 / 1,250**	1,050	1,050 / 1,250**	1,050 / 1,250**
M1	1,450 / 1,250**	1,450	1,450 / 1,250**	1,450 / 1,250**
O1	—	770	—	—
O4	—	920	—	—
Q	190	190	135	345
Q10	965	965	1,115	965
S	1,912	1,912	1,912	1,912
S1	1,435	1,435	1,000	—
T10	930	1,525	430	935
T11	1,180	1,675	400	1,320
U10	5,185	6,270	3,780	5,200
U11	5,315	6,395	5,670	5,670
W10	33,8°	20,7°	—	15,2°
W11	26,5°	18,8°	—	13,7°
Z	5,315	6,395	5,670	5,670

* without signal light DB and amber beacon; can be removed for transport

** Symmetric Rail

E = Tail radius

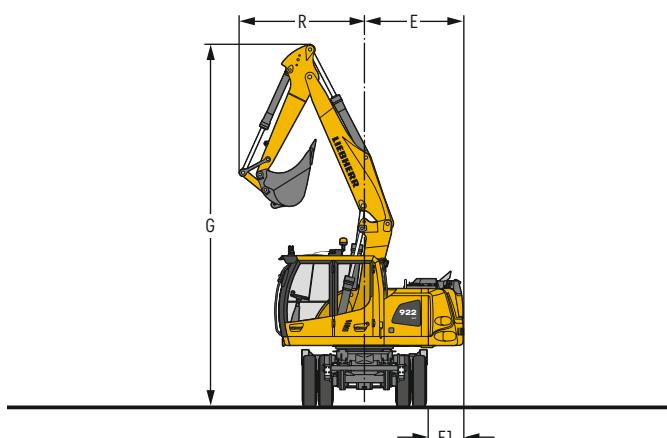
Tyres 10.00-20

	Stick	Two-piece boom 5.05 m	without outriggers (Asymmetric Rail)	without outriggers (Symmetric Rail)	Rear + front outriggers
	m	mm	mm	mm	mm
V	1.85	6,300	6,500	7,450*	
	2.05	6,050	6,250	7,200*	
	2.25	6,550*	6,100	7,050*	
W	1.85	3,000	3,000	3,000*	
	2.05	3,050	3,050	3,050*	
	2.25	3,100*	3,100	3,100*	
X	1.85	8,300	8,500	9,450*	
	2.05	8,150	8,350	9,300*	
	2.25	8,150*	8,350	9,350*	

	Stick	Offset two-piece boom 5.00 m	without outriggers (Asymmetric Rail)	without outriggers (Symmetric Rail)	Rear + front outriggers
	m	mm	mm	mm	mm
V	1.85	6,750	6,950	7,350	
	2.05	6,350	6,550	7,500*	
	2.25	6,650*	6,150	7,150*	
W	1.85	3,150	3,150	3,150	
	2.05	3,150	3,150	3,150*	
	2.25	3,150*	3,150	3,150*	
X	1.85	8,300	8,500	8,900	
	2.05	8,150	8,350	9,300*	
	2.25	8,800*	8,350	9,300*	

Dimensions are with equipment over steering axle

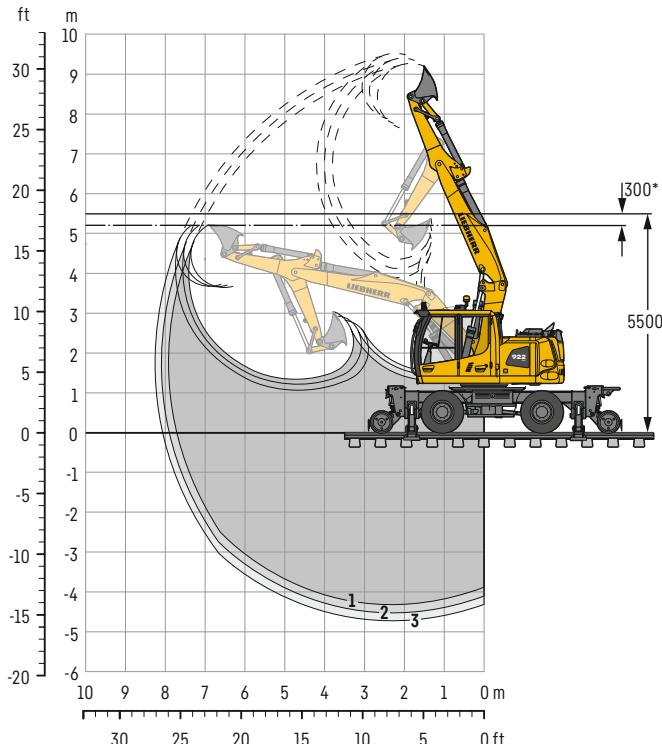
* Equipment over digging axle for shorter transport dimensions



Boom	Stick	G	R	E	E1
	m	mm	mm	mm	mm
Two-piece boom 5.05 m	1.85	7,380	2,560	2,000	739
Two-piece boom 5.05 m	2.05	7,380	2,560	2,000	739
Two-piece boom 5.05 m	2.25	7,380	2,570	2,000	739

Ditch cleaning bucket

with two-piece boom 5.05 m



* Safety distance to overhead wires

Ditch cleaning buckets Machine stability per ISO 10567* (75% of tipping capacity)

Cutting width mm	Capacity ISO 7451 ¹⁾ m ³	Weight kg	without outriggers			Rear + front outriggers			Narrow gauge 1,000 mm		
			on rail			on tyres			on tyres		
			Stick length (m)	Stick length (m)	Stick length (m)	Stick length (m)	Stick length (m)	Stick length (m)	Stick length (m)	Stick length (m)	Stick length (m)
1,600 ¹⁾	0.50	330	■	■	■	■	■	■	■	■	■
1,800 ¹⁾	0.57	360	■	■	■	■	■	■	■	■	■
2,000 ¹⁾	0.65	390	■	■	■	■	■	■	■	■	■
1,600 ²⁾	0.80	766	△	△	-	■	■	■	△	△	△
2,000 ²⁾	0.70	811	△	△	△	■	■	■	■	■	■

* Indicated loads are based on ISO 10567 and do not exceed 75% of tipping or 87% of hydraulic capacity, max. stick length without quick coupler, lifted 360° on firm with blocked oscillating axle

¹⁾ comparable with SAE (heaped)

²⁾ with 2 x 50° rotator

Max. material weight ■ = ≤ 1.8 t/m³, ■ = ≤ 1.5 t/m³, △ = ≤ 1.2 t/m³, - = not authorised

Digging envelope

	1	2	3	
Stick length	m	1.85	2.05	2.25
Max. digging depth	m	4.35	4.55	4.75
Max. reach at ground level	m	7.70	7.90	8.05
Max. dumping height	m	7.65	7.75	7.85
Max. dumping height under overhead wires	m	3.64	3.66	3.67
Max. teeth height	m	9.25	9.40	9.50
Min. equipment radius	m	2.56	2.56	2.57

Digging forces

	1	2	3	
Max. digging force (ISO 6015)	kN	110.6	102.2	95.2
Max. breakout force (ISO 6015)	t	11.3	10.4	9.7

Max. breakout force with ripper bucket

134.6 kN (13.7 t)

Operating weight

The operating weight includes the basic machine with 8 tyres plus intermediate rings, two-piece boom 5.05 m, stick 2.25 m and ditch cleaning bucket 2,000 mm / 0.65 m³.

Undercarriage versions	Weight (kg)
A 922 Rail Litronic without outriggers (Asymmetric Rail)	20,400
A 922 Rail Litronic without outriggers (Symmetric Rail)	20,400
A 922 Rail Litronic with rear + front outriggers	22,100

Lift capacities

with two-piece boom 5.05 m (without outriggers)

Stick 1.85 m

		3.0 m	4.5 m	6.0 m	Stick 1.85 m	m
m	Undercarriage	on rail	on rail	on rail	on rail	m
7.5	on rail	6.9	8.5*		4.3	5.9*
	on tyres	8.5*	8.5*		5.8	5.9*
6.0	on rail	6.9	7.6*	3.8	6.9*	2.5
	on tyres	7.6*	7.6*	5.0	6.9*	3.4
4.5	on rail	6.7	10.3*	3.8	7.4*	2.3
	on tyres	9.0	10.3*	5.0	7.4*	3.1
3.0	on rail	6.4	10.2*	3.8	8.4*	2.3
	on tyres	8.7	10.2*	5.0	7.3	3.1
1.5	on rail	6.4	12.4*	3.6	8.9*	2.2
	on tyres	8.7	12.4*	4.9	7.3	3.0
0	on rail	5.9	14.0*	3.4	9.0*	2.1
	on tyres	8.3	13.9	4.6	7.3	2.9
-1.5	on rail	5.7	14.4*	3.2	9.2*	2.0
	on tyres	8.1	14.4	4.4	7.0	2.8
-3.0	on rail	5.5	11.9*	3.1	5.7*	
	on tyres	7.9	11.9*	4.3	5.7*	4.2

Stick 2.05 m

		3.0 m	4.5 m	6.0 m	Stick 2.05 m	m
m	Undercarriage	on rail	on rail	on rail	on rail	m
7.5	on rail				3.9	4.8*
	on tyres				4.8*	4.8*
6.0	on rail				2.4	3.9*
	on tyres				3.2	3.9*
4.5	on rail	6.7	9.9*	3.8	7.3*	2.3
	on tyres	9.0	9.9*	5.1	7.3*	3.2
3.0	on rail	6.4	10.6*	3.8	8.3*	2.3
	on tyres	8.7	10.6*	5.0	7.3	3.1
1.5	on rail	6.4	12.4*	3.7	8.9*	2.3
	on tyres	8.7	12.4*	4.9	7.3	3.1
0	on rail	5.9	14.0*	3.4	9.0*	2.1
	on tyres	8.3	13.9	4.7	7.4	2.9
-1.5	on rail	5.7	14.3*	3.2	9.2*	2.0
	on tyres	8.1	14.3	4.4	7.1	2.8
-3.0	on rail	5.6	12.8*	3.1	6.6*	
	on tyres	7.9	12.8*	4.3	6.6*	3.7

