

# Crawler Excavator

## R 924<sub>compact</sub>

Operating Weight: 55,445 - 64,043 lb

Engine Output: 163 kW / 120 HP

Bucket Capacity: 0.78 - 1.50 yd<sup>3</sup>



# LIEBHERR

# R 924 COMPACT

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Bucket Capacity: 0.78 - 1.50 yd<sup>3</sup>



## Performance

The Liebherr R 924 Compact is the combination of the excellent performance characteristics of a standard excavator and the reduced dimensioning of a compact machine. Even when operational in areas where space is limited the R 924 Compact copes with the highest demands in regard to excavation and load performance.

## Reliability

The high demand for performance and quality is consequently converted into landmark solutions to achieve the highest level of dependability and availability. Liebherr has more than 50 years experience in the production of hydraulic excavators and has an unparalleled competence in design and know-how.

## Comfort

A concept focussed specifically on operator comfort has resulted in the largest driver's cab in its class as well as perfect accessibility of all service points.

## Economy

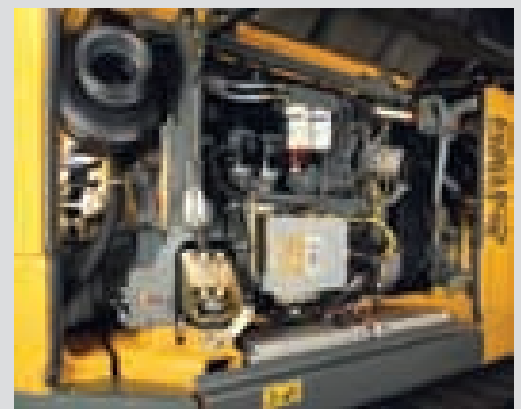
The R 924 Compact is synonymous with multi-functionality, performance and maximum possible productivity. Innovative features such as the modular quick-change system and the central lubrication system, fitted as standard, shorten tooling and servicing times.





#### Multi-function tool carrier

- For every material and application the correct digging tool
- Change-over of mechanical and hydraulic tool in a matter of seconds due to a modular quick coupler system designed and manufactured by Liebherr
- Likufix for the change-over of all hydraulic and mechanical tools from the dash board in the operator station



# Performance

The Liebherr R 924 Compact is the combination of the excellent performance characteristics of a standard excavator and the reduced dimensioning of a compact machine. It is synonymous with multi-functionality, performance and maximum possible productivity. Innovative features such as the modular quick-change system and the central lubrication system, fitted as standard, shorten tooling and servicing times.

## Outstanding Productivity

### Liebherr Positive Control Hydraulic System

Two independent hydraulic circuits ensure effective component actuation, particularly during simultaneous movements, quickly making the necessary flow rates available and providing optimal energy utilisation. The maximum movement speeds are achieved by switching the pump circuits to work in parallel. This means that the Liebherr Positive Control Hydraulic System offers improved performance during simultaneous movements, grading work and when driving both straight ahead and cornering.

### High excavation and load performance

The R 924 Compact is ideally suitable for use under the most confined conditions due to a reduced tail swing of 5'7" ft-in and impresses with an outstanding stability. Combined with a high hydraulic performance – typical for Liebherr hydraulic excavators – the results are short cycle times and high digging- and loading performances.

### Liebherr diesel power

The four cylinder diesel engine designed and manufactured by Liebherr especially for construction machinery, guarantees huge capacity and long operational life as well as complying with the Level IIIA / Tier 3 exhaust standard. At the same time, the R 924 Compact with this engine power is the most powerful excavator in its class. Unique for a compact excavator is the crafty solution for the longitudinal mounting of the powerpack.

## Solid footing

### Stability

The weight concentration in the undercarriage contributes to an effective utilization of the digging forces and an excellent stability under all ground conditions.

### Large ground clearance

The large ground clearance under the carbody assures an extensive protection of the undercarriage components as well as easy traveling even under difficult ground conditions.

### Key technologies made by Liebherr

- Power train optimised perfectly to the construction of the short-tail excavator
- Outstanding performance characteristics for productivity unique in its class
- In-house production of engines, hydraulic pumps, transfer gears, traction drives and electronic components



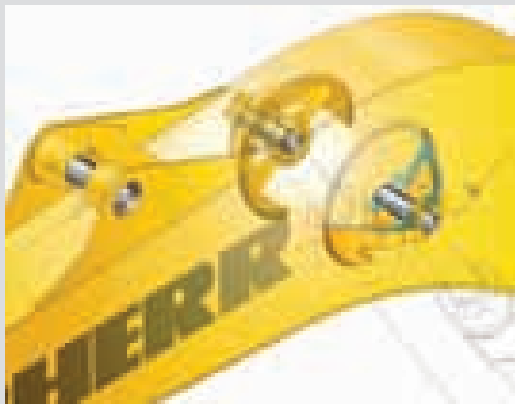
### Sturdy Undercarriage

- The combination of high tensile strength steel plates and steel castings in order to minimize stress tension
- A dozer blade, e.g. for grading jobs, is optional available



#### Robust equipment design

- Unique hoist assembly positioning design: The R 924 Compact is the only machine in its class fitted with two separate bolts
- High-strength design with cast sockets
- Long-term benefit: Cast steel components at the pivot points





# Reliability

The high demand for performance and quality is consequently converted into landmark solutions to achieve the highest level of dependability and availability. Liebherr has more than 50 years experience in the production of hydraulic excavators and has an unparalleled competence in design and know-how.

## Technology with prospects

### Perfect optimisation

Individual components of the drive train, manufactured in-house, such as diesel engine, traction drive, rotary actuators, operating pump and hydraulic cylinder are perfectly optimised with one another. As components of a total system designed for long operational life, they guarantee maximum possible reliability.

### Quality right down to the last detail

The clear lay out of hydraulic, lubrication and electrical conduits ensures ideal operational reliability and maximum machine availability. Undercoating and surface-treating of components provide ideal corrosion protection.

## Safety of functionality

### Protected Operator

The cab complies with the ROPS (Roll-Over protective Structure) requirements, as laid out in ISO 12117-2. In addition, the R 924 Compact is fitted with protection for the roof window as standard.

### Automatic control of functionality

The operator can entirely focus on his job, because the integrated on-board electronic continuously performs a comparison with pre-determined target data. Eventual deviations from the target parameters are shown on the display.

### Data storage

The on-board computer stores eventual abnormalities from the rated data. The data can be readily recalled and transferred by radio transmission to a service center.

