

# **Experience the progress** R 928

### Safety

- Fully unobstructed all-round visibility optional rear and side surveillance cameras
- Tiltable console for easy and safe access to cab
- Emergency exit via the rear cab window
- Right window and windshield in laminated and tinted glass

### **2** Equipment

- Large choice of sticks
- Longer lifespan of components thanks to a grouping of the lubrication points
- Safety check valves for hoist and stick cylinders (option)

### **3 Maintenance**

- Innovative servicing concept, with service points accessible from ground level
- Engine oil, hydraulic oil and fuel levels visible on display

### **4** Comfort

- Spacious, air-conditioned work space
- Mechanical seat with vertical suspension as standard
- Easy-to-use high resolution 9" colour touchscreen
- Completely retractable front cab window
- LED lighting as standard



### **5** Engine

- Liebherr engine equivalent to EU Stage IIIA and EPA Tier 3
- Automatic engine idling/speed increase, controlled via joystick sensors

### **6** Undercarriage

- Robust, reliable X-frame undercarriage, easy to secure thanks to its integrated eyelets
- Easy maintenance
- Maintenance-free track chains and track rollers with lifetime lubrication



# **Technical data**



Rating per ISO 9249	150 kW (204 HP) at 1,800 RPM
Torque	1,245 Nm at 1,100 RPM
Model	Liebherr D934 A7-23
Туре	4 cylinder in-line
Bore	122 mm
Stroke	150 mm
Displacement	7.01
Engine operation	4-stroke diesel
	Common-Rail
	Turbo-charged and after-cooler
Exhaust gas treatment	Engine equivalent to EU Stage IIIA / EPA Tier 3: with EGR
Cooling system	Water-cooled and oil cooler, after-cooled and fuel cooled
Air cleaner	Dry-type air cleaner with pre-cleaner
Fuel tank	6201
Electrical system	
Voltage	24V
Batteries	2 x 135 Ah/12 V
Alternator	Three-phase current 24V/140A
Engine idling	Sensor controlled



Power distribution	Via control valves, simultaneous and independent actuation of undercarriage, swing drive and equipment
Electric servo circuit	Electro-hydraulic control
Equipment and swing	Proportional via joystick levers
Travel	- Proportional control via foot pedals or removable levers - Automatic or manual speed adjustment
Additional functions	Proportional regulation via foot pedals or mini-joystick

### Hydraulic system

Hydraulic system	Positive Control hydraulic system. Demand-based, double independent pump flows Features high system dynamics and sensitivity provided by integrated system controlling Independent circuit for rotation
Hydraulic pumps	·
For equipment and travel drive	Liebherr, variable displacement, swashplate double pump
Max. flow	2 x 265 l/min.
Max. pressure	380 bar
For swing drive	Swashplate pump, closed-loop circuit
Max. flow	200 l/min.
Max. pressure	365 bar
Pump management	Electronic management synchronous to the control block
Hydraulic tank	2391
Hydraulic system	max. 475 l
Filtration	1 main return filter with integrated partial micro filtration (10 µm)
Cooling system	Compact cooler, consisting of a water cooler, with hydraulic oil cooler, gearbox oil cooler, fuel cooler and after-cooler cores and hydrostatically driven fan
MODE selection	Adjustment of engine and hydraulic performance via a mode pre-selector to match application, e.g. for espe- cially economical and environmentally friendly operation or for maximum digging performance and heavy-duty jobs
Engine speed and performance setting	Stepless adjustment of engine output and hydraulic power via engine speed

### $\bigcirc$ Swing drive

Drive	Liebherr swashplate motor with integrated brake valve and torque control
Transmission	Liebherr compact planetary reduction gears
Swing ring	Liebherr, sealed race ball bearing swing ring, internal teeth
Swing speed	0-10.1 RPM stepless
Swing torque	90 kNm
Holding brake	Wet multi-disc (spring applied, pressure released)



Cab	
Cab	ROPS safety cab structure optional (roll-over protection system according to ISO 12117-2:2008) with windscreen, totally or partially retractable (only upper part), under cab roof, LED work headlights integrated in the ceiling, a door with a sliding window (can be opened on both sides), large storing box and several stowing possibilities, shock-absorbing suspension, laminated right hand side and roof windows, all windows tinted, separate extensible window shades for the sunroof window and windscreen, cigarette lighter and 24V plug, cup holder, mobile phone storage net
Operator's seat	Liebherr-Standard seat, mechanically suspended with weight adjustment, vertical seat damping including consoles and joysticks. Seat and armrests adjustable separately and in combination (adjustable in length, height, and inclination)
Option	Liebherr-Comfort seat, airsprung with automatic weight adjustment, vertical and longitudinal seat damping including consoles and joysticks, with seat heating
Arm consoles	Oscillating consoles with seat, tiltable console left
Operation and displays	Large high-resolution operating unit, intuitive, colour display with touchscreen, video-compatible, numerous setting, control and monitoring options, e.g. air conditioning control, fuel consumption, machine and attachment parameters
Air-conditioning	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
Noise emission	
	00 dD(A)   (iidb)
ISO 6396	80 dB(A) = L <sub>pA</sub> (inside cab)