Stick 2.25 m

		3.0 m	4.5 m	6.0 m	Stick 2.25 m	m
m	Undercarriage	on rail	on rail	on rail	on rail	m
7.5	on rail		3.7	4.8*	3.5	4.1*
	on tyres		4.8*	4.8*	4.1*	4.1*
6.0	on rail		3.9	6.4*	2.3	3.4*
	on tyres		5.1	6.4*	3.1	3.4*
4.5	on rail	6.7	8.6*	3.8	7.0*	2.4
	on tyres	8.6*	8.6*	5.1	7.0*	3.2
3.0	on rail	6.4	10.9*	3.7	8.1*	2.4
	on tyres	8.7	10.9*	5.0	7.3	3.2
1.5	on rail	6.3	12.4*	3.7	8.8*	2.3
	on tyres	8.6	12.4*	4.9	7.3	3.1
0	on rail	6.0	13.8*	3.4	8.9*	2.1
	on tyres	8.4	13.8	4.7	7.4	2.1
-1.5	on rail	5.7	14.2*	3.2	9.2*	2.0
	on tyres	8.1	14.1	4.4	7.1	2.8
-3.0	on rail	5.5	13.5*	3.0	7.4*	
	on tyres	7.9	13.5*	4.2	6.9	3.3



Height



Can be slewed through 360°



In longitudinal position of undercarriage



Max. reach

* Limited by hydr. capacity

The lift capacities are stated in metric tonnes (t) with PowerLift of 375 bar at the stick end without attachment. This applies to a firm flat substrate with a closed steering axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (±15°) are specified over the steering axle with the stabilizers raised. The values apply when the adjusting cylinder is in the optimal position. Indicated loads based on the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity, or are limited by the permissible load of the load hook.

In accordance with the harmonised European Standard EN 474-5, hydraulic excavators used for lifting operations must be equipped with pipe fracture safety valves, an overload warning device, a load hook and a lift capacity chart.

Please note that the stability will be reduced by approx. 20% in case of a 100 mm cant and 40% in case of a 200 mm cant.

Lift capacities

with two-piece boom 5.05 m (without outriggers, heavy counterweight)

Stick 1.85 m

		3.0 m	4.5 m	6.0 m		m
Undercarriage						m
7.5	on rail	7.3	8.5*		4.6	5.9*
	on tyres	8.5*	8.5*		5.9*	5.9*
6.0	on rail	7.4	7.6*	4.0	6.9*	2.7
	on tyres	7.6*	7.6*	5.3	6.9*	3.6
4.5	on rail	7.1	10.3*	4.1	7.4*	2.5
	on tyres	9.5	10.3*	5.3	7.4*	3.3
3.0	on rail	6.9	10.2*	4.0	8.4*	2.5
	on tyres	9.2	10.2*	5.3	7.7	3.3
1.5	on rail	6.8	12.4*	3.9	8.9*	2.4
	on tyres	9.1	12.4*	5.2	7.6	3.2
0	on rail	6.3	14.0*	3.7	9.0*	2.3
	on tyres	8.8	14.0*	5.0	7.8	3.1
-1.5	on rail	6.1	14.4*	3.4	9.2*	2.2
	on tyres	8.6	14.4*	4.7	7.5	3.0
-3.0	on rail	6.0	11.9*	3.3	5.7*	
	on tyres	8.5	11.9*	4.6	5.7*	4.5

Stick 2.05 m

		3.0 m	4.5 m	6.0 m		m
Undercarriage						m
7.5	on rail					4.0
	on tyres					4.0
6.0	on rail	7.4	7.6*	4.0	6.9*	2.7
	on tyres	7.6*	7.6*	5.3	6.9*	3.6
4.5	on rail	7.1	10.3*	4.1	7.4*	2.5
	on tyres	9.5	10.3*	5.3	7.4*	3.3
3.0	on rail	6.9	10.2*	4.0	8.4*	2.5
	on tyres	9.2	10.2*	5.3	7.7	3.3
1.5	on rail	6.8	12.4*	3.9	8.9*	2.4
	on tyres	9.1	12.4*	5.2	7.6	3.2
0	on rail	6.3	14.0*	3.7	9.0*	2.3
	on tyres	8.8	14.0*	5.0	7.8	3.1
-1.5	on rail	6.1	14.4*	3.4	9.2*	2.2
	on tyres	8.6	14.4*	4.7	7.5	3.0
-3.0	on rail	6.0	11.9*	3.3	5.7*	
	on tyres	8.5	11.9*	4.6	5.7*	4.5

Stick 2.25 m

		3.0 m	4.5 m	6.0 m		m
Undercarriage						m
7.5	on rail					4.6
	on tyres					4.6
6.0	on rail					6.0
	on tyres					6.0
4.5	on rail	7.2	8.6*	4.1	7.0*	2.6
	on tyres	8.6*	8.6*	5.3	7.0*	3.4
3.0	on rail	6.9	10.9*	4.0	8.1*	2.6
	on tyres	9.2	10.9*	5.3	7.7	3.4
1.5	on rail	6.8	12.4*	4.0	8.8*	2.5
	on tyres	9.1	12.4*	5.2	7.6	3.3
0	on rail	6.4	13.8*	3.7	8.9*	2.3
	on tyres	8.9	13.8*	5.0	7.7	3.2
-1.5	on rail	6.1	14.2*	3.5	9.2*	2.2
	on tyres	8.6	14.2*	4.8	7.5	3.0
-3.0	on rail	6.0	13.5*	3.3	7.4*	
	on tyres	8.5	13.5*	4.6	7.3	3.6

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

The lift capacities are stated in metric tonnes (t) with PowerLift of 375 bar at the stick end without attachment. This applies to a firm flat substrate with a closed steering axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (±15°) are specified over the steering axle with the stabilizers raised. The values apply when the adjusting cylinder is in the optimal position. Indicated loads based on the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity, or are limited by the permissible load of the load hook.

In accordance with the harmonised European Standard EN 474-5, hydraulic excavators used for lifting operations must be equipped with pipe fracture safety valves, an overload warning device, a load hook and a lift capacity chart.

Please note that the stability will be reduced by approx. 20% in case of a 100 mm cant and 40% in case of a 200 mm cant.

Lift capacities

with two-piece boom 5.05 m (rear + front outriggers)

Stick 1.85 m

		3.0 m	4.5 m	6.0 m	
m	Undercarriage				m
7.5	on rail	7.3	8.5*		
	on tyres	8.5*	8.5*		
	rear + front outriggers down	8.5*	8.5*		
6.0	on rail	7.3	7.6*	4.0	
	on tyres	7.6*	7.6*	5.4	
	rear + front outriggers down	7.6*	7.6*	6.7	
4.5	on rail	7.1	10.3*	4.1	
	on tyres	9.6	10.3*	5.4	
	rear + front outriggers down	10.3*	10.3*	6.6	
3.0	on rail	6.9	10.2*	4.0	
	on tyres	9.3	10.2*	5.3	
	rear + front outriggers down	10.2*	10.2*	6.5	
1.5	on rail	6.8	12.4*	3.9	
	on tyres	9.2	12.4*	5.3	
	rear + front outriggers down	11.7	12.4*	6.6	
0	on rail	6.3	14.0*	3.7	
	on tyres	8.9	14.0*	5.0	
	rear + front outriggers down	11.9	14.0*	6.4	
-1.5	on rail	6.1	14.4*	3.4	
	on tyres	8.7	14.4*	4.8	
	rear + front outriggers down	11.7	14.4*	6.1	
-3.0	on rail	6.0	11.9*	3.3	
	on tyres	8.6	11.9*	4.7	
	rear + front outriggers down	11.6	11.9*	5.7	

Stick 2.05 m

		3.0 m	4.5 m	6.0 m	
m	Undercarriage				m
7.5	on rail				
	on tyres				
	rear + front outriggers down				
6.0	on rail				
	on tyres				
	rear + front outriggers down				
4.5	on rail				
	on tyres				
	rear + front outriggers down				
3.0	on rail				
	on tyres				
	rear + front outriggers down				
1.5	on rail				
	on tyres				
	rear + front outriggers down				
0	on rail				
	on tyres				
	rear + front outriggers down				
-1.5	on rail				
	on tyres				
	rear + front outriggers down				
-3.0	on rail				
	on tyres				
	rear + front outriggers down				

Stick 2.25 m

		3.0 m	4.5 m	6.0 m	
m	Undercarriage				m
7.5	on rail				
	on tyres				
	rear + front outriggers down				
6.0	on rail				
	on tyres				
	rear + front outriggers down				
4.5	on rail				
	on tyres				
	rear + front outriggers down				
3.0	on rail				
	on tyres				
	rear + front outriggers down				
1.5	on rail				
	on tyres				
	rear + front outriggers down				
0	on rail				
	on tyres				
	rear + front outriggers down				
-1.5	on rail				
	on tyres				
	rear + front outriggers down				
-3.0	on rail				
	on tyres				
	rear + front outriggers down				

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

The lift capacities are stated in metric tonnes (t) with PowerLift of 375 bar at the stick end without attachment. This applies to a firm flat substrate with a closed steering axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (±15°) are specified over the steering axle with the stabilizers raised and over the rigid axle with the stabilizers down. The values apply when the adjusting cylinder is in the optimal position. Indicated loads based on the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity, or are limited by the permissible load of the load hook.

In accordance with the harmonised European Standard EN 474-5, hydraulic excavators used for lifting operations must be equipped with pipe fracture safety valves, an overload warning device, a load hook and a lift capacity chart.

Please note that the stability will be reduced by approx. 20% in case of a 100 mm cant and 40% in case of a 200 mm cant.