### Liebherr hydraulic cylinders

- Cylinder sizes matched to each model
- High-quality coating of piston rod
- Special gasket packages for piston rod and piston
- Sealed special bushings for pin mountings
- End-cushion at each end



### Cleanly arranged upper

- Clearly arranged hose routing is designed to achieve longevity
- Transverse-mounted control valve for optimal accessibility
- Secure hose routing within the upper structure



#### Intelligent detailed solutions

- The radiators are well accessible from the ground level for cleaning
- Easy cleaning of the foldable climate condenser
- Laterally positioned intake slots to increase radiator longevity





# Comfort

A concept focussed specifically on operator comfort has resulted in the largest driver's cab in its class as well as perfect accessibility of all service points.

## The operator takes centre stage

### Workspace with free room

In terms of the personal space requirements, the operator of the R 924 Compact has almost unlimited room. The spacious and comfortable cab provides all operators with generous room for climbing in, generous leg and elbow room and lots of storage space for cool box and other personal items.

### Air-conditioning as standard

The air-conditioning sensors constantly monitor the temperature settings. The ventilation flaps can be open and closed electronically at the press of a button. The re-heat function dehumidifies the cab in seconds.

## Ergonomics for an effective work effort

### Straightforward arrangements

Design and positioning of seat, consoles and information display are perfectly coordinated within an ergonomically total concept. The operator seat with shock absorber is adjustable to fit individual needs. The oversized cab windows provide optimal visibility to the entire working- and surrounding area.

### Intelligent joystick controls

The ergonomically optimized joysticks provide relaxed working conditions. The travel function of the excavator is easy and precise due to hydraulically cushioned foot pedals.

### Everything in its right place

- Comfortable climb with ergonomically positioned hand grips
- Large platform, treated with anti-slip coating
- Optimal arrangement of mirrors for unobstructed view of the surrounding area



### Maintenance benefits as standard

- All service points are centrally integrated and easily accessible via service flap
- All routine servicing work possible from ground
- Routine cleaning of the most accessible coolers can easily be performed by opening out the individual cooling elements



#### Liebherr Tool-Control

- Immediately after change of the hydraulic tool, the programmed pressure settings and oil flow volumes are available
- Stores up to 10 accessory tool settings (pressure and oil flow)
- Displays the type of accessory tool



# Economy

The R 924 Compact is synonymous with multi-functionality, performance and maximum possible productivity. Innovative features such as the modular quick-change system and the central lubrication system, fitted as standard, shorten tooling and servicing times.

## One excavator – unlimited application areas

### Multi-purpose machine

The R 924 Compact is a multi-purpose machine, which can be utilized in a variety of ways. It is ideally suitable at jobsites with tight space conditions such as inner cities and narrow forest roads due to its compact design. Naturally, it can perform all classical jobs of a standard excavator as well, such as digging- and utility construction, demolition- and material handling work.

### Compact attachment dimensions

The attachment geometry, especially developed for the R 924 Compact, allows due to the boom pivot point located behind the operator station, an effective operation at loading height as well. The total clearance circle is less than 6'3" ft-in .

## Top technology for top profitability

### Well oiled

Regular greasing on the Liebherr R 924 Compact is performed by the semi-automatic central lubrication system, fitted as standard. The Liebherr central lubrication system ensures a marked reduction in servicing times as well as maximum operational reliability even in aggressive environmental conditions. Resulting in a real-term reduction in bearing wear and subsequent repair work.

### Electronic engine speed sensing

This regulating system provides an efficient conversion of the engine power into hydraulic performance – which ends up in an optimal utilization of the pump capacity. The result: increase in output, decrease in fuel consumption, and protection of the diesel engine.

### Hydrostatic fan drive

- Thermostatically regulated fan speed via engine oil and coolant temperature
- Accelerated warm-up period
- Assurance of steady fluid quality due to constant temperature
- Increased longevity of drive components
- Fan only takes-off the needed power, reducing fuel consumption



### Quick spare parts service

- Over 80,000 line items are ready for the global spare part requirements
- Emergency spare parts requirements are available within 24 hours

# Technical Data



## Engine

Rating per ISO 9249	163 hp (120 kW) at 1800 rpm
Model	Liebherr D 934 S
Type	4 cylinder in-line
Bore/Stroke	4.80/5.35 in
Displacement	388 in <sup>3</sup>
Engine operation	4-stroke diesel unit pump system turbo-charged after-cooled and fuel cooled reduced emissions
Cooling	water-cooled and integrated motor oil cooler
Air cleaner	dry-type air cleaner with pre-cleaner, primary and safety elements
Fuel tank	91 gal
Electrical system	
Voltage	24 V
Batteries	2 x 135 Ah/12 V
Starter	24 V/7.8 kW
Alternator	three phase current 24 V/80 A
Engine idling	sensor controlled
Emission	conform with level IIIA/Tier 3 emission standard



## Hydraulic System

Hydraulic pump	Positive Control Classic, regulation with Liebherr variable flow swash plate double pump, proportional controller hydraulically steered
Max. flow	2 x 57 gpm
Max. pressure	5,076 psi
Pump regulation	electro-hydraulic with electronic engine speed sensing regulation, pressure compensation, flow compensation, automatic oil flow optimizer, swing circuit with priority and torque control
Hydraulic tank	39 gal
Hydraulic system	max. 95 gal
Hydraulic oil filter	1 full flow filter (20 µm) in return line with integrated fine filter area (5 µm) and an additional leakage filter
Hydraulic oil cooler	compact cooler, consisting of a water and fuel cooler, sandwiched with hydraulic oil cooler and after-cooler cores and hydrostatically driven fan
MODE selection	adjustment of machine performance and the hydraulics via a mode selector to match application
ECO	for especially economical and environmentally friendly operation
POWER	for maximum digging power and heavy duty jobs
LIFT	for lifting
FINE	for precision work and lifting through very sensitive movements
Super-Finish	adjustable working speed for grading
RPM adjustment	stepless adjustment of engine output via the rpm at each selected mode
Liebherr Tool Control	ten preadjustable pump flows and pressures for add on tools



## Hydraulic Controls

Power distribution	via control valve with integrated safety valves
Servo circuit	
Attachment and swing	proportional via joystick levers
Travel	– proportional via foot pedals or removable hand levers – speed pre-selection
Additional functions	via foot pedals or joystick toggle switch



## Swing Drive

Drive by	Liebherr swash plate motor, shockless and anti-reaction
Transmission	Liebherr compact planetary reduction gear
Swing ring	Liebherr, sealed single race ball bearing swing ring, internal teeth
Swing speed	0 – 12.7 rpm stepless
Swing torque	51,777 lbf ft
Holding brake	wet multi-disc (spring applied, pressure released)
Option	pedal controlled positioning brake