### Undercarriage

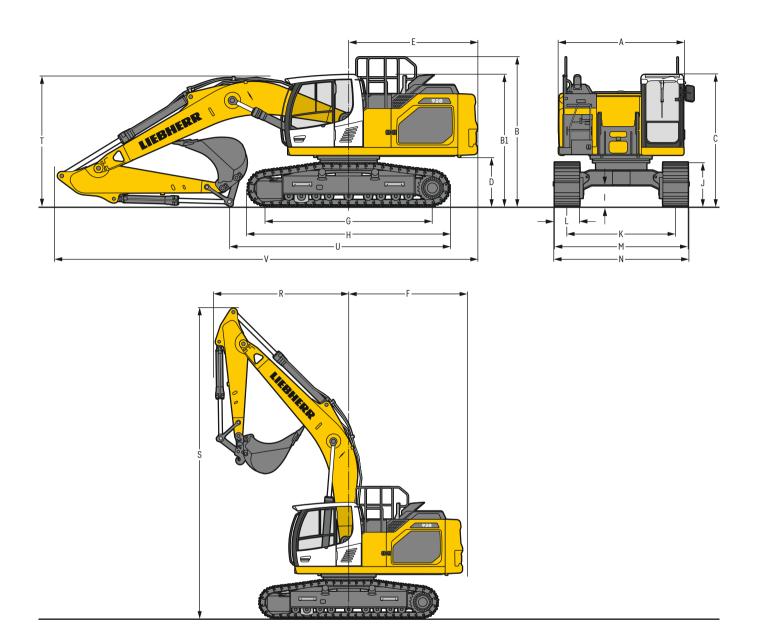
LC	Gauge 2,590 mm
Drive	Liebherr swashplate motor with brake valves on both sides
Transmission	Liebherr planetary reduction gear
Maximum travel speed	3.5 km/h low range
	5.8 km/h high range
Drawbar pull on crawler	261kN
Track components	D7, D7G, maintenance-free
Track rollers / Carrier rollers	9/2
Tracks	Sealed and greased
Track pads	Triple grouser
Holding brake	Wet multi-disc (spring applied, pressure released)
Brake valves	Integrated into travel motor
Lashing eyes	Integrated



# **Equipment**

quipinoni	
Туре	Combination of resistant steel plates and cast steel components
Hydraulic cylinders	Liebherr cylinders with seal and guidance systems
Bearings	Sealed, low maintenance
Lubrication	Liebherr central lubrication system
Hydraulic connections	Pipes and hoses equipped with SAE split-flange connections
Buckets	Standard equipped with Liebherr tooth system

# **Dimensions**



		LC			mm
Α	Uppercarriage width				2,9902)
В	Uppercarriage height				3,570
B1	Uppercarriage height (handrails folded)				3,130
С	Cab height				3,150
D	Counterweight ground clearance				1,175
E	Rear-end length				3,075
F	Tail swing radius				3,200
G	Wheelbase				3,990
Н	Undercarriage length				4,840
1	Undercarriage ground clearance				505
J	Track height				1,055
K	Track gauge				2,590
L	Track pad width	60	700	800	900
М	Width over tracks	3,19	3,290	3,390	3,490
N	Width over steps	3,19	3,190	3,3901)	3,3901)

 $<sup>^{1)}</sup>$  width with removable steps

<sup>2)</sup> without door stop device and spacer

		Stick length	Mono boom 6.00 m direct mounting
		m	mm
R	Front swing radius		3,650
S	Height with boom up		8,400
T	Boom height	2.50	3,200
		3.00	3,150
		3.50	3,150
U	Length on ground	2.50	6,100
		3.00	5,250
		3.50	4,760
٧	Overall length		10,100
	Bucket		1.65 m <sup>3</sup>