Lift capacities

with two-piece boom 5.05 m (rear + front outriggers, heavy counterweight)

Stick 1.85 m

		3.0 m	4.5 m	6.0 m	 m
m	Undercarriage				
7.5	on rail	7.8	8.5*		
	on tyres	8.5*	8.5*		
	rear + front outriggers down	8.5*	8.5*		
6.0	on rail	7.6*	7.6*	4.3 6.9*	
	on tyres	7.6*	7.6*	5.7 6.9*	
	rear + front outriggers down	7.6*	7.6*	6.9* 6.9*	
4.5	on rail	7.5	10.3*	4.4 7.4*	
	on tyres	10.0	10.3*	5.7 7.4*	
	rear + front outriggers down	10.3*	10.3*	7.0 6.1*	
3.0	on rail	7.3	10.2*	4.3 8.4*	
	on tyres	9.7	10.2*	5.6 8.1	
	rear + front outriggers down	10.2*	10.2*	6.9 8.4*	
1.5	on rail	7.3	12.4*	4.2 8.9*	
	on tyres	9.7	12.4*	5.6 8.1	
	rear + front outriggers down	12.3	12.4*	6.9 8.9*	
0	on rail	6.8	14.0*	4.0 9.0*	
	on tyres	9.5	14.0*	5.3 8.3	
	rear + front outriggers down	12.5	14.0*	6.8 9.0*	
-1.5	on rail	6.6	14.4*	3.7 9.2*	
	on tyres	9.3	14.4*	5.1 8.0	
	rear + front outriggers down	12.4	14.4*	6.5 9.2*	
-3.0	on rail	6.4	11.9*	3.6 5.7*	
	on tyres	9.1	11.9*	5.0 5.7*	
	rear + front outriggers down	11.9*	11.9*	5.7* 5.7*	

Stick 2.05 m

		3.0 m	4.5 m	6.0 m	 m
m	Undercarriage				
7.5	on rail				
	on tyres				
	rear + front outriggers down				
6.0	on rail				
	on tyres				
	rear + front outriggers down				
4.5	on rail	7.6	9.9*	4.4 7.3*	
	on tyres	9.9*	9.9*	5.7 7.3*	
	rear + front outriggers down	9.9*	9.9*	7.0 7.3*	
3.0	on rail	7.3	10.6*	4.3 8.3*	
	on tyres	9.8	10.6*	5.6 8.1	
	rear + front outriggers down	10.6*	10.6*	6.9 8.3*	
1.5	on rail	7.3	12.4*	4.2 8.9*	
	on tyres	9.7	12.4*	5.6 8.1	
	rear + front outriggers down	12.3	12.4*	6.8 8.9*	
0	on rail	6.8	14.0*	4.0 9.0*	
	on tyres	9.6	14.0*	5.4 8.2	
	rear + front outriggers down	12.4	14.0*	6.8 9.0*	
-1.5	on rail	6.6	14.3*	3.7 9.2*	
	on tyres	9.3	14.3*	5.1 8.1	
	rear + front outriggers down	12.4	14.3*	6.5 9.2*	
-3.0	on rail	6.4	12.8*	3.6 6.6*	
	on tyres	9.1	12.8*	5.0 6.6*	
	rear + front outriggers down	12.2	12.8*	6.4 6.6*	

Stick 2.25 m

		3.0 m	4.5 m	6.0 m	 m
m	Undercarriage				
7.5	on rail				
	on tyres	4.2	4.8*		
	rear + front outriggers down	4.8*	4.8*	4.1* 4.1*	
6.0	on rail				
	on tyres	5.8	6.4*	3.6 3.9*	
	rear + front outriggers down	6.4*	6.4*	3.9* 3.9*	
4.5	on rail	7.6	8.6*	4.4 7.0*	
	on tyres	8.6*	8.6*	5.7 7.0*	
	rear + front outriggers down	8.6*	8.6*	7.0 7.0*	
3.0	on rail	7.3	10.9*	4.3 8.1*	
	on tyres	9.8	10.9*	5.6 8.1*	
	rear + front outriggers down	10.9*	10.9*	6.8 8.1*	
1.5	on rail	7.2	12.4*	4.2 8.8*	
	on tyres	9.7	12.4*	5.6 8.1	
	rear + front outriggers down	12.2	12.4*	6.8 8.8*	
0	on rail	6.8	13.8*	4.0 8.9*	
	on tyres	9.6	13.8*	5.4 8.1	
	rear + front outriggers down	12.4	13.8*	6.8 8.9*	
-1.5	on rail	6.6	14.2*	3.8 9.2*	
	on tyres	9.3	14.2*	5.1 8.1	
	rear + front outriggers down	12.4	14.2*	6.6 9.2*	
-3.0	on rail	6.4	13.5*	3.6 7.4*	
	on tyres	9.1	13.5*	4.9 7.4*	
	rear + front outriggers down	12.2	13.5*	6.4 7.4*	

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

The lift capacities are stated in metric tonnes (t) with PowerLift of 375 bar at the stick end without attachment. This applies to a firm flat substrate with a closed steering axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (±15°) are specified over the steering axle with the stabilizers raised and over the rigid axle with the stabilizers down. The values apply when the adjusting cylinder is in the optimal position. Indicated loads based on the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity, or are limited by the permissible load of the load hook.

In accordance with the harmonised European Standard EN 474-5, hydraulic excavators used for lifting operations must be equipped with pipe fracture safety valves, an overload warning device, a load hook and a lift capacity chart.

Please note that the stability will be reduced by approx. 20% in case of a 100 mm cant and 40% in case of a 200 mm cant.

Lift capacities

with two-piece boom 5.05 m (heavy counterweight), narrow gauge 1,000 mm

Stick 1.85 m

		3.0 m	4.5 m	6.0 m	Stick 1.85 m	m
m	Undercarriage	 	 	 		m
7.5	on rail	5.4	8.4*		3.1	5.6*
	on tyres	8.5*	8.5*		5.9*	5.9*
6.0	on rail	5.4	7.6*	3.0	6.9*	1.9
	on tyres	7.6*	7.6*	5.3	6.9*	4.4*
4.5	on rail	5.1	10.1*	3.0	7.5*	1.8
	on tyres	9.5	10.3*	5.3	7.4*	5.6
3.0	on rail	4.9	10.3*	3.0	8.4	1.3
	on tyres	9.2	10.2*	5.3	7.7	3.8*
1.5	on rail	4.9	12.6*	2.8	8.4	1.7
	on tyres	9.1	12.4*	5.2	7.6	5.5
0	on rail	4.4	14.1*	2.6	8.5	1.6
	on tyres	8.8	14.0*	5.0	7.8	5.4
-1.5	on rail	4.3	14.4*	2.4	8.3	1.5
	on tyres	8.6	14.4*	4.7	7.5	4.9*
-3.0	on rail	4.2	11.0*			2.6
	on tyres	8.5	11.9*	4.6	5.7*	6.1*

Stick 2.05 m

		3.0 m	4.5 m	6.0 m	Stick 2.05 m	m
m	Undercarriage	 	 	 		m
7.5	on rail				2.9	4.7*
	on tyres				4.8*	4.8*
6.0	on rail	5.4	6.9*		3.1	6.7*
	on tyres	5.4	6.7*		5.4	6.7*
4.5	on rail	5.2	10.2*	3.0	7.3*	1.8
	on tyres	9.5	9.9*	5.3	7.3*	5.1
3.0	on rail	5.0	10.8*	3.0	8.4*	1.8
	on tyres	9.2	10.6*	5.3	7.7	5.7
1.5	on rail	4.9	12.6*	2.9	8.4	1.7
	on tyres	9.1	12.4*	5.2	7.6	5.6
0	on rail	4.5	14.1*	2.7	8.5	1.6
	on tyres	8.9	14.0*	5.0	7.8	4.8
-1.5	on rail	4.3	14.4*	2.4	8.4	1.5
	on tyres	8.6	14.3*	4.7	7.5	5.3
-3.0	on rail	4.1	12.1*	2.3	6.0*	2.2
	on tyres	8.5	12.8*	4.6	6.6*	5.0*

Stick 2.25 m

		3.0 m	4.5 m	6.0 m	Stick 2.25 m	m
m	Undercarriage	 	 	 		m
7.5	on rail		2.9	5.6*	2.6	4.0*
	on tyres		4.8*	4.8*	4.1*	4.1*
6.0	on rail		3.1	6.5*	1.8	4.7*
	on tyres		5.4	6.4*	3.3	3.9*
4.5	on rail	5.2	9.8*	3.0	7.1*	1.9
	on tyres	8.6*	8.6*	5.3	7.0*	5.1
3.0	on rail	4.9	11.1*	3.0	8.2*	1.9
	on tyres	9.2	10.9*	5.3	7.7	5.6
1.5	on rail	4.9	12.5*	2.9	8.3	1.8
	on tyres	9.1	12.4*	5.2	7.6	5.7
0	on rail	4.5	13.9*	2.7	8.4	1.6
	on tyres	8.9	13.8*	5.0	7.7	5.1
-1.5	on rail	4.3	14.3*	2.5	8.4	1.5
	on tyres	8.6	14.2*	4.8	7.5	4.0
-3.0	on rail	4.1	13.0*	2.3	6.8*	1.9
	on tyres	8.5	13.5*	4.6	7.3	4.5*