## Operator's Cab

Cab	ROPS safety cab structure (capable of sweeping over), resiliently mounted, sound insulated, tinted windows, front window stores overhead, door with sliding window
Operator's seat	shock absorbing suspension, adjustable to operator's weight, 6-way adjustable seat
Joysticks	integrated into adjustable seat consoles
Monitoring	menu driven query of current operating conditions via the LCD display. Automatic monitoring, display, warning (acoustical and optical signal) and saving machine malfunction data, for example, engine overheating, low engine oil pressure or low hydraulic oil level
Heating system	standard air conditioning, combined cooler/heater, additional dust filter in fresh air/recirculated
Noise emission	
ISO 6396	L <sub>PA</sub> (inside cab) = 70 dB(A)
2000/14/EC	L <sub>WA</sub> (surround noise) = 101 dB(A)



## Undercarriage

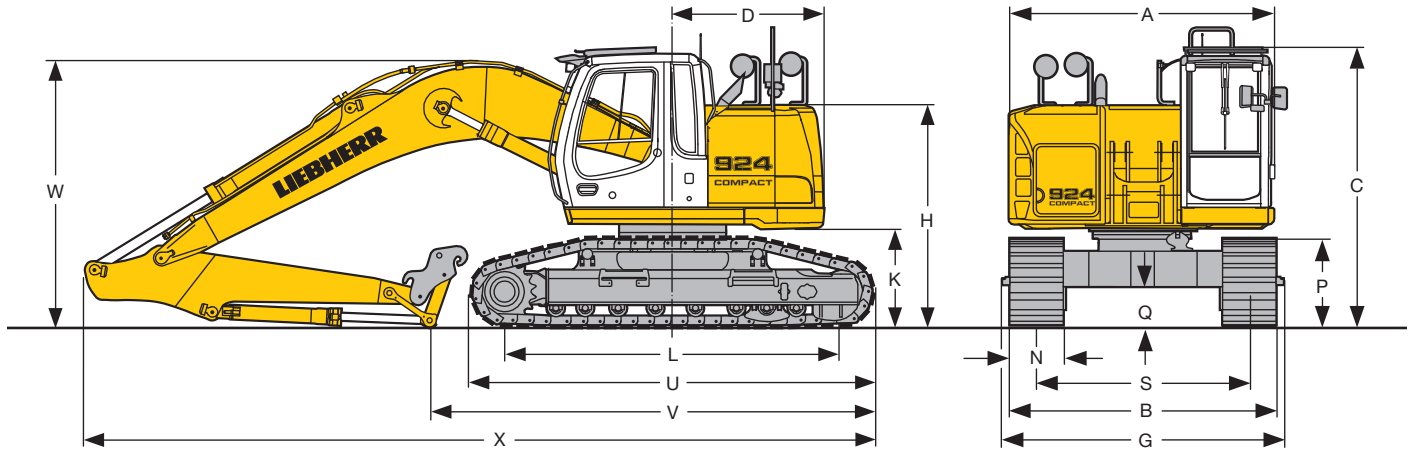
HD-SL	heavy duty, wide gauge and longer crawler length
Drive	Liebherr swash plate motors with integrated brake valves on both sides
Transmission	Liebherr planetary reduction gears
Travel speed	low range – 2.0 mph high range – 3.4 mph
Net drawbar pull on crawler	46,760 lbf
Track components	B 60, maintenance-free
Track rollers/Carrier rollers	8/2
Tracks	sealed and greased
Track pads	triple grouser
Digging locks	wet multi-discs (spring applied, pressure released)
Brake valves	integrated into travel motor
Lashing eyes	integrated
Option	blade



## Attachment

Type	combination of resistant steel plates and cast steel components
Hydraulic cylinders	Liebherr cylinders with special seal-system, shock absorbed
Pivots	sealed, low maintenance
Lubrication	semi-automatic Liebherr central lubrication system (except link and tilt geometry)
Hydraulic connections	pipes and hoses equipped with SAE split-flange connections
Bucket	standard equipped with 26,455 lb safety hook for lifting

# Dimensions



	ft in
A	9' 9"
C with protection for the roof window	10' 4"
C with protective grid up FOPS (option)	10' 8"
D	5' 7"
F1	3' 2"
H	8' 2"
I	21"
J	12"
K	3' 8"
L	12' 4"
P	3' 3"
Q	19"
S	7' 10"
U	14' 11"
U1	16' 6"
N	24" 30"
B	9' 10" 10' 4"
G	10' 4" 10' 4"

## Gooseneck Boom 18'8"

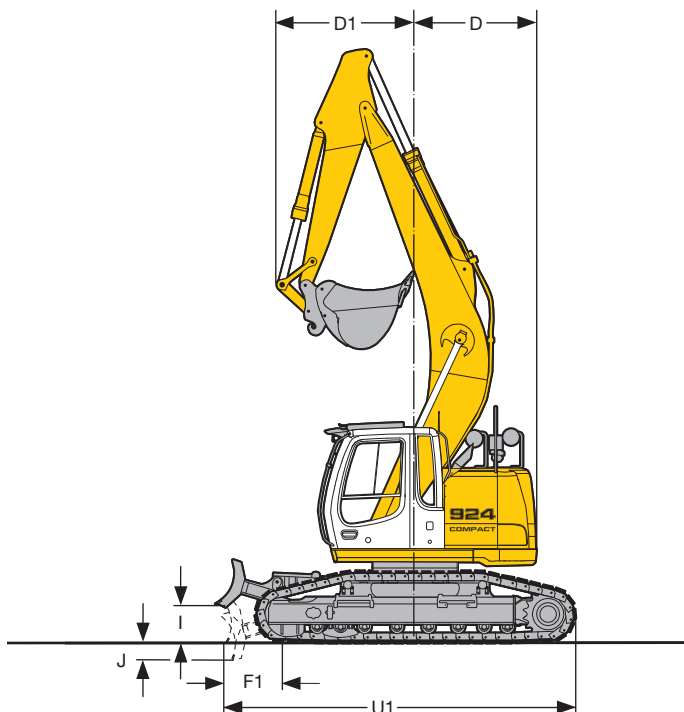
Stick Length	ft in	8' 8"	9' 8"
V	ft in	17' 3"	16' 5"
W	ft in	10'	10'
X	ft in	29' 2"	29' 2"
D1 without quick change adapter with bucket	ft in	6' 5"	6' 3"
D1 with quick change adapter and bucket	ft in	6' 7"	6' 5"

## Adjustable Offset Boom 18'8"

Stick Length	ft in	8' 8"	9' 8"
V	ft in	17' 7"	16' 5"
W	ft in	9' 10"	9' 10"
X	ft in	29' 2"	29' 2"
D1 without quick change adapter with bucket	ft in	6' 11"	6' 9"
D1 with quick change adapter and bucket	ft in	7' 1"	6' 11"