# **Transport dimensions**

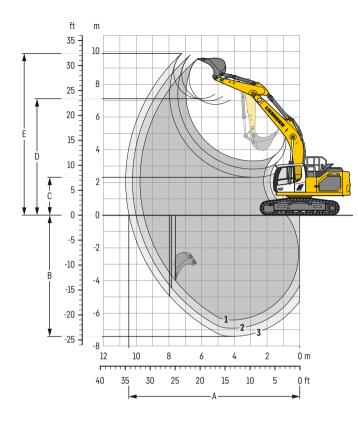
### removable elements disassembled

	Mono boom 6.00	Mono boom 6.00 m			
		m	ım		
Pad width	600	700	800	900	
Transport width	3,190	3,290	3,390	3,490	

	Stick	
	m	mm
Transport length		10,100
Transport height	2.50	3,200
	3.00	3,150
	3.50	3,150
Bucket		1.65 m <sup>3</sup>

### **Backhoe bucket**

### with mono boom 6.00 m



### Digging envelope

without quick coupler		1	2	3
Stick length	m	2.50	3.00	3.50
A Max. reach at ground level	m	9.54	10.01	10.44
B Max. digging depth	m	6.41	6.91	7.41
C Min. dumping height	m	3.32	2.82	2.32
D Max. dumping height	m	6.77	7.00	7.12
E Max. cutting height	m	9.54	9.78	9.89

#### **Forces**

without quick coupler		1	2	3
Stick digging force (ISO 6015)	kN	152	134	120
Bucket digging force (ISO 6015)	kN	187	187	187
Stick digging force (SAE J1179)	kN	145	129	116
Bucket digging force (SAE J1179)	kN	166	166	166

#### Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 4.6 t, mono boom 6.00 m, stick 3.00 m and bucket  $1.65\,\text{m}^3$  (1,020 kg).

Undercarriage			L	С	
Pad width	mm	600	700	800	900
Weight	kg	28,750	29,100	29,450	29,800
Ground pressure	kg/cm <sup>2</sup>	0.56	0.48	0.43	0.39

The operating weight includes the basic machine with counterweight 5.1t, mono boom  $6.00\,m$ , stick  $3.00\,m$  and bucket  $1.65\,m^3$  ( $1,020\,kg$ ).

Undercarriage			L	С				
Pad width	mm	600 700 800 9						
Weight	kg	29,250	29,600	29,950	30,300			
Ground pressure	ka/cm²	0.57	0.49	0 44	0.40			

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

	width							ercarriage pads 600 mm)		
	Cutting width	Capacity ISO 7451	Weight <sup>3)</sup>	Weight⁴		without aviolance plan	Stick l	ength (m)	with guide coupler	
	mm	m³	> kg	> kg	2.50	without quick coupler 3.00	3.50	2.50	with quick coupler 3.00	3.50
_			· · · · ·	· · · ·	2.00	0.00	0.00	2.00	0.00	0.00
wit	h count	erweigl	nt 4.6 t							
	650	0.55	580	590	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	850	0.75	620	640	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	1,050	0.95	710	740	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	1,250	1.15	810	830	<u> </u>	<u> </u>	<u> </u>	<b>A</b>	<u> </u>	<u> </u>
STD1)	1,250	1.25	890	910 880	<u> </u>	<u> </u>	<u> </u>	<b>A</b>	<u> </u>	<b>A</b>
ST	1,400 1,500	1.35 1.45	850 910	910	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	1,600	1.45	950	970	<u> </u>	<u> </u>	Ā	<u> </u>	<u> </u>	<u> </u>
	1,500	1.65	1,020	1,020			î			î
	1,600	1.75	1,060	1,080	<u> </u>	_ _	•		_ _	<u> </u>
	1,700	1.85	1,080	1,100	<b>A</b>		<b>A</b>	<b>A</b>		<b>A</b>
	650	0.55	640	650	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	850	0.75	690	720	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	1,050	0.95	800	830	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	1,250	1.15	910	940	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
~	1,250	1.25	1,010		<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
HD <sup>2</sup>	1,400	1.35	970	990	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	1,500	1.45	1,030	1,030	<b>A</b>	<u> </u>	<u> </u>	<b>A</b>		<b>A</b>
	1,600	1.55	1,070	1,090	<u> </u>	<b>A</b>	<u> </u>	<b>A</b>	<b>A</b>	<u> </u>
	1,500 1,600	1.65	1,160	1,160	<b>A</b>	<u> </u>	•	<b>A</b>	<u> </u>	•
	1,700	1.75 1.85	1,220 1,240	1,230	<b>A</b>	- :	<u> </u>	<b>A</b>	- :	
	1,700	1.00	1,240	1,230	_	-		_	-	-
wit	h count	erweigh	nt 5.1 t							
	650	0.55	580	590	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	850	0.75	620	640	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	1,050	0.95	710	740	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	1,250	1.15	810	830	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
=	1,250	1.25	890	910	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
STD1)	1,400	1.35	850	880	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
•	1,500	1.45	910	910	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	1,600	1.55	950	970	<b>A</b>	<b>A</b>	<u> </u>	<b>A</b>	<b>A</b>	<b>A</b>
	1,500	1.65	1,020	1,020	<b>A</b>	<b>A</b>	<u> </u>	<b>A</b>	<u> </u>	<u> </u>
	1,600	1.75	1,060	1,080	<b>A</b>	<u> </u>		<b>A</b>	<u> </u>	-
_	1,700	1.85 0.55	1,080	1,100	<b>A</b>	<u> </u>		<b>A</b>	<u> </u>	
	850	0.55	690	720	<b>A</b>	<b>A</b>	<b>1</b>	<b>A</b>	<b>A</b>	<b>A</b>
	1,050	0.75	800	830	<u> </u>	<u> </u>	Ā	<u> </u>	<u> </u>	<u> </u>
	1,250	1.15	910	940	_			_		<u> </u>
	1,250	1.25		1,030	_			_		<u> </u>
<b>HD</b> <sup>2)</sup>	1,400	1.35	970	990		_ _	_ _	<b>A</b>	_ _	<u> </u>
-	1,500	1.45	1,030	1,030	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	1,600	1.55	1,070	1,090	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	1,500	1.65	1,160	1,160	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
	1,600	1.75	1,220	1,230	<b>A</b>	<b>A</b>		<b>A</b>	<b>A</b>	
	1,700	1.85	1,240	1,250	<b>A</b>	<b>A</b>	•	<b>A</b>	•	<b>A</b>