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

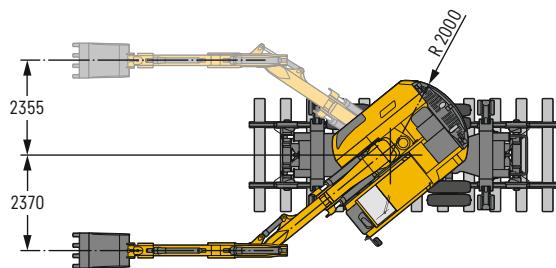
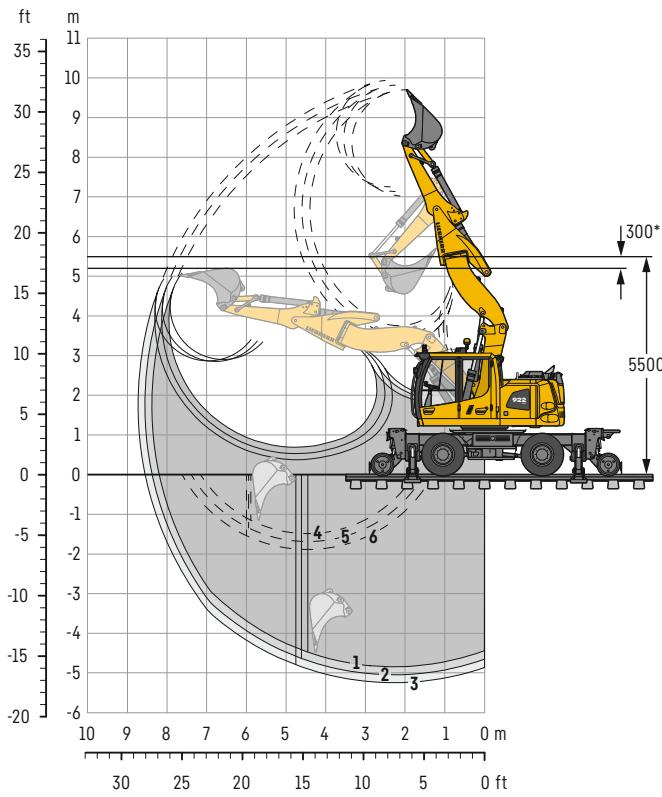
The lift capacities are stated in metric tonnes (t) with PowerLift of 375 bar at the stick end without attachment. This applies to a firm flat substrate with a closed steering axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (±15°) are specified over the steering axle with the stabilizers raised. The values apply when the adjusting cylinder is in the optimal position. Indicated loads based on the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity, or are limited by the permissible load of the load hook.

In accordance with the harmonised European Standard EN 474-5, hydraulic excavators used for lifting operations must be equipped with pipe fracture safety valves, an overload warning device, a load hook and a lift capacity chart.

Please note that the stability will be reduced by approx. 20% in case of a 100 mm cant and 40% in case of a 200 mm cant.

Backhoe bucket

with offset two-piece boom 5.00 m



* Safety distance to overhead wires

Buckets Machine stability per ISO 10567* (75 % of tipping capacity)

Cutting width mm	Capacity ISO 7451 ¹⁾ m ³	Weight kg	without outriggers						Rear + front outriggers on tyres						down		
			on rail			on tyres			on rail			Stick length (m)			Stick length (m)		
			1.85	2.05	2.25	1.85	2.05	2.25	1.85	2.05	2.25	1.85	2.05	2.25	1.85	2.05	2.25
400	0.24	310	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
650	0.45	348	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
850	0.60	401	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1 050	0.80	480	△	△	-	■	■	■	■	■	■	■	■	■	■	■	■
1 250	0.95	525	-	-	-	■	■	■	■	■	■	■	■	■	■	■	■

* Indicated loads are based on ISO 10567 and do not exceed 75 % of tipping capacity or 87 % of hydraulic capacity, max. stick length without quick coupler, lifted 360° on firm with blocked oscillating axle
1) comparable with SAE (heaped)

Max. material weight ■ = ≤ 1.8 t/m³, ■ = ≤ 1.5 t/m³, △ = ≤ 1.2 t/m³, - = not authorised

Digging envelope

	1	2	3	
Stick length	m	1.85	2.05	2.25
Max. digging depth	m	4.85	5.05	5.25
Max. reach at ground level	m	8.20	8.40	8.55
Max. dumping height	m	7.05	7.15	7.25
Max. dumping height under overhead wires	m	2.85	2.85	2.85
Max. teeth height	m	9.70	9.80	9.95
Min. equipment radius	m	2.58	2.57	2.56

1 with stick 1.85 m

2 with stick 2.05 m

3 with stick 2.25 m

with set straight boom

4 with stick 1.85 m

5 with stick 2.05 m

6 with stick 2.25 m

at max. equipment offset with vertical ditch walls

Digging forces

	1	2	3	
Max. digging force (ISO 6015)	kN	110.6	102.2	95.2
	t	11.3	10.4	9.7
Max. breakout force (ISO 6015)	kN	101.3	101.3	101.3
	t	10.3	10.3	10.3

Max. breakout force with ripper bucket

134.6 kN (13.7 t)

Operating weight

The operating weight includes the basic machine with 8 tyres plus intermediate rings, offset two-piece boom 5.00 m, stick 2.25 m and bucket 850 mm / 0.60 m³.

Undercarriage versions	Weight (kg)
A 922 Rail Litronic without outriggers (Asymmetric Rail)	21,100
A 922 Rail Litronic without outriggers (Symmetric Rail)	21,100
A 922 Rail Litronic with rear + front outriggers	22,800

Lift capacities

with offset two-piece boom 5.00 m (without outriggers)

Stick 1.85 m

		3.0 m	4.5 m	6.0 m	Stick 1.85 m	m
m	Undercarriage	on rail	on rail	on rail	on rail	m
7.5	on rail	6.9	8.3*		4.3	5.4*
	on tyres	8.3*	8.3*		5.4*	5.4*
6.0	on rail	6.9	7.8*	3.7	4.1*	5.6
	on tyres	7.8*	7.8*	5.0	4.1*	
4.5	on rail	6.6	9.9*	3.7	5.9*	6.5
	on tyres	8.9	9.9*	5.0	7.1*	
3.0	on rail	6.3	9.9*	3.7	8.0*	6.9
	on tyres	8.5	9.9*	4.9	7.2	
1.5	on rail	6.2	12.1*	3.5	8.5*	7.0
	on tyres	8.5	12.1*	4.8	7.1	
0	on rail	5.7	13.6*	3.3	8.6*	6.8
	on tyres	8.1	13.5	4.5	7.3	
-1.5	on rail	5.4	14.0*	3.0	8.9*	6.2
	on tyres	7.8	14.0*	4.2	6.9	
-3.0	on rail	5.3	11.5*	2.8	5.3*	4.5
	on tyres	7.6	11.5*	4.0	5.3*	

Stick 2.05 m

		3.0 m	4.5 m	6.0 m	Stick 2.05 m	m
m	Undercarriage	on rail	on rail	on rail	on rail	m
7.5	on rail				3.9	4.5*
	on tyres				4.5*	4.5*
6.0	on rail	6.9	7.8*	3.7	6.4*	5.6
	on tyres	7.8*	7.8*	5.0	6.4*	
4.5	on rail	6.6	9.9*	3.7	7.1*	6.5
	on tyres	8.9	9.9*	5.0	7.1*	
3.0	on rail	6.3	9.9*	3.7	8.0*	6.9
	on tyres	8.5	9.9*	4.9	7.2	
1.5	on rail	6.2	12.1*	3.5	8.5*	7.0
	on tyres	8.5	12.1*	4.8	7.1	
0	on rail	5.7	13.6*	3.3	8.6*	6.8
	on tyres	8.1	13.5	4.5	7.3	
-1.5	on rail	5.4	14.0*	3.0	8.9*	6.2
	on tyres	7.8	14.0*	4.2	6.9	
-3.0	on rail	5.3	11.5*	2.8	5.3*	4.5
	on tyres	7.6	11.5*	4.0	5.3*	

Stick 2.25 m

		3.0 m	4.5 m	6.0 m	Stick 2.25 m	m
m	Undercarriage	on rail	on rail	on rail	on rail	m
7.5	on rail				3.5	3.8*
	on tyres				3.8*	3.8*
6.0	on rail				2.1	3.1*
	on tyres				3.0	3.1*
4.5	on rail	6.7	8.9*	3.8	6.8*	6.8
	on tyres	8.9*	8.9*	5.0	6.8*	
3.0	on rail	6.3	10.7*	3.7	7.7*	7.3
	on tyres	8.6	10.7*	4.9	7.2	
1.5	on rail	6.2	12.1*	3.6	8.4*	7.4
	on tyres	8.4	12.1*	4.9	7.1	
0	on rail	5.8	13.4*	3.3	8.6*	7.2
	on tyres	8.2	13.3	4.6	7.3	
-1.5	on rail	5.4	13.8*	3.0	8.9*	6.6
	on tyres	7.9	13.8	4.3	6.9	
-3.0	on rail	5.2	13.1*	2.8	7.0*	5.0
	on tyres	7.6	13.1*	4.0	6.7	

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

The lift capacities are stated in metric tonnes (t) with PowerLift of 375 bar at the stick end without attachment. This applies to a firm flat substrate with a closed steering axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (±15°) are specified over the steering axle with the stabilizers raised. The values apply when the adjusting cylinder is in the optimal position. Indicated loads based on the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity, or are limited by the permissible load of the load hook.

In accordance with the harmonised European Standard EN 474-5, hydraulic excavators used for lifting operations must be equipped with pipe fracture safety valves, an overload warning device, a load hook and a lift capacity chart.

Please note that the stability will be reduced by approx. 20% in case of a 100 mm cant and 40% in case of a 200 mm cant.