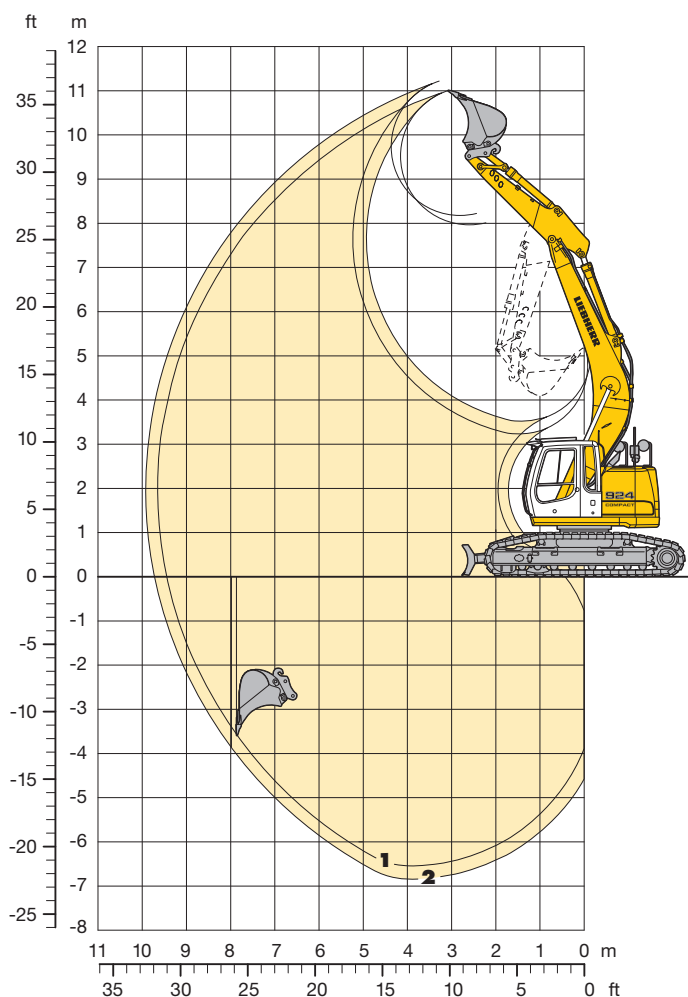
## Hydr. Adjustable Boom 11'10"

Stick Length	ft in	8' 8"	9' 8"
V	ft in	18' 8"	17' 11"
W	ft in	10' 2"	10' 4"
X	ft in	30' 4"	30' 4"
D1 without quick change adapter with bucket	ft in	6' 3"	6' 3"
D1 with quick change adapter and bucket	ft in	6' 5"	6' 5"



# Backhoe Attachment

with Gooseneck Boom 18'8"



## Digging Envelope with Quick Change Adapter

		1	2
Stick length	ft in	8'8"	9' 8"
Max. digging depth	ft in	21'6"	22' 6"
Max. reach at ground level	ft in	31'	31'10"
Max. dump height	ft in	26'1"	26' 9"
Max. teeth height	ft in	36'1"	36' 9"

## Digging Forces without Quick Change Adapter

		1	2
Digging force ISO	lbf	24,954	23,155
	lb	24,912	23,148
Breakout force ISO	kN	31,698	31,698
	lb	31,746	31,746

## with Quick Change Adapter

Digging force ISO	lbf	23,605	21,806
	lb	23,589	21,825
Breakout force ISO	lbf	26,303	26,303
	lb	26,235	26,235

Max. breakout force without quick change adapter with ripper bucket 35,520 lbf (35,494 lb)

## Operating Weight and Ground Pressure

Operating weight includes basic machine with gooseneck boom 18'8", stick 9'8", quick change adapter 48 and bucket 1.05 yd<sup>3</sup>.

Undercarriage HD-SL		without blade			with blade		
Pad width	in	20"	24"	30"	20"	24"	30"
Weight	lb	55,445	55,996	57,429	59,414	59,965	61,398
Ground pressure	psi	8.8	7.4	6.1	9.5	8.0	6.5

## Buckets

		without Quick Change Adapter				with Quick Change Adapter			
Cutting width	in	33"	41"	49"	55"	33"	41"	49"	55"
Capacity ISO 7451	yd <sup>3</sup>	0.78	1.05	1.31	1.50	0.78	1.05	1.31	1.50
Weight Standard bucket with Liebherr teeth Z 35	lb	1,190	1,367	1,587	1,720	1,213	1,389	1,609	1,742
Suitable for material up to a specific weight of									
with stick 8'8"	lb/yd <sup>3</sup>	3,034	3,034	3,034	3,034	3,034	3,034	3,034	3,034
with stick 9'8"	lb/yd <sup>3</sup>	3,034	3,034	3,034	3,034	3,034	3,034	3,034	2,528



# Lift Capacities

with Gooseneck Boom 18'8"

## Stick 8'8"

ft	Under-carriage	10 ft	15 ft	20 ft	25 ft	ft
30	without blade					10,4* 10,4* 12.42
25	with blade		12,5* 12,5*			8,9* 8,9* 19.30
20	without blade		12,5* 12,5*	11,5 12,2*		8,9* 8,9* 23.18
15	with blade	20,9* 20,9*	13,2* 13,2*	11,5 12,2*		8,6* 8,6* 25.50
10	without blade	20,9* 20,9*	15,7* 15,7*	11,1 13,3*	7,7 10,0*	7,4 8,8* 26.69
5	with blade	28,7* 28,7*	16,1 19,3*	10,5 14,8*	7,4 12,4	6,7 9,4* 26.89
0	without blade	28,7* 28,7*	17,2 19,3*	11,3 14,8*	8,0 12,5*	6,4 10,5* 26.14
- 5	with blade	11,8* 11,8*	14,9 22,2*	9,9 16,3*	7,1 12,1	6,9 10,5* 24.33
- 10	without blade	11,8* 11,8*	16,0 22,2*	10,7 16,3*	7,7 13,1*	7,1 12,3
- 15	with blade	17,0* 17,0*	14,2 23,1*	9,4 16,6	6,9 11,9	6,5 11,1
	without blade	17,0* 17,0*	15,3 23,1*	10,2 16,9*	7,5 13,2*	7,1 12,5*
	with blade	25,3* 25,3*	14,0 22,0*	9,3 16,3		7,1 12,3
	without blade	25,3* 25,3*	15,1 22,0*	10,1 16,3*		7,7 12,8*
	with blade	25,9* 25,9*	14,1 19,1*	9,4 14,1*		8,7 12,9*
	without blade	25,9* 25,9*	15,3 19,1*	10,1 14,1*		9,4 12,9*
	with blade	17,5* 17,5*	13,1* 13,1*			12,2* 12,2*
	without blade	17,5* 17,5*	13,1* 13,1*			12,2* 12,2*