<sup>\*</sup> Indicated loads are based on ISO 10567, at maximum reach, and may be swung 360° on firm and even ground  $^{1\!0}$  Standard bucket with teeth Z 40  $^{2\!0}$  HD bucket with teeth Z 40

Max. material weight  $\triangle$  =  $\leq$  2.0 t/m³,  $\blacksquare$  =  $\leq$  1.8 t/m³,  $\triangle$  =  $\leq$  1.65 t/m³,  $\blacksquare$  =  $\leq$  1.5 t/m³

<sup>3)</sup> Bucket for direct mounting

<sup>4)</sup> Bucket for mounting to quick coupler SWA 48 (250 kg) Other buckets available upon request

### **Lift capacities**

### with mono boom 6.00 m, counterweight 4.6 t and track pads 600 mm

#### Stick 2.50 m

<u>e</u>	[D	3.0	) m	4.5	5 m	6.0	) m	7.5	m	9.0	m		<u>~</u> 0	₽
Under- carriage	m m	- <del>4</del> )	Ŀ	- <del>-</del> 5)		-£)		- <del>4</del>	Ŀ	-£)	Ŀ	- <u>-</u>		_ m
	7.5					7.7	8.1*					7.5	7.7*	6.1
	6.0					7.6	8.7*					5.7	7.5*	7.2
	4.5	17.9*	17.9*	11.3	11.7*	7.3	9.5*	5.2	7.8			4.9	7.4	7.8
	3.0			10.5	14.1*	7.0	10.5*	5.1	7.7			4.5	6.8	8.1
2	1.5			9.9	15.4*	6.7	10.5	4.9	7.5			4.4	6.7	8.1
	0			9.7	15.4*	6.5	10.3	4.8	7.4			4.5	6.9	7.9
	- 1.5	13.3*	13.3*	9.7	14.3*	6.5	10.3					5.0	7.7	7.3
	-3.0	15.5*	15.5*	9.9	12.2*	6.6	9.2*					6.1	8.5*	6.4
	- 4.5	10.2*	10.2*	8.0*	8.0*							7.5*	7.5*	4.7

#### Stick 3.00 m

<u>. e</u>	1	3.0	) m	4.5	5 m	6.0	) m	7.5	m	9.0	m	1	<u>~</u> 0	=
Under- carriag	] <b>#</b> m	- <del>4</del>		-£)		- <del>-</del> 5)		- <u>4</u>	Ŀ	- <del>4</del>	Ŀ	-40		m
	7.5					7.7*	7.7*					6.3*	6.3*	6.7
	6.0					7.7	8.0*	5.4	6.9*			5.1	6.1*	7.7
	4.5			10.8*	10.8*	7.4	8.9*	5.2	7.9			4.5	6.2*	8.3
	3.0			10.7	13.2*	7.0	10.0*	5.1	7.7			4.2	6.2	8.6
2	1.5			10.0	15.0*	6.7	10.5	4.9	7.5			4.0	6.1	8.6
	0	6.7*	6.7*	9.7	15.4*	6.5	10.3	4.8	7.4			4.1	6.3	8.4
	-1.5	12.2*	12.2*	9.6	14.8*	6.4	10.2	4.7	7.3			4.5	6.9	7.8
	-3.0	17.4*	17.4*	9.7	13.1*	6.4	9.9*					5.3	8.2*	6.9
	-4.5	12.6*	12.6*	9.7*	9.7*							7.5	7.7*	5.5