Lift capacities

with offset two-piece boom 5.00 m (without outriggers, heavy counterweight)

Stick 1.85 m

		3.0 m	4.5 m	6.0 m	Stick 1.85 m	m
m	Undercarriage	 	 	 		m
7.5	on rail	7.3	8.3*		4.6	5.4*
	on tyres	8.3*	8.3*		5.4*	5.4*
6.0	on rail	7.4	7.8*	4.0	6.6*	2.6
	on tyres	7.8*	7.8*	5.3	6.6*	3.5
4.5	on rail	7.0	9.9*	4.0	7.1*	2.3
	on tyres	9.3	9.9*	5.3	7.1*	3.2
3.0	on rail	6.7	9.9*	4.0	8.0*	2.3
	on tyres	9.0	9.9*	5.2	7.5	3.2
1.5	on rail	6.7	12.1*	3.8	8.5*	2.2
	on tyres	8.9	12.1*	5.1	7.5	3.1
0	on rail	6.1	13.6*	3.6	8.6*	2.1
	on tyres	8.7	13.6*	4.8	7.7	2.9
-1.5	on rail	5.9	14.0*	3.2	8.9*	2.0
	on tyres	8.4	14.0*	4.5	7.3	2.8
-3.0	on rail	5.7	11.5*	3.1	5.3*	2.3
	on tyres	8.2	11.5*	4.4	5.3*	3.0

Stick 2.05 m

		3.0 m	4.5 m	6.0 m	Stick 2.05 m	m
m	Undercarriage	 	 	 		m
7.5	on rail				4.2	4.5*
	on tyres				4.5*	4.5*
6.0	on rail				2.5	3.6*
	on tyres				3.4	3.6*
4.5	on rail				1.9	3.2*
	on tyres				2.6	3.2*
3.0	on rail				6.8	10.4*
	on tyres				9.0	10.4*
1.5	on rail				6.7	12.1*
	on tyres				8.9	12.1*
0	on rail				6.2	13.5*
	on tyres				8.7	13.5*
-1.5	on rail				5.9	13.9*
	on tyres				8.4	13.9*
-3.0	on rail				5.7	12.4*
	on tyres				8.2	12.4*

Stick 2.25 m

		3.0 m	4.5 m	6.0 m	Stick 2.25 m	m
m	Undercarriage	 	 	 		m
7.5	on rail				3.8	3.8*
	on tyres				4.0*	4.0*
6.0	on rail				4.1	6.2*
	on tyres				5.4	6.2*
4.5	on rail				7.1	8.9*
	on tyres				8.9*	8.9*
3.0	on rail				6.8	10.7*
	on tyres				9.0	10.7*
1.5	on rail				7.4	12.1*
	on tyres				8.9	12.1*
0	on rail				7.2	13.4*
	on tyres				8.8	13.4*
-1.5	on rail				6.6	13.8*
	on tyres				8.4	13.8*
-3.0	on rail				5.0	13.1*
	on tyres				8.2	13.1*

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

The lift capacities are stated in metric tonnes (t) with PowerLift of 375 bar at the stick end without attachment. This applies to a firm flat substrate with a closed steering axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (±15°) are specified over the steering axle with the stabilizers raised. The values apply when the adjusting cylinder is in the optimal position. Indicated loads based on the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity, or are limited by the permissible load of the load hook.

In accordance with the harmonised European Standard EN 474-5, hydraulic excavators used for lifting operations must be equipped with pipe fracture safety valves, an overload warning device, a load hook and a lift capacity chart.

Please note that the stability will be reduced by approx. 20% in case of a 100 mm cant and 40% in case of a 200 mm cant.

Lift capacities

with offset two-piece boom 5.00 m (rear + front outriggers)

Stick 1.85 m

		3.0 m	4.5 m	6.0 m		m	
m	Undercarriage						m
7.5	on rail	7.3	8.3*		4.6	5.4*	
	on tyres	8.3*	8.3*		5.4*	5.4*	
	rear + front outriggers down	8.3*	8.3*		5.4*	5.4*	
6.0	on rail	7.4	7.8*	3.9	6.6*	2.6	
	on tyres	7.8*	7.8*	5.3	6.6*	3.6	
	rear + front outriggers down	7.8*	7.8*	6.6*	6.6*	4.1*	
4.5	on rail	7.0	9.9*	4.0	7.1*	2.3	
	on tyres	9.4	9.9*	5.3	7.1*	3.2	
	rear + front outriggers down	9.9*	9.9*	6.5	7.1*	4.1	
3.0	on rail	6.7	9.9*	3.9	8.0*	2.3	
	on tyres	9.1	9.9*	5.2	7.6	3.0	
	rear + front outriggers down	9.9*	9.9*	6.4	8.0*	4.1	
1.5	on rail	6.7	12.1*	3.8	8.5*	2.2	
	on tyres	9.0	12.1*	5.2	7.6	3.1	
	rear + front outriggers down	11.4	12.1*	6.4	8.5*	4.0	
0	on rail	6.1	13.6*	3.5	8.6*	2.1	
	on tyres	8.8	13.6*	4.9	7.8	3.0	
	rear + front outriggers down	11.7	13.6*	6.3	8.6*	3.9	
-1.5	on rail	5.9	14.0*	3.2	8.9*	2.0	
	on tyres	8.5	14.0*	4.6	7.4	2.9	
	rear + front outriggers down	11.5	14.0*	6.0	8.9*	3.7	
-3.0	on rail	5.7	11.5*	3.1	5.3*		
	on tyres	8.3	11.5*	4.4	5.3*		
	rear + front outriggers down	11.3	11.5*	5.3*	5.3*		

Stick 2.05 m

		3.0 m	4.5 m	6.0 m		m	
m	Undercarriage						m
7.5	on rail						
	on tyres						
	rear + front outriggers down						
6.0	on rail						
	on tyres						
	rear + front outriggers down						
4.5	on rail						
	on tyres						
	rear + front outriggers down						
3.0	on rail						
	on tyres						
	rear + front outriggers down						
1.5	on rail						
	on tyres						
	rear + front outriggers down						
0	on rail						
	on tyres						
	rear + front outriggers down						
-1.5	on rail						
	on tyres						
	rear + front outriggers down						
-3.0	on rail						
	on tyres						
	rear + front outriggers down						

Stick 2.25 m

		3.0 m	4.5 m	6.0 m		m	
m	Undercarriage						m
7.5	on rail						
	on tyres						
	rear + front outriggers down						
6.0	on rail						
	on tyres						
	rear + front outriggers down						
4.5	on rail						
	on tyres						
	rear + front outriggers down						
3.0	on rail						
	on tyres						
	rear + front outriggers down						
1.5	on rail						
	on tyres						
	rear + front outriggers down						
0	on rail						
	on tyres						
	rear + front outriggers down						
-1.5	on rail						
	on tyres						
	rear + front outriggers down						
-3.0	on rail						
	on tyres						
	rear + front outriggers down						

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

The lift capacities are stated in metric tonnes (t) with PowerLift of 375 bar at the stick end without attachment. This applies to a firm flat substrate with a closed steering axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (±15°) are specified over the steering axle with the stabilizers raised and over the rigid axle with the stabilizers down. The values apply when the adjusting cylinder is in the optimal position. Indicated loads based on the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity, or are limited by the permissible load of the load hook.

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Please note that the stability will be reduced by approx. 20% in case of a 100 mm cant and 40% in case of a 200 mm cant.

Lift capacities

with offset two-piece boom 5.00 m (rear + front outriggers, heavy counterweight)

Stick 1.85 m

		3.0 m	4.5 m	6.0 m		m	
m	Undercarriage						m
7.5	on rail	7.8	8.3*		4.9	5.4*	
	on tyres	8.3*	8.3*		5.4*	5.4*	
	rear + front outriggers down	8.3*	8.3*		5.4*	5.4*	
6.0	on rail	7.8*	7.8*	4.2	6.6*		
	on tyres	7.8*	7.8*	5.6	6.6*		
	rear + front outriggers down	7.8*	7.8*	6.6*	6.6*		
4.5	on rail	7.5	9.9*	4.3	7.1*	2.5	
	on tyres	9.9	9.9*	5.6	7.1*	3.4	
	rear + front outriggers down	9.9*	9.9*	6.8	7.1*	4.4	
3.0	on rail	7.2	9.9*	4.2	8.0*	2.5	
	on tyres	9.5	9.9*	5.5	7.9	3.4	
	rear + front outriggers down	9.9*	9.9*	6.7	8.0*	4.4	
1.5	on rail	7.1	12.1*	4.1	8.5*	2.4	
	on tyres	9.5	12.1*	5.5	7.9	3.3	
	rear + front outriggers down	11.9	12.1*	6.7	8.5*	4.3	
0	on rail	6.6	13.6*	3.8	8.6*	2.3	
	on tyres	9.3	13.6*	5.2	8.1	3.2	
	rear + front outriggers down	12.2	13.6*	6.7	8.6*	4.1	
-1.5	on rail	6.3	14.0*	3.5	8.9*	2.2	
	on tyres	9.1	14.0*	4.9	7.8	3.1	
	rear + front outriggers down	12.2	14.0*	6.3	8.9*	4.0	
-3.0	on rail	6.1	11.5*	3.4	5.3*		
	on tyres	8.8	11.5*	4.7	5.3*		
	rear + front outriggers down	11.5*	11.5*	5.3*	5.3*		

Stick 2.05 m

		3.0 m	4.5 m	6.0 m		m	
m	Undercarriage						m
7.5	on rail						
	on tyres						
	rear + front outriggers down						
6.0	on rail						
	on tyres						
	rear + front outriggers down						
4.5	on rail						
	on tyres						
	rear + front outriggers down						
3.0	on rail						
	on tyres						
	rear + front outriggers down						
1.5	on rail						
	on tyres						
	rear + front outriggers down						
0	on rail						
	on tyres						
	rear + front outriggers down						
-1.5	on rail						
	on tyres						
	rear + front outriggers down						
-3.0	on rail						
	on tyres						
	rear + front outriggers down						

Stick 2.25 m

		3.0 m	4.5 m	6.0 m		m	
m	Undercarriage						m
7.5	on rail						
	on tyres						
	rear + front outriggers down						
6.0	on rail						
	on tyres						
	rear + front outriggers down						
4.5	on rail						
	on tyres						
	rear + front outriggers down						
3.0	on rail						
	on tyres						
	rear + front outriggers down						
1.5	on rail						
	on tyres						
	rear + front outriggers down						
0	on rail						
	on tyres						
	rear + front outriggers down						
-1.5	on rail						
	on tyres						
	rear + front outriggers down						
-3.0	on rail						
	on tyres						
	rear + front outriggers down						