## Stick 9'8"

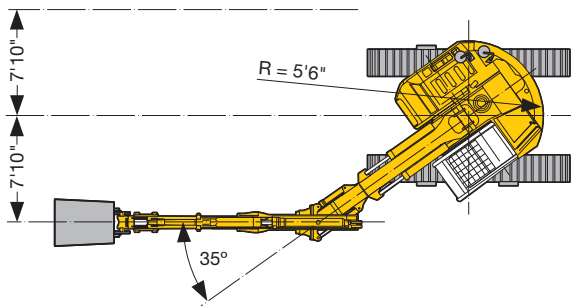
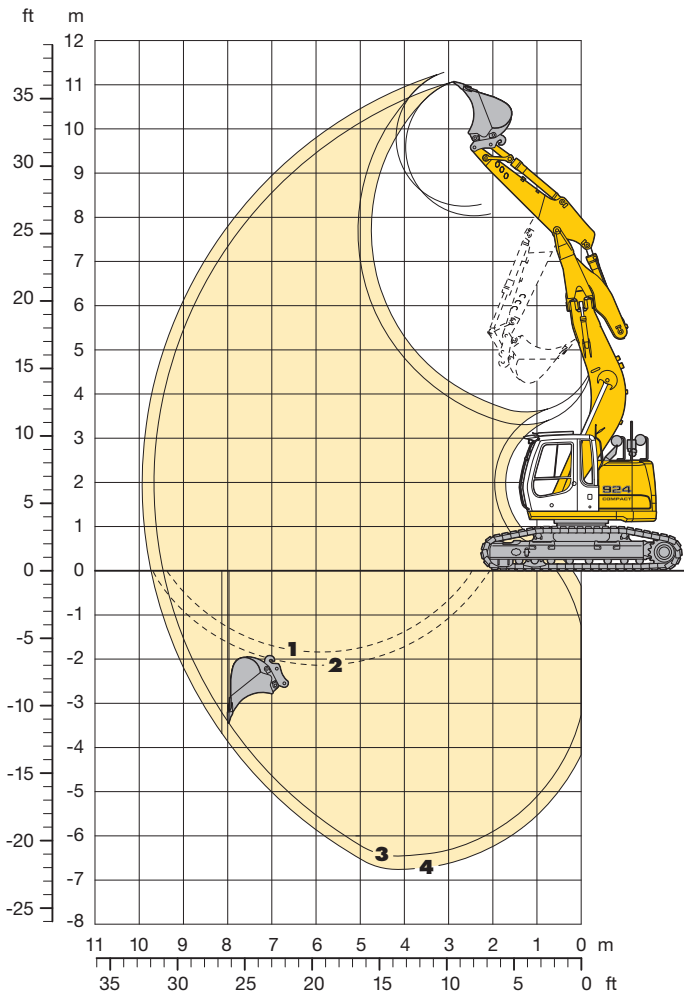
ft	Under-carriage	10 ft	15 ft	20 ft	25 ft	ft
30	without blade					9,1* 9,1* 14.36
25	with blade		11,5* 11,5*	8,7* 8,7*		9,1* 9,1* 20.59
20	without blade		11,5* 11,5*	8,7* 8,7*		7,9* 7,9* 24.26
15	with blade		12,3* 12,3*	11,6* 11,6*		7,9* 7,9* 26.49
10	without blade	18,1* 18,1*	14,8* 14,8*	11,2 12,7*	7,7 10,5*	7,6 7,8* 27.63
5	with blade	18,1* 18,1*	14,8* 14,8*	11,9 12,7*	8,3 10,5*	7,6 7,8* 27.10
0	without blade	28,9* 28,9*	16,3 18,5*	10,5 14,4*	7,4 12,2*	6,3 8,3* 25.36
- 5	with blade	28,9* 28,9*	17,4 18,5*	11,3 14,4*	8,0 12,2*	6,8 8,3* 22.37
- 10	without blade	14,9* 14,9*	15,0 21,7*	9,9 15,9*	7,1 12,1	6,0 9,2*
- 15	with blade	14,9* 14,9*	16,1 21,7*	10,7 15,9*	7,7 12,9*	6,6 9,2*
	without blade	17,2* 17,2*	14,2 23,0*	9,4 16,5	6,9 11,8	6,1 10,5
	with blade	17,2* 17,2*	15,3 23,0*	10,2 16,8*	7,5 13,2*	6,7 10,8*
	without blade	24,0* 24,0*	13,9 22,3*	9,2 16,3	6,8 11,7	6,6 11,5
	with blade	24,0* 24,0*	15,0 22,3*	10,0 16,5*	7,4 12,6*	7,2 12,3*
	without blade	27,3 27,5*	14,0 19,8*	9,2 14,6*		7,9 12,5*
	with blade	27,5* 27,5*	15,1 19,8*	10,0 14,6*		8,6 12,5*
	without blade	19,7* 19,7*	14,4 14,5*			11,5 12,2*
	with blade	19,7* 19,7*	14,5* 14,5*			12,2* 12,2*

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

The lift capacities on the load hook of the Liebherr quick change adapter 48 without attachment are stated in lb x 1000, and can be lifted 360° on firm, level supporting surface. Adjacent values are valid for the undercarriage when in the longitudinal position. Capacities are valid for 30" wide triple-grouser pads. Indicated loads are based on ISO 10567 standard and do not exceed 75 % of tipping or 87 % of hydraulic capacity (indicated by \*) or are limited through the allowed lift capacity of the load hook on the quick change adapter (26,455 lb). Without quick change adapter the lift capacities will increase by 551 lb, without bucket cylinder, link and lever they increase by an additional 617 lb.

# Backhoe Attachment

with Adjustable Offset Boom 18'8"



## Digging Envelope with Quick Change Adapter

		3	4
Stick length	ft in	8'8"	9' 8"
Max. digging depth	ft in	21'2"	22' 2"
Max. reach at ground level	ft in	31'	31'10"
Max. dump height	ft in	26'3"	27' 1"
Max. teeth height	ft in	36'3"	37' 1"

1 Stick 8'8"

2 Stick 9'8"

at max. attachment offset with vertical ditch walls

3 Stick 8'8"

4 Stick 9'8"

with set straight boom

## Digging Forces without Quick Change Adapter

Digging force ISO	lbf	24,954	23,155
	lb	24,912	23,148
Breakout force ISO	lbf	31,698	31,698
	lb	31,746	31,746

## with Quick Change Adapter

Digging force ISO	lbf	23,605	21,806
	lb	23,589	21,825
Breakout force ISO	lbf	26,303	26,303
	lb	26,235	26,235

Max. breakout force without

quick change adapter with ripper bucket

35,520 lbf (35,494 lb)

## Operating Weight and Ground Pressure

Operating weight includes basic machine with adjustable offset boom 18'8", stick 9'8", quick change adapter 48 and bucket 1.05 yd<sup>3</sup>.