#### Stick 3.50 m

a)	t 1	3.0	) m	4.5	5 m	6.0	) m	7.5	m	9.0	m	1	<b>~</b> 0	⊋
Under- carriag	Î Ø	-£)		- <u>-</u>		- <u>4</u>	Ŀ	<b></b> □	Ŀ	<b>⊶</b> ‡	Ŀ			 m
	7.5											5.2*	5.2*	7.2
	6.0							5.4	6.7*			4.7	5.1*	8.1
	4.5					7.5	8.3*	5.3	7.4*			4.1	5.2*	8.7
	3.0	11.9*	11.9*	10.8	12.3*	7.1	9.5*	5.1	7.7			3.8	5.4*	9.0
2	1.5	5.5*	5.5*	10.1	14.4*	6.7	10.5	4.9	7.5	3.7	5.7	3.7	5.7	9.0
	0	7.7*	7.7*	9.6	15.3*	6.4	10.2	4.7	7.3			3.8	5.8	8.8
	-1.5	11.7*	11.7*	9.5	15.0*	6.3	10.1	4.7	7.2			4.1	6.3	8.3
	-3.0	17.2*	17.2*	9.6	13.7*	6.3	10.1					4.7	7.3	7.4
	-4.5	14.7*	14.7*	9.8	11.0*	6.5	8.0*					6.3	7.8*	6.1



The load values are quoted in tons (t) at stick end (without bucket), and may be swung 360° on firm and even ground. Adjacent values are valid for the undercarriage when in the longitudinal position.

Capacities are valid for 600 mm wide track pads. Indicated loads are based on ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity (indicated via \*). Without bucket cylinder, link and lever the lift capacities will increase by 345 kg. Lifting capacity of the excayator is limited by machine stability and hydraulic capacity.

link and lever the lift capacities will increase by 345 kg. Lifting capacity of the excavator is limited by machine stability and hydraulic capacity.

According to European Standard, EN 474-5: In the European Union excavators have to be equipped with an overload warning device, a load diagram and automatic safety check valves on hoist cylinders and stick cylinder(s), when they are used for lifting operations which require the use of lifting accessories.

Determine maximum load lift from load lift chart displayed in the operator's cab or from load lift chart detailed in the operator's manual supplied with the machine.

### **Lift capacities**

### with mono boom 6.00 m, counterweight 5.1t and track pads 600 mm

Sti		.5	

<u>e</u>	TAL	3.0	) m	4.5	5 m	6.0	) m	7.5	m	9.0	m	1	<b>~</b> 0	₽
Under- carriage	m m	-£)	Ŀ	- <del>4</del>		-£)		<b>-</b> ∰	Ŀ	- <del>4</del>	Ŀ	- <u>-</u>		_ m
	7.5					8.0	8.1*					7.7*	7.7*	6.1
	6.0					7.9	8.7*					6.0	7.5*	7.2
	4.5	17.9*	17.9*	11.7*	11.7*	7.7	9.5*	5.5	8.2			5.2	7.6*	7.8
	3.0			11.0	14.1*	7.3	10.5*	5.3	8.0			4.8	7.1	8.1
2	1.5			10.4	15.4*	7.0	10.9	5.2	7.8			4.6	7.0	8.1
	0			10.2	15.4*	6.8	10.7	5.1	7.7			4.8	7.2	7.9
	-1.5	13.3*	13.3*	10.3	14.3*	6.8	10.7					5.3	8.0	7.3
	-3.0	15.5*	15.5*	10.4	12.2*	6.9	9.2*					6.4	8.5*	6.4
	-4.5	10.2*	10.2*	8.0*	8.0*							7.5*	7.5*	4.7