 Height  Can be slewed through 360°  Max. reach * Limited by hydr. capacity

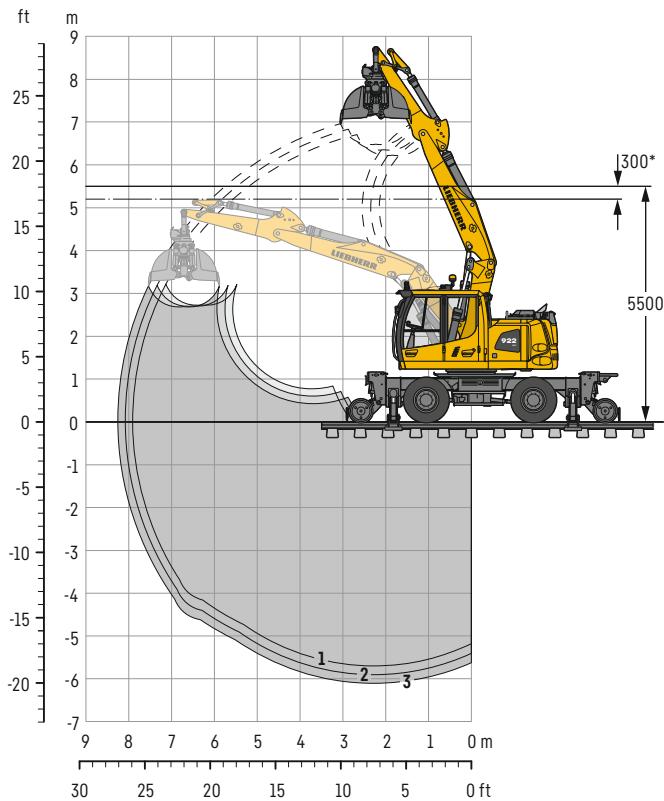
The lift capacities are stated in metric tonnes (t) with PowerLift of 375 bar at the stick end without attachment. This applies to a firm flat substrate with a closed steering axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (±15°) are specified over the steering axle with the stabilizers raised and over the rigid axle with the stabilizers down. The values apply when the adjusting cylinder is in the optimal position. Indicated loads based on the ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity, or are limited by the permissible load of the load hook.

In accordance with the harmonised European Standard EN 474-5, hydraulic excavators used for lifting operations must be equipped with pipe fracture safety valves, an overload warning device, a load hook and a lift capacity chart.

Please note that the stability will be reduced by approx. 20% in case of a 100 mm cant and 40% in case of a 200 mm cant.

Clamshell grab

with two-piece boom 5.05 m



* Safety distance to overhead wires

Digging envelope

Stick length
Max. digging depth
Max. reach at ground level
Max. dumping height
Max. dumping height under overhead wires

	1	2	3
m	1.85	2.05	2.25
m	5.70	5.90	6.10
m	7.90	8.10	8.25
m	6.25	6.35	6.45
m	2.73	2.71	2.69

Operating weight

The operating weight includes the basic machine with 8 tyres plus intermediate rings, two-piece boom 5.05 m, stick 2.25 m and clamshell grab GMZ 22 / 0.30 m³.

Undercarriage versions

A 922 Rail Litronic without outriggers (Asymmetric Rail)
A 922 Rail Litronic without outriggers (Symmetric Rail)
A 922 Rail Litronic with rear + front outriggers

Weight (kg)
20,900
20,900
22,600

Clamshell grabs GMZ 22 Machine stability per ISO 10567* (75% of tipping capacity)

Width of clamshells	Capacity	Weight	without outriggers						Rear + front outriggers						down		
			on rail			on tyres			on rail			on tyres			Stick length (m)		
			1.85	2.05	2.25	1.85	2.05	2.25	1.85	2.05	2.25	1.85	2.05	2.25	1.85	2.05	2.25
300 ¹⁾	0.08	675	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
500 ²⁾	0.16	740	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
600 ²⁾	0.20	770	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
700 ²⁾	0.24	810	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
800 ²⁾	0.28	840	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1,000 ²⁾	0.34	905	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
600 ³⁾	0.30	850	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
800 ³⁾	0.42	925	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1,000 ³⁾	0.54	1,005	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

* Indicated loads are based on ISO 10567 and do not exceed 75% of tipping or 87% of hydraulic capacity, max. stick length without quick coupler, lifted 360° on firm with blocked oscillating axle

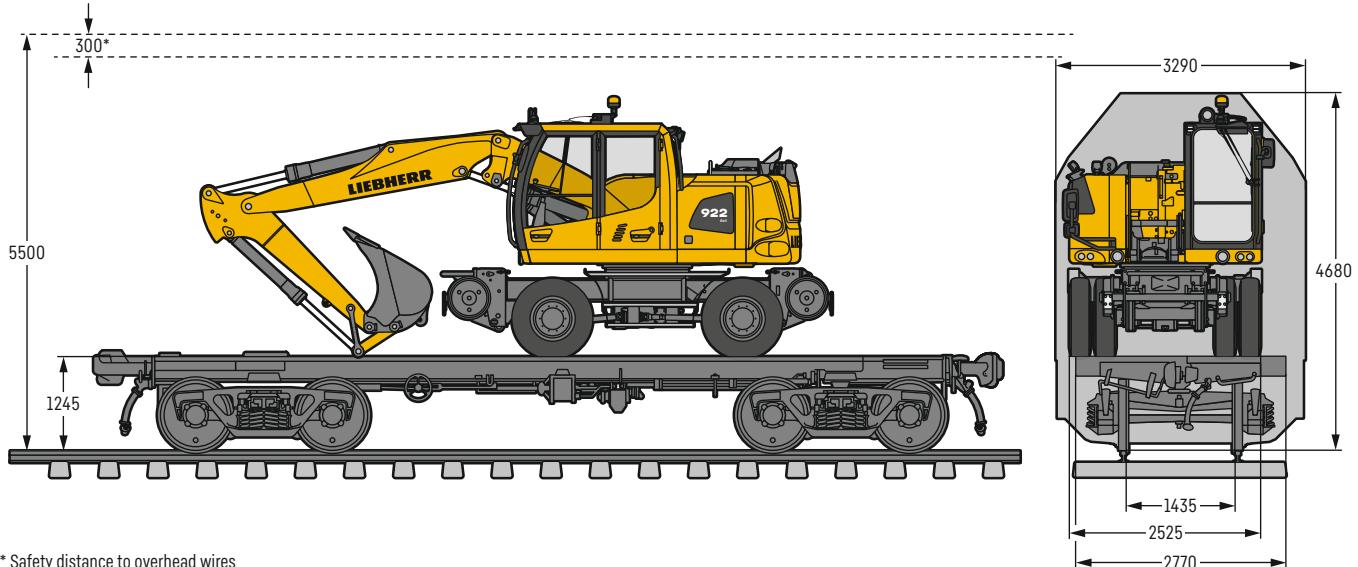
1) Track construction buckets

2) Combination bucket

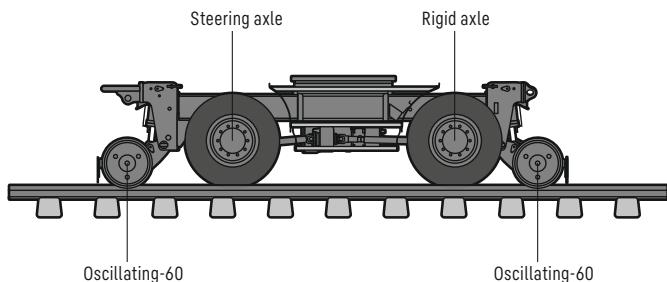
3) Clamshell buckets

Max. material weight ■ = ≤ 1.8t/m³, ■ = ≤ 1.5t/m³, △ = ≤ 1.2t/m³, - = not authorised

Dimensions for transport / choice of bogie systems



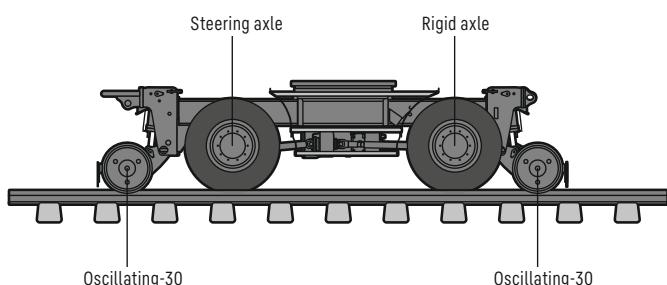
* Safety distance to overhead wires



Variant A

steering axle end oscillating-60
rigid axle end oscillating-60

Area of application
for rail track unevenness

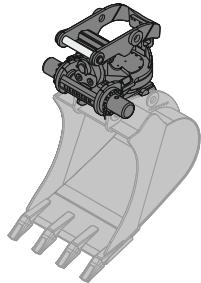


Variant B

steering axle end oscillating-30
rigid axle end oscillating-30

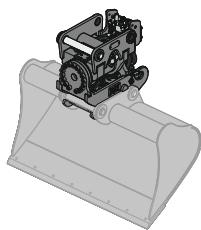
Area of application
for heavy loads / rear + front outriggers

Attachments



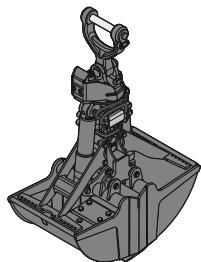
Tilt rotator

Mounting machine side	SW stick mechanical, SWA 33 mechanical, SWA 33 hydraulic, SWA 33 Solidlink, SWA 48 mechanical, SWA 48 Solidlink
TR 20	
Mountings attachment side	SW stick mechanical, SWA 33 mechanical, SWA 33 hydraulic, SWA 48 mechanical
Weight ¹⁾ ³⁾	kg 505-575
Rotation	360°
Tilt	2 x 50°
TR 25	
Mountings attachment side	SW stick mechanical, SWA 33 mechanical, SWA 33 hydraulic, SWA 48 mechanical, SWA 48 hydraulic
Weight ¹⁾ ³⁾	kg 640-705
Rotation	360°
Tilt	2 x 50°



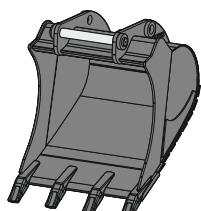
Tilt unit

LITU 33	
Mounting machine side	SWA 33 Solidlink
Mountings attachment side	SWA 33 hydraulic, SWA 33 Solidlink
Weight ¹⁾ ³⁾	kg 380-410
Tilt	2 x 50°
LITU 48	
Mounting machine side	SWA 48 Solidlink
Mountings attachment side	SWA 48 hydraulic, SWA 48 Solidlink
Weight ²⁾ ³⁾	kg 700-740
Tilt	2 x 45°