Undercarriage HD-SL		without blade			with blade		
Pad width	in	20"	24"	30"	20"	24"	30"
Weight	lb	57,540	58,091	59,524	61,508	62,059	63,492
Ground pressure	psi	9.1	7.7	6.3	9.8	8.2	6.7

## Buckets

		without Quick Change Adapter				with Quick Change Adapter			
Cutting width	in	33"	41"	49"	55"	33"	41"	49"	55"
Capacity ISO 7451	yd <sup>3</sup>	0.78	1.05	1.31	1.50	0.78	1.05	1.31	1.50
Weight Standard bucket with Liebherr teeth Z 35	lb	1,190	1,367	1,587	1,720	1,213	1,389	1,609	1,742
Suitable for material up to a specific weight of									
with stick 8'8"	lb/yd <sup>3</sup>	3,034	3,034	3,034	2,528	3,034	3,034	3,034	2,528
with stick 9'8"	lb/yd <sup>3</sup>	3,034	3,034	3,034	2,528	3,034	3,034	2,528	2,023

# Lift Capacities

## with Adjustable Offset Boom 18'8"

### Stick 8'8"

ft	Under-carriage	10 ft	15 ft	20 ft	25 ft	ft
30	without blade					8,9* 8,9* 12.61
25	with blade		12,2* 12,2*			7,6* 7,6* 19.42
20	without blade		12,9* 12,9*	11,2 11,7*		7,3* 7,3* 23.28
15	with blade	20,4* 20,4*	15,1* 15,1*	10,7 12,6*	7,2 9,1*	6,8 7,5* 25.59
10	without blade	28,5 29,3*	15,3 18,2*	9,8 13,9*	6,8 11,6*	6,0 8,0* 26.78
5	with blade	29,3* 29,3*	16,5 18,2*	10,6 13,9*	7,4 11,6*	6,6 8,0* 26.98
0	without blade	13,3* 13,3*	13,6 20,6*	9,0 15,1*	6,4 11,5	5,6 8,9* 26.23
- 5	with blade	13,3* 13,3*	14,7 20,6*	9,8 15,1*	7,0 12,1*	6,2 8,9* 26.23
- 10	without blade	18,3* 18,3*	12,6 21,3*	8,4 15,6	6,1 11,1	5,7 10,4 24.42
- 15	with blade	18,3* 18,3*	13,8 21,3*	9,2 15,6*	6,7 12,1*	6,2 10,6* 21.30
	without blade	24,1 26,4*	12,3 20,2*	8,1 14,9*		6,2 11,4 16.09
	with blade	26,3 26,4*	13,5 20,2*	8,9 14,9*		6,8 11,6*
	without blade	23,2* 23,2*	12,5 17,2*	8,3 12,7*		7,6 11,6*
	with blade	23,2* 23,2*	13,7 17,2*	9,1 12,7*		8,3 11,6*
	without blade	15,1* 15,1*	11,4* 11,4*			10,5* 10,5* 16.09
	with blade	15,1* 15,1*	11,4* 11,4*			10,5* 10,5*

### Stick 9'8"

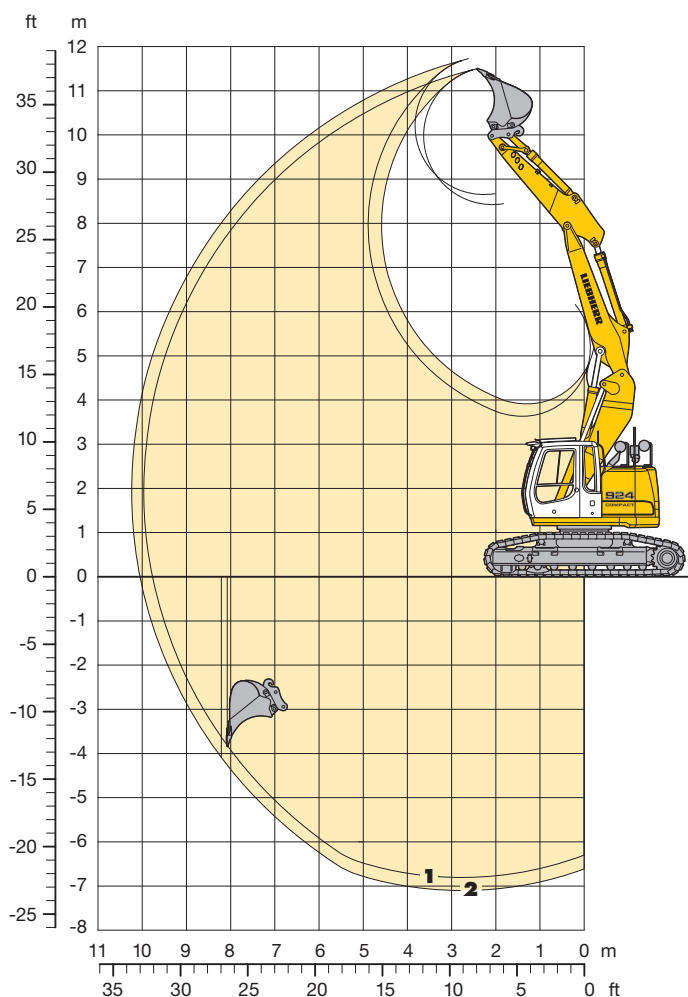
ft	Under-carriage	10 ft	15 ft	20 ft	25 ft	ft
30	without blade					7,8* 7,8* 14.54
25	with blade		11,3* 11,3*	7,8* 7,8*		6,7* 6,7* 20.71
20	without blade		11,3* 11,3*	7,8* 7,8*		6,7* 6,7* 24.36
15	with blade	18,6* 18,6*	14,3* 14,3*	10,8 12,0*	7,3 9,8*	6,4 6,6* 26.58
10	without blade	18,6* 18,6*	14,3* 14,3*	11,6 12,0*	7,9 9,8*	6,6* 6,6*
5	with blade	27,3* 27,3*	15,6 17,4*	9,9 13,5*	6,8 11,3*	5,7 7,0* 27.72
0	without blade	27,3* 27,3*	16,8 17,4*	10,7 13,5*	7,4 11,3*	6,2 7,0*
- 5	with blade	16,5* 16,5*	13,8 20,2*	9,0 14,8*	6,4 11,5	5,3 7,7* 27.92
- 10	without blade	16,5* 16,5*	14,9 20,2*	9,8 14,8*	7,0 11,9*	5,8 7,7*
- 15	with blade	18,5* 18,5*	12,6 21,2*	8,4 15,4*	6,1 11,1	5,3 9,0* 27.19
	without blade	18,5* 18,5*	13,8 21,2*	9,2 15,4*	6,7 12,1*	5,9 9,0*
	with blade	23,8 25,1*	12,2 20,4*	8,1 15,1*	5,9 10,9	5,8 10,6
	without blade	25,1* 25,1*	13,4 20,4*	8,9 15,1*	6,5 11,4*	6,3 11,1* 25.46
	with blade	24,4 24,7*	12,4 17,9*	8,1 13,2*		6,9 11,2* 22.49
	without blade	24,7* 24,7*	13,5 17,9*	8,9 13,2*		7,6 11,2*
	with blade	17,3* 17,3*	12,9* 12,9*			10,3 10,6* 17.64
	without blade	17,3* 17,3*	12,9* 12,9*			10,6* 10,6*