#### Stick 3.00 m

		3.0	) m	4.5	5 m	6.0	) m	7.5	m	9.0	m	1	<u></u>	=
Under- carriage	m m	- <del>4</del>		-5)	Ŀ	-40		<b></b> 5□	Ŀ	- <del>4</del>	Ŀ	-40		m
	7.5					7.7*	7.7*					6.3*	6.3*	6.7
	6.0					8.0	8.0*	5.6	6.9*			5.4	6.1*	7.7
	4.5			10.8*	10.8*	7.7	8.9*	5.5	7.9*			4.7	6.2*	8.3
	3.0			11.2	13.2*	7.4	10.0*	5.3	8.0			4.4	6.5*	8.6
2	1.5			10.5	15.0*	7.0	11.0	5.2	7.8			4.3	6.4	8.6
	0	6.7*	6.7*	10.2	15.4*	6.8	10.7	5.0	7.7			4.4	6.6	8.4
	-1.5	12.2*	12.2*	10.1	14.8*	6.7	10.6	5.0	7.6			4.7	7.2	7.8
	-3.0	17.4*	17.4*	10.2	13.1*	6.8	9.9*					5.6	8.2*	6.9
	-4.5	12.6*	12.6*	9.7*	9.7*							7.7*	7.7*	5.5

#### Stick 3.50 m

<u>e</u>		3.0	) m	4.5	5 m	6.0	) m	7.5	m	9.0	m	1	<u></u>	þ
Under- carriage	m m	- <u>4</u>	Ŀ			-£	j	<b></b> □	Ė	<b>⊶</b> ‡	Ŀ	- <u>-</u>		m
	7.5											5.2*	5.2*	7.2
	6.0							5.7	6.7*			4.9	5.1*	8.1
	4.5					7.8	8.3*	5.5	7.4*			4.3	5.2*	8.7
	3.0	11.9*	11.9*	11.3	12.3*	7.4	9.5*	5.3	8.0			4.0	5.4*	9.0
2	1.5	5.5*	5.5*	10.6	14.4*	7.0	10.6*	5.1	7.8	4.0	5.9	3.9	5.9*	9.0
	0	7.7*	7.7*	10.2	15.3*	6.8	10.7	5.0	7.6			4.0	6.1	8.8
	-1.5	11.7*	11.7*	10.0	15.0*	6.6	10.5	4.9	7.6			4.3	6.6	8.3
	-3.0	17.2*	17.2*	10.1	13.7*	6.6	10.3*					5.0	7.7	7.4
	- 4.5	14.7*	14.7*	10.3	11.0*	6.8	8.0*					6.6	7.8*	6.1



The load values are quoted in tons (t) at stick end (without bucket), and may be swung 360° on firm and even ground. Adjacent values are valid for the undercarriage when in the longitudinal position. Capacities are valid for 600 mm wide track pads. Indicated loads are based on ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity (indicated via \*). Without bucket cylinder, link and lever the lift capacities will increase by 345 kg. Lifting capacity of the excavator is limited by machine stability and hydraulic capacity.

According to European Standard, EN 474-5: In the European Union excavators have to be equipped with an overload warning device, a load diagram and automatic safety check valves on hoist cylinders

and stick cylinder(s), when they are used for lifting operations which require the use of lifting accessories.

Determine maximum load lift from load lift chart displayed in the operator's cab or from load lift chart detailed in the operator's manual supplied with the machine.

### **Attachments**



### Rigid ditch cleaning bucket

GRL 04, for direct mounting	g							
Cutting width	mm	1,500	2,000	2,010	2,400			
Capacity	m <sup>3</sup>	0.50	0.70	0.85	0.85			
Weight	kg	400	500	530	580			
GRL 04, for mounting to qu	ick coupler SWA	48						
Cutting width	mm	1,500	1,500	2,000	2,000	2,000	2,400	2,400
Capacity	m <sup>3</sup>	0.50	0.95	0.70	1.20	1.25	0.85	1.15
Weight	kg	430	560	400	640	600	600	650



### Tiltable ditch cleaning bucket

GRL 90, 2 x 50° tiltable, for	direct mounting	g									
Cutting width	mm	1,600	2,000	2,000	2,000	2,200	2,400	2,800			
Capacity	m <sup>3</sup>	0.80	0.50	0.70	1.00	1.15	0.85	1.45			
Weight	kg	798	686	819	883	920	885	1,009			
GRL 90, 2 x 50° tiltable, for mounting to quick coupler SWA 48											
Cutting width	mm	1,600	2,000	2,000	2,000	2,200	2,200	2,200	2,400	2,400	2,800
Capacity	m <sup>3</sup>	0.80	0.50	0.70	1.00	0.80	1.15	1.40	0.85	1.25	1.85
Weight	ka	850	690	880	940	880	980	1.000	890	1.000	1.088



#### Tilt bucket

SL 90, 2 x 50° tiltable, for di	rect mounting									
Cutting width	mm	1,600	1,600	1,600						
Capacity	m <sup>3</sup>	0.80	1.00	1.35						
Weight	kg	768	820	918						
SL 90, 2 x 50° tiltable, for m	ounting to quid	k coupler	SWA 48							
Cutting width	mm	1,500	1,500	1,600	1,600	1,600	1,600	1,600	1,600	1,600
Capacity	m <sup>3</sup>	0.60	1.20	0.80	1.00	1.35	1.55	1.00	1.35	1.55
Weight	kg	680	970	820	890	970	1,035	1,006	1,184	1,550
HD version								Χ	Χ	Χ