Clamshell grab GMZ 22 / GMZ 22 HD⁴⁾

Mountings	direct mounting, SW stick mechanical, SWA 33 mechanical, SWA 33 hydraulic, SWA 33 Solidlink, SWA 48 mechanical, SWA 48 hydraulic, SWA 48 Solidlink
Clamshell buckets	
Shell width	mm 300 400 600 800 1,000
Opening width	mm 1,502 1,502 1,502 1,502 1,502
Capacity	m ³ 0.14 0.20 0.30 0.42 0.54
Weight ¹⁾	kg 895 925 1,025 1,105 1,180
Track construction buckets	
Shell width	mm 300
Opening width	mm 1,141
Capacity	m ³ 0.08
Weight ¹⁾	kg 815
Combination buckets	
Shell width	mm 400 500 600 700 800 1,000
Opening width	mm 1,227 1,227 1,227 1,227 1,227 1,227
Capacity	m ³ 0.12 0.16 0.20 0.24 0.28 0.34
Weight ¹⁾	kg 835 895 945 985 1,015 1,080



Backhoe bucket 03

Mountings	direct mounting, SW stick mechanical, SWA 33 mechanical, SWA 33 hydraulic, SWA 33 Solidlink, SWA 48 mechanical, SWA 48 hydraulic, SWA 48 Solidlink
Cutting width	mm 300 400 500 650 850 1,050 1,250
Capacity	m ³ 0.17 0.24 0.32 0.42 0.60 0.80 0.95
Weight ¹⁾	kg 235 260 305 360 415 495 540

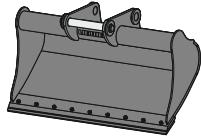
¹⁾ weights based on an attachment in a standard design with the machine SWA 33 Solidlink mounting

²⁾ weights based on an attachment in a standard design with the machine SWA 48 Solidlink mounting

³⁾ depending on the mounting on the attachment

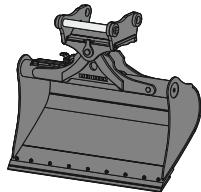
⁴⁾ 20 kg additional weight for HD version

Attachments



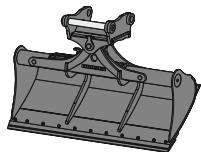
Universal bucket 03

Mountings	SWA 33 mechanical, SWA 33 hydraulic, SWA 33 Solidlink, SWA 48 mechanical, SWA 48 hydraulic, SWA 48 Solidlink		
Cutting width	mm	1,500	
Capacity	m ³	0.60	
Weight ¹⁾	kg	385	



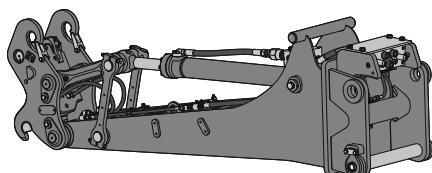
Tilt bucket 90

Mountings	direct mounting, SW stick mechanical, SWA 33 mechanical, SWA 33 hydraulic, SWA 33 Solidlink, SWA 48 mechanical, SWA 48 hydraulic, SWA 48 Solidlink		
Cutting width	mm	1,500	1,600
Capacity	m ³	0.60	0.80
Weight ¹⁾	kg	700	785
Tilt angle		2 x 50°	2 x 50°



Ditch cleaning bucket

Mountings	direct mounting, SW stick mechanical, SWA 33 mechanical, SWA 33 hydraulic, SWA 33 Solidlink, SWA 48 mechanical, SWA 48 hydraulic, SWA 48 Solidlink							
GRL 90								
Cutting width	mm	1,600	1,600	2,000	2,200			
Capacity	m ³	0.55	0.80	0.50	0.80			
Weight ¹⁾	kg	685	815	705	840			
Tilt angle		2 x 50°	2 x 50°	2 x 50°	2 x 50°			
GRL 90 Rail								
Cutting width	mm	2,000	2,000					
Capacity	m ³	0.70	1.00					
Weight ¹⁾	kg	820	870					
Tilt angle		2 x 50°	2 x 50°					
GRL rigid 2B								
Cutting width	mm	600	800	1,000	1,200	1,400	1,600	1,800
Capacity	m ³	0.17	0.25	0.30	0.38	0.45	0.50	0.57
Weight ¹⁾	kg	185	215	245	275	310	350	380
								410
GRL rigid Rail								
Cutting width	mm	1,600	2,000					
Capacity	m ³	0.80	0.48					
Weight ¹⁾	kg	470	370					



Stick extension LS 12

Mounting machine side	SWA 33 Solidlink, SWA 48 Solidlink		
Mountings attachment side	SWA 33 mechanical, SWA 33 mechanical Solidlink ²⁾ , SWA 33 hydraulic ⁴⁾ , SWA 33 Solidlink ³⁾ ⁴⁾ ⁵⁾		
Length	m	2.25	
Weight ¹⁾	kg	approx. 580-630	

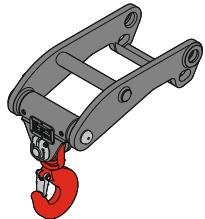
¹⁾ weights based on an attachment in a standard design with the machine SWA 33 Solidlink mounting

²⁾ attachment with high pressure circuit only possible with the manual switchover tipping cylinder or an extended hydraulic circuit on the carrier machine

³⁾ attachment with high pressure circuit only possible with the electric switchover tipping cylinder or an extended hydraulic circuit on the carrier machine

⁴⁾ 14-pin signal contact strip is required, for example to control and monitor the hydraulic quick coupling system on the stick extension on the attachment side or to transfer electrical signals for the switchover

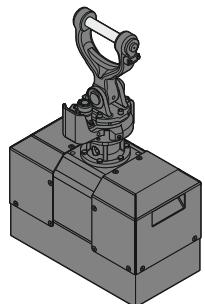
⁵⁾ a socket on the stick above the signal contact strip for the carrier machine is also required for switching between different hydraulic circuits



Load hook

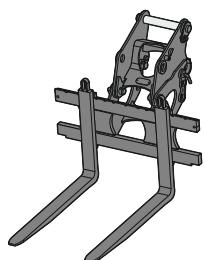
Mountings		direct mounting, SW stick mechanical, SWA 33 mechanical, SWA 33 hydraulic, SWA 48 mechanical, SWA 48 hydraulic
Max. load	t 8	
Rotatable		360°, mechanical
Height to bolting point	mm 508	

Weight¹⁾ kg 120



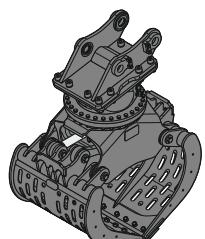
Hydro magnet

Mountings		direct mounting, SW stick mechanical, SWA 33 mechanical, SWA 33 hydraulic, SWA 33 Solidlink, SWA 48 mechanical, SWA 48 hydraulic, SWA 48 Solidlink
Power	kW 5	
Lift capacity	t 5	
Swivel circuit		330°
Overall height to bearing fork	mm 1,182	
Weight ¹⁾	kg 1,485	



Pallet fork

Mountings		direct mounting, SW stick mechanical, SWA 33 mechanical, SWA 33 hydraulic, SWA 33 Solidlink, SWA 48 mechanical, SWA 48 hydraulic, SWA 48 Solidlink
Max. width pallet fork	mm 1,245	
Pallet forks length	mm 1,200	
Lift capacity (ISO 2328)	t 2.5	
Weight ¹⁾	kg 330	



Sorting grab

	perforated	ribbed	closed	perforated	ribbed	closed	perforated	closed	perforated	closed
Mountings	direct mounting, SW stick mechanical, SWA 33 mechanical, SWA 33 hydraulic, SWA 33 Solidlink, SWA 48 mechanical, SWA 48 hydraulic, SWA 48 Solidlink									
SG 20B										
Shell width	mm 800		800	1,000		1,000	1,200	1,200	1,400	1,400
Capacity	m ³ 0.40		0.40	0.50		0.50	0.60	0.60	0.70	0.70
Max. closing force	kN 40		40	40		40	40	40	40	40
Weight ¹⁾	kg 915		925	955		970	1,000	1,015	1,040	1,060
SG 25B										
Shell width	mm 800		800	1,000	1,000	1,000	1,200	1,200	1,400	1,400
Capacity	m ³ 0.55		0.50	0.55	0.75	0.65	0.75	0.90	0.90	1.10
Max. closing force	kN 60		60	60	60	60	60	60	60	60
Weight ¹⁾	kg 1,170		1,220	1,190	1,235	1,300	1,260	1,300	1,325	1,380
										1,415

¹⁾ weights based on an attachment in a standard design with the machine SWA 33 Solidlink mounting

Equipment

Undercarriage

Dual-circuit braking system with rail wheel brake, hydraulically	•
Support frame, lockable (front and rear)	+
Add-on-axle	+
Bumper (front and rear)	+
Trailer coupling Rockinger, semi-automatic	•
Lighting system white / red incl. power socket*	+
Earthing cable with ball-headed pin	x
Fire extinguisher 6 kg	x
Grab suspension bracket	+
Drag shoe, 2 pieces	•
Load holding valve on each stabilization cylinder	•
Line protection for rail guide cylinders	+
Parking brake, maintenance-free	•
Outrigger with individual control	+
Rear + front outriggers	+
Tyre inflation hose with pressure gauge at wagon braking system	+
Tyres, variants	+
Rail undercarriage friction wheel, gauge 1,000 mm (not available in combination with rear + front outriggers)	+
Rail undercarriage convertible (position and pressure control)	+
Rail guide axles, oscillating 30 on the steering and rigid axle side	•
Rail guide axles, oscillating 60 on the steering and rigid axle side	+
Rail guide, gauge 1,435 mm*	•
Rail guide, gauge 1,600 mm	+
Rail sweeper, swivelling	x
Narrow excavator axles with wheel head width of 2,100 mm	+
Protection for oscillating axle cylinders	+
Proportional servo-steering with emergency function	•
Speeder*	+
Two storage compartments	•
Storage compartment with drawer	+
Power socket 24V/10A (front / rear)	+
Lashing eyelets for transport	•
Wagon braking system (pneumatic, 1 circuit)	•
Wagon braking system (pneumatic, 2 circuits)	+
Tool equipment, extended	+
Pull rod	x