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

The lift capacities on the load hook of the Liebherr quick change adapter 48 without attachment are stated in lb x 1000, and can be lifted 360° on firm, level supporting surface. Adjacent values are valid for the undercarriage when in the longitudinal position. Capacities are valid for 30" wide triple-grouser pads. Indicated loads are based on ISO 10567 standard and do not exceed 75 % of tipping or 87 % of hydraulic capacity (indicated by \*) or are limited through the allowed lift capacity of the load hook on the quick change adapter (26,455 lb). Without quick change adapter the lift capacities will increase by 551 lb, without bucket cylinder, link and lever they increase by an additional 617 lb.

# Backhoe Attachment

with Hydr. Adjustable Boom 11'10"



## Digging Envelope

with Quick Change Adapter

		1	2
Stick length	ft in	8'8"	9'8"
Max. digging depth	ft in	22'4"	23'4"
Max. reach at ground level	ft in	32'	33'
Max. dump height	ft in	27'7"	28'5"
Max. teeth height	ft in	37'9"	38'5"

## Digging Forces

without Quick Change Adapter

		1	2
Digging force ISO	lbf	24,954	23,155
	lb	24,912	23,148
Breakout force ISO	lbf	31,698	31,698
	lb	31,746	31,746

with Quick Change Adapter

Digging force ISO	lbf	23,605	21,806
	lb	23,589	21,825
Breakout force ISO	lbf	26,303	26,303
	lb	26,235	26,235

Max. breakout force without quick change adapter with ripper bucket 35,520 lbf (35,494 lb)

## Operating Weight and Ground Pressure

Operating weight includes basic machine with hydr. adjustable boom 11'10", stick 9'8", quick change adapter 48 and bucket 1.05 yd<sup>3</sup>.

Undercarriage HD-SL		without blade			with blade		
Pad width	in	20"	24"	30"	20"	24"	30"
Weight	lb	58,091	58,642	60,075	62,059	62,610	64,043
Ground pressure	psi	9.2	7.8	6.4	10.0	8.4	6.8

## Buckets

		without Quick Change Adapter				with Quick Change Adapter			
Cutting width	in	33"	41"	49"	55"	33"	41"	49"	55"
Capacity ISO 7451	yd <sup>3</sup>	0.78	1.05	1.31	1.50	0.78	1.05	1.31	1.50
Weight Standard bucket with Liebherr teeth Z 35	lb	1,190	1,367	1,587	1,720	1,213	1,389	1,609	1,742
Suitable for material up to a specific weight of									
with stick 8'8"	lb/yd <sup>3</sup>	3,034	3,034	3,034	2,528	3,034	3,034	3,034	2,528
with stick 9'8"	lb/yd <sup>3</sup>	3,034	3,034	3,034	2,528	3,034	3,034	2,528	2,023

# Lift Capacities

with Hydr. Adjustable Boom 11'10"

## Stick 8'8"

ft	Under-carriage	10 ft	15 ft	20 ft	25 ft	ft
30	without blade					9,6* 9,6* 14.57
	with blade					9,6* 9,6*
25	without blade		13,0* 13,0*	9,7* 9,7*		8,5* 8,5* 20.73
	with blade		13,0* 13,0*	9,7* 9,7*		8,5* 8,5*
20	without blade	14,3* 14,3*	15,1* 15,1*	11,9 13,3*		8,2 8,3* 24.38
	with blade	14,3* 14,3*	15,1* 15,1*	12,6 13,3*		8,3* 8,3*
15	without blade	25,6* 25,6*	17,6 17,9*	11,8* 14,2*	7,8 12,0*	6,8 8,5* 26.60
	with blade	25,6* 25,6*	17,9* 17,9*	12,3 14,2*	8,4 12,0*	7,3 8,5*
10	without blade	30,5* 30,7*	17,1 20,6*	11,6 15,4*	7,6 12,4*	6,0 9,0* 27.74
	with blade	30,7* 30,7*	17,9* 20,6*	12,2* 15,4*	8,2 12,5*	6,5 9,0*
5	without blade	30,3 31,8*	16,9 22,1*	11,2 16,1*	7,2 12,3	5,7 10,0
	with blade	31,8 31,8*	17,7* 22,1*	12,0* 16,1*	7,8 12,7*	6,2 10,1*
0	without blade	30,6 34,5*	16,2 22,2*	10,3 16,2*	6,7 11,9	5,7 10,2
	with blade	32,2 34,5*	17,3 22,2*	11,1 16,2*	7,3 12,7*	6,2 10,9*
- 5	without blade	28,9 35,5*	15,2 22,6*	9,4 16,5*	6,4 11,2*	6,2 10,5*
	with blade	31,0 35,5*	16,3 22,6*	10,2 16,5*	7,0 11,2*	6,7 10,5*
- 10	without blade	28,3 35,3*	14,2 21,7*	8,9 13,6*		7,4 9,7*
	with blade	30,5 35,3*	15,3 21,7*	9,7 13,6*		8,1 9,7*
- 15	without blade	22,9* 22,9*	12,2* 12,2*			7,3* 7,3* 17.66
	with blade	22,9* 22,9*	12,2* 12,2*			7,3* 7,3*