### Clamshell grab

GMZ 40, clamshell buck	ets, for mounting t	o quick coup	ler SWA 48 (exists for direct m	nounting)			
Cutting width	mm	800	1,000	1,200	1,400	1,600	
Capacity	m <sup>3</sup>	0.65	0.85	1.05	1.20	1.40	
Weight	kg	-	-	-	1,245	1,333	



Sorting grab		perforate	d		ribbed			closed			stone tong
SG 30, for direct mounting											
Cutting width	mm	1,000	1,200	1,400	1,000	1,200	1,400	1,000	1,200	1,400	1,020
Capacity	m³	0.85	1.00	1.15	0.75	0.90	1.05	0.85	1.00	1.15	0.85
Weight	kg	1,700	1,570	1,850	1,775	1,885	1,990	1,730	1,810	1,890	1,765
SG 30, for mounting to quick	coupler SWA	48									
Cutting width	mm	1,000	1,200	1,400	1,000	1,200	1,400	1,000	1,200	1,400	1,020
Capacity	m³	0.85	1.00	1.15	0.75	0.90	1.05	0.85	1.00	1.15	0.85
Weight	kn	1 700	1 570	1.850	1 775	1 885	1000	1 730	1 810	1 800	1 745



### Tiltrotator

TR 25, for mounting to quick coupler SWA 48				
Weight	kg	720		
Rotation		360° 2 x 50°		
Tilt		2 x 50°		

### **Serial equipment**



#### Undercarriage

Lashing eyes

Sprocket with dirt ejector

Track and carrier rollers, sealed and lifetime-lubricated

Tracks, sealed and greased

### **Uppercarriage**

Access platforms without protruding parts

Anti-skid surfaces

Automatic swing brake lock

Engine hood with gas spring opening

Filters accessible from ground level

Hydraulic oil level, visible from ground level

Lockable service doors

Lockable storage and accessories compartment

Main switch, accessible from ground level

Main switch, electric, with timer

Main switch, manual, lockable

Positioning swing brake manual

Protection grid on radiator fan

Sound insulation

Swing-out radiators

Tool set including storage case

Windshield washer fluid tank, accessible from ground level



### Hydraulic system

Dedicated swing circuit

Filter with integrated fine filters

Hydraulic pressure measuring ports

Liebherr Positive Control system with 2 independent circuits

Pressure accumulator for controlled lowering of equipment with engine turned off



### Engine

Air filter with automatic dust ejector

Automatic engine idling / speed increase, controlled via joystick sensors

Common-Rail injection system

Engine oil dipstick

Exhaust gas after-treatment system - EGR

Fixed geometry turbocharger

Fuel fine filter

Fuel pre-filter and water separator

Fuel priming pump

Intercooler

Power Pack equivalent to EU Stage IIIA/EPA Tier 3



2" seat belt with retractor

9" multifunction colour touchscreen

Air conditioning, automatic, tri-zone, controlled via display

Armrests adjustable in length, height and inclination

Bottle holder

Cab air filters housing, accessible from ground level

Cab door sliding windows

Cigarette lighter

Coat hook

Electric socket in cabin (24V)

Emergency hammer

Engine coolant level, visible from the cab

Engine oil level on touchscreen

Footrest

Fuel consumption on touchscreen

Fuel level on touchscreen

Hydraulic oil level on touchscreen

Interior lighting

Laminated right hand side window

Laminated roof window

LiDAT Plus (Liebherr data transfer system)

Mechanical hour meter, visible from ground level

Mobile phone storage net

Movement priority between swing and boom, adjustable via touchscreen

Movement priority for stick-in, adjustable via touchscreen

Operating modes

Power modes

Rain hood over front window opening

Rearview mirror

Rear window emergency exit

Retractable laminated two-piece windscreen

Roll-down sun blinds for windscreen and roof window

Rubber floor mat, fixed on floor and removable

Shortkey buttons on joystick configurable Stepless adjustable engine speed

Storage nets

Storage spaces

Swing braking torque adjustable via touchscreen

Swing drive gearbox oil level, visible from the cab

Tiltable console left

Tinted windows

Visco-elastic damping

Windscreen wiper and washer



#### **Equipment**

Anti-drift system boom cylinders

Anti-drift system stick cylinder Boom cylinders regeneration

Pivot points made of cast steel

SAE split flanges on high pressure lines

Stick cylinder regeneration

# **Equipment standard / option**

### Undercarriage

Chain guide 1 piece	•
Chain guide 2 pieces	+
Chain guide 3 pieces	+
Chain guide 4 pieces	+
Cover and base plate for undercarriage centre section	•
Reinforced cover and base plate for undercarriage centre section	+
Steps	•
Steps wide	+
Track pads triple grouser 600 mm	•
Track pads triple grouser 700 / 800 / 900 mm	+
Undercarriage LC	+