Hydraulic system

Shut-off valve between hydraulic tank and pump(s)	•
Pressure test fittings	•
Electronic pump regulation	•
Hydraulic oil filter with integrated microfilter	•
Liebherr hydraulic oil from -20 °C to +40 °C	•
Liebherr hydraulic oil, biologically degradable	+
Liebherr hydraulic oil, specially for warm or cold regions	+
Bypass filter	+
Emergency actuation, electric	x
Switchover clamshell operation and tipping cylinder (not available in combination with Solidlink)	•
Switchover high pressure circuit 1 and tipping cylinder	+
Switchover high pressure circuit 1 and two-piece boom	+
Preparation Liebherr hydro-magnet	+

Diesel engine

Fuel anti-theft device	+
Sensor controlled engine idling	•
Liebherr particle filter*	•
Air pre-filter with dust discharge	+
Preheating hydraulic oil	+
Preheating fuel	+
Preheating engine oil	+

Work space limitation

Electronic lift limitation	x
Load torque limitation (RCL)	x
Load torque warning (RCI)	+
Swivel limitation	x
Virtual wall	+

Uppercarriage

Uppercarriage rear light, 2 pieces, LED	+
Uppercarriage right side light, 1 piece, LED	•
Counterweight (tail swing radius 2,000 mm)	•
Counterweight (tail swing radius 2,000 mm), heavy	+
Refuelling system with filling pump	+
External starting aid (battery connectors)	+
Handrails, non slip surfaces	•
Main battery switch for electrical system	•
Engine hood with gas spring	•
Uppercarriage doors, lockable	•
Amber beacon, at uppercarriage, LED double flash	+
Signal light DB, halogen	x
Signal light DB, LED	+

Cab

Storage compartment	•
Activation of the lighting (compliant with the Road Traffic Licensing authority) for tramway operations	+
Cab lights rear, 2 pieces, LED	•
Cab lights front, 2 pieces, LED (under rain cover)	•
Exterior mirror, electrical adjustable, with heating	+
Control elements for signal-horn and emergency brake at co-driver's seat	•
Lighting for cab access	x
Mechanical hour meters, readable from outside the cab	•
Roof window made from impact-resistant laminated safety glass	•
Data logger	•
Two seater cab	•
Circular bubble level	+
Pressure indication of rail axles on the display	•
Driver identification code	+
Driver profile, personalised	•
Operator's seat Standard	•
Operator's seat Comfort	+
Operator's seat Premium	+
Driving alarm (acoustic signal is emitted during travel, can be switched ON / OFF)	+
Fire extinguisher 2kg	+
Windscreen retractable (including upper part)	•
Intermittent windscreen wiper with wiper washer	•
Footrest	+
Speed indication on the rail-display	•
Cruise control*	•
Rubber floor mat, removable	•
High pressure circuit, permanent drive	•
Dome light	•
Licence plate holder with light*	+
Coat hook	•
Automatic air conditioning	•
Fuel consumption indicator	•
Electric cooler	+
Steering wheel lock	•
Steering column adjustable	•
LiDAT, vehicle fleet management*/**	•
Emergency exit rear window	•
Positioning swing brake	+
Proportional control	•
Radio Comfort, control via display with handsfree set	+
Preparation for radio installation	•
Rain cover over front window opening	•
ROPS cab	•
Back-up alarm (acoustic signal is emitted traveling backward, can not be switched off)	+
Amber beacon, on cab, LED double flash	+
Windshield wiper with interval switching and washer, roof window	•
Windshield wiper with interval switching and washer, rear window	•
Driver door with sliding window	•
Slipcover for operator seat	+
Right side window and windshield made from laminated safety glass	•
Safety components DB (safety flag, signal horn, warning triangle, warning light, first-aid box)	x
Sun blind	•
Auxiliary heating, adjustable (week time switch)	+
Power socket 12V	•
Left control console, folding	•
Electronic immobilizer	+
Cigarette lighter / power socket 24V	•

Equipment

Alternative connection medium pressure circuit on right side of stick	+
Boom lights, 2 pieces, LED	•
Stick lights, 2 pieces, LED	+
Grab lines for stick with tipping kinematic	+
High pressure circuit 1 incl. unpressurised return line and Tool Control	•
High pressure circuit 2 incl. lines	•
Load holding valve tipping cylinder, both sides	+
Load holding valve tipping cylinder, single-sided	+
Load lug on boom	+
Load lug on stick	+
Leak oil line, additional for attachments	+
Stick prepared for quick coupler stick	•
Medium pressure circuit incl. lines	•
PowerLift	•
Pipe fracture safety valves hoist cylinders	•
Pipe fracture safety valve stick cylinder	•
Hose quick coupling at grab lines	•
Hose protection for Solidlink	+
Quick coupling system Solidlink-9 SWA 33	+
Quick coupling system Solidlink SWA 33	+
Quick coupling system Solidlink SWA 48	+
Signal contacts for Solidlink, 14-pin	+
Signal contacts for Solidlink, 14-pin, with control unit for second SWA	+
Special buckets and other attachments	+
Power socket on stick, commutable (2 circuits)	+
Tool Control, 20 attachment adjustments selectable over the display	•
Tool Management, automatic attachment recognition (in combination with Solidlink)	+
Latching for connecting link in grab operation	+
Two-piece boom	•
Offset two-piece boom	+
Cylinders with end damping	•

Complete machine

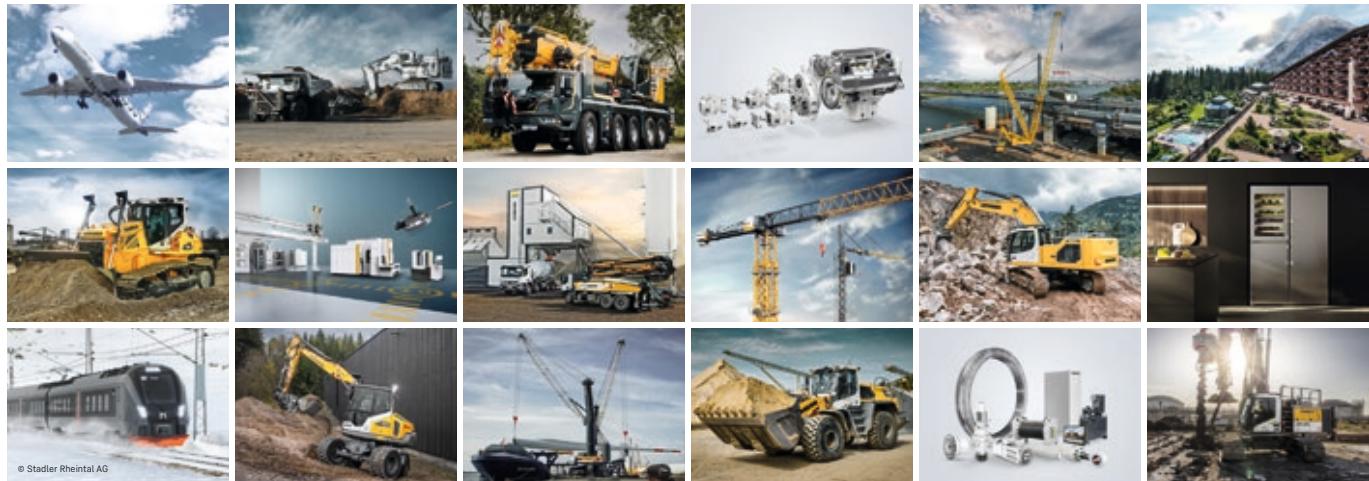
Machine guidance system	
Preparation	+
Lubrication	
Lubrication undercarriage, manually – decentralised (grease points)	+
Lubrication undercarriage steering axle, manually – centralised (one grease point)	•
Central lubrication system for uppercarriage and equipment, automatically (without quick coupler and connecting link)	•
Centralised lubrication extended for quick coupler	+
Centralised lubrication extended for connecting link	+
Special coating	
DB-coating	x
Special coating undercarriage, uppercarriage, equipment	+
Monitoring	
Rear view monitoring with camera	•
Side view monitoring with camera	•

• = Standard, + = Option, x = Required for acceptance by the German RR (DB)

* = country-dependent, ** = optionally extendable after one year

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

The Liebherr Group



Global and independent: more than 75 years of success

Liebherr was founded in 1949 when, with the development of the world's first mobile tower crane, Hans Liebherr laid the foundations for a family-run company which now has more than 50,000 employees and comprises over 150 companies across every continent. The holding company of the Group is Liebherr-International AG in Bulle, Switzerland, whose shareholders are exclusively members of the Liebherr family.

Technology leadership and pioneering spirit

Liebherr is a pioneer and its forward-looking approach has seen it make important contributions to technology history over a wide variety of industries. Employees throughout the world continue to share the courage of the company founder, sharing a passion to produce innovative products and a determination to provide world-leading equipment and machinery.

Diversified product programme

Liebherr is one of the world's biggest construction machine manufacturers and provides high-quality, user-oriented products and services. Its product range includes the product segments earthmoving, material handling, deep foundation, mining, mobile and crawler cranes, tower cranes, concrete technology, maritime cranes, aerospace and transportation systems, gear technology and automation systems, refrigerators and freezers, components and hotels.

Customised solutions and maximum customer value

Liebherr solutions are characterised by precision, implementation and longevity. The company is committed to technological excellence and to providing customers with solutions that match their needs exactly. For Liebherr, customer focus does not end with delivery of a product but continues through a comprehensive range of back-up and support services.

www.liebherr.com

Liebherr-Hydraulikbagger GmbH

Liebherrstraße 12 • 88457 Kirchdorf (Iller), Germany • Phone +49 7354 80-0
info.lhb@liebherr.com • www.liebherr.com • www.facebook.com/LiebherrConstruction