## Stick 9'8"

ft	Under-carriage	10 ft	15 ft	20 ft	25 ft	ft
30	without blade		9,8* 9,8*			8,4* 8,4* 16.32
	with blade		9,8* 9,8*			8,4* 8,4*
25	without blade		11,8* 11,8*	9,9* 9,9*		7,5* 7,5* 21.98
	with blade		11,8* 11,8*	9,9* 9,9*		7,5* 7,5*
20	without blade		13,2* 13,2*	12,0 12,5*	7,9 8,2*	7,3* 7,3* 25.45
	with blade		13,2* 13,2*	12,5* 12,5*	8,2* 8,2*	7,3* 7,3*
15	without blade	23,3* 23,3*	17,1* 17,1*	11,7* 13,8*	7,9 11,8*	6,4 7,5* 27.58
	with blade	23,3* 23,3*	17,1* 17,1*	12,3* 13,8*	8,5 11,8*	6,9 7,5*
10	without blade	30,6* 31,0*	17,1 20,0*	11,5 15,0*	7,7 12,3*	5,7 7,9* 28.68
	with blade	31,0* 31,0*	17,9* 20,0*	12,1* 15,0*	8,3* 12,3*	6,2 7,9*
5	without blade	30,2* 31,5*	16,8* 21,8*	11,4 15,9*	7,3 12,3	5,4 8,8*
	with blade	31,5* 31,5*	17,7 21,8*	12,1 15,9*	7,9 12,6*	5,9 8,8*
0	without blade	30,6 34,0*	16,3 22,0*	10,5 16,1*	6,8 12,0	5,4 9,7
	with blade	31,8* 34,0*	17,5 22,0*	11,3 16,1*	7,4 12,7*	5,9 10,2*
- 5	without blade	29,0 35,2*	15,2 22,4*	9,6 16,4*	6,4 11,5	5,8 10,2*
	with blade	31,2 35,2*	16,4 22,4*	10,3 16,4*	7,0 11,9*	6,3 10,2*
- 10	without blade	28,3 35,6*	14,3 22,4*	8,9 14,7*		6,8 9,5*
	with blade	30,4 35,6*	15,5 22,4*	9,7 14,7*		7,4 9,5*
- 15	without blade	26,6* 26,6*	13,8 15,0*			7,8* 7,8* 19.12
	with blade	26,6* 26,6*	14,9 15,0*			7,8* 7,8*

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

The lift capacities on the load hook of the Liebherr quick change adapter 48 without attachment are stated in lb x 1000, and can be lifted 360° on firm, level supporting surface. Adjacent values are valid for the undercarriage when in the longitudinal position. Capacities are valid for 30" wide triple-grouser pads with adjusting cylinder in optimal position. Indicated loads are based on ISO 10567 standard and do not exceed 75 % of tipping or 87 % of hydraulic capacity (indicated by \*) or are limited through the allowed lift capacity of the load hook on the quick change adapter (26,455 lb). Without quick change adapter the lift capacities will increase by 551 lb, without bucket cylinder, link and lever they increase by an additional 617 lb.

# Equipment



## Undercarriage

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Triple grouser pads 24"	•	
Lifetime lubricated track rollers	•	
Track guide at each track frame	•	
Tracks sealed and greased	•	
Track chain tensioner (grease/hydraulic)	•	
Idler protection	•	
Lashing eyes	•	
Two-stage travel motors	•	
Triple grouser pads 20"		•
Triple grouser pads 30"		•
Three-piece track guide		•
Blade 9'10"		•
Blade 10'4"		•
Sprocket B 60 with dirt ejector		•
Sprocket D 6 C with dirt ejector		•
Conversion kit – track B 60 to D 6 C		•
Reinforced base-plate center-piece		•
Tool box		•



## Uppercarriage

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Non slip surfaces	•	
Rear view mirror on counterweight	•	
Rear view mirror right	•	
Handrails	•	
Main switch for electric circuit	•	
Radiator guard for cooling fan	•	
Engine hood with lift help	•	
Sound insulation	•	
Maintenance-free HD-batteries	•	
Tool box	•	
Tool kit	•	
Electric fuel tank filler pump		•
Foot pedal swing positioning brake		•
Customized colors		•



## Hydraulics

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Hydraulic tank shut-off valve	•	
Pressure compensation	•	
Pressure test ports	•	
Pressure storage for controlled lowering of attachments with engine turned off	•	
Filter with integrated fine filter area (5 µm)	•	
Electronic pump regulation	•	
Liebherr Positive Control	•	
Flow compensation	•	
Stepless work mode selector	•	
Additional hydraulic circuits		•
Filter for secondary circuit		•
Bio-degradable hydr. oil		•
Liebherr Tool Control		•



## Engine

s o

Turbo-charged	•	
Conform with standard level IIIA/Tier 3	•	
Unit pump system	•	
After-cooled	•	
Sensor controlled engine idling	•	
Air filter with pre-cleaner main- and safety element	•	
Fuel water separator	•	
Laminated radiator	•	
Cold starting aid		•



## Operator's Cab

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Storage tray	•	
Displays for engine operating condition	•	
Automatic air conditioning with defroster	•	
Mechanical hour meters, readable from outside the cab	•	
Roof right window and windshield armored	•	
Seat and consoles independently adjustable (6-way adjustable seat)	•	
Removable customized foot mat	•	
Closed storage space	•	
Dome light	•	
Coat hanger	•	
Multi-function display	•	
Emergency exit rear window	•	
Preparation for radio installation	•	
Right window made of one piece (without post)	•	
Rain hood over front window opening	•	
ROPS safety cab structure (capable of sweeping over)	•	
All tinted windows	•	
Door with sliding window	•	
Protection for the roof window	•	
Seat belt	•	
Sun roller blind	•	
Load bearing sectional profile structure, covered with deep-drawn panels	•	
Wiper/washer	•	
Cigarette lighter and ashtray	•	
Roof window wiper		•
Air power seat adjustment		•
Fire extinguisher		•
Foot support		•
Electric refrigerator box		•
Bullet proof window (fixed installation – can not be opened)		•
Stereo radio		•
Beacon		•
Protection for the roof window if roof window wiper		•
Sun visor		•
Sun protection roof for cab		•
Upper protection guard (FOPS)		•
Electric travel lock		•
Additional rear headlights		•
Two additional roof headlights		•



## Attachment

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Semi-automatic central lubrication system (except link and tilt geometry)	•	
Cylinders with shock absorbers	•	
SAE split flanges on all high pressure lines	•	
Work light and horn on boom	•	
Sealed pivots/Y sealant between bucket and stick	•	
26,455 lb lifting hook with safety link on bucket or on quick-coupler	•	
Automatic central lubrication system (except link and tilt geometry)		•
Central lubrication for lever with protection cover		•
Safety check valves for hoist cylinder		•
Stick sealed (between bucket and stick)		•
Overload warning device		•
Hydr. or mechanical quick change coupler		•
Likufix		•
Piston rod protection (bucket cylinder)		•
Hydraulic lines for additional tools		•
Hydr. lines, on stick, for clam operation/two-way selector valves for bucket/clam		•
Bucket link holder for clam, application		•
Liebherr line of buckets		•
Special application buckets		•
Liebherr line of clams and grapples		•
Customized colors		•

S = Standard, O = 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.**

**Liebherr Construction Equipment Co.**  
 4100 Chestnut Avenue, Newport News, VA 23607, USA  
 ☎ (757) 245 5251, Fax (757) 928 8701  
 www.liebherr.com, E-Mail: info.lce@liebherr.com