### □ Uppercarriage

• • •	
Batteries high capacity	+
Batteries standard capacity	•
Centralised lubrication system (automatic)	+
Centralised lubrication system (manual)	•
Counterweight heavy 5.1 t	+
Counterweight standard 4.6 t	•
External starting aid (24 V)	+
Front right rearview mirror	•1)
Fuel anti-theft protection	+
Headlight on uppercarriage, front right, LED, 1 piece, protection included	●1)
Headlight on uppercarriage, front right, LED+, 1 piece, protection included	+1)
Headlight on uppercarriage, lateral right, LED+, 1 piece	+1)
Headlight on uppercarriage, lateral left, LED+, 1 piece	+1)
Headlights on uppercarriage, rear, LED+, 2 pieces	+1)
Lockable fuel tank cap	•
Lockable fuel tank cap with padlock	+
Lockable storage box	+
Rearview mirror on counterweight	•
Safe uppercarriage side access platform	+
Tank refilling pump fuel	+
Uppercarriage bottom closure sheets	•

### Hydraulic system

•	
Filter for hydraulic hammer return flow	+
High pressure circuit flow summation	+
High pressure circuit with Tool Control (20 attachment adjustments on display)	+
Liebherr hydraulic oil	•
Liebherr hydraulic oil, adapted for extreme climate conditions	+
Liebherr hydraulic oil, biodegradable	+
Medium pressure circuit	+

### Engine

Air pre-filter with cyclonical dust trap	+
Air pre-filter with oil bath dust trap	+
Pre-heating system for fuel	+

### Cab

Acoustic travel alarm deactivatable	+
Auxilary heater programmable	+
Dark tinted windows	+
Electric socket in cabin (12 V)	+
Emergency stop in cab	+
FGPS front guard	+
FGPS front guard tiltable	+
FOPS top guard	+
Handrests elevated for joysticks	+
Headlights on cab, front, LED, 2 pieces	<b>●</b> 1)
Headlights on cab, front, LED+, 2 pieces	+1)
Luminosity control (LED+ headlights)	+1)
Mini-joystick proportional	+
Operator seat Comfort	+
Operator seat Standard	•
Cvortous warning cycloni	+
Radio Comfort	+
Radio pre-installation	•
noar non momentug camera	+
Right hand side view monitoring camera	+
noor military protection grid	+
Not o dately dub directare (100 12117 2)	+
notating bodoon on odbin, EES, 2 picco	+
Sun visor	+
Windscreen bottom protection grid	+

### Equipment

Floating boom	+
Headlight on boom, right, LED, 1 piece	•1)
Headlight on boom, right, LED+, 1 piece	+1)
Liebherr bucket range	+
Liebherr tooth system	+
Mono boom 6.00 m	+
Pipe fracture safety valve for stick cylinder	+
Pipe fracture safety valves for boom cylinders	+
Quick coupler SWA 48 hydraulic	+
Quick coupler SWA 48 mechanical	+
Stick 2.50 m	+
Stick 3.00 m	+
Stick 3.50 m	+
Stick bottom protection	+

#### • = Standard. + = Option

 $^{1\!\mathrm{J}}$  Equipment not individually available, but only as predefined packages Non-exhaustive list, please contact us for further information.

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.

### **Notes**

### **The Liebherr Group**



#### Global and independent: more than 70 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 business now employing nearly 51,000 people and comprising over 140 companies across every continent.

The parent company is Liebherr-International AG in Bulle, Switzerland, whose associates are exclusively members of the Liebherr family.

#### Leaders and pioneers

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 founder, sharing a passion to produce innovative products and a determination to provide world-leading equipment and machinery.

#### Diversified portfolio

The company is one of the world's biggest construction equipment manufacturers and provides high-quality, user-oriented products and services to sectors including: earthmoving, material handling, deep foundations, mining, mobile and crawler cranes, tower cranes, concrete production and distribution, maritime cranes, aerospace and transportation, gear technology and automation, refrigeration and freezing, components and hotels.

#### **Customised care**

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. That customer focus does not end with delivery of a product but continues through a comprehensive range of back-up and support services.

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