

Equipment Information Demolition Excavator

R 940

Litronic®



Engine

200 kW / 272 HP

Stage V

Tier 4 Final

Non-regulated only for select markets

Operating Weight

48,700 – 63,900 kg

Working Height

23 m

H/2: 20 m

LIEBHERR

Technical Data



Engine

Rating per ISO 9249	200 kW (272 HP) at 1,800 RPM
Torque	1,400 Nm at 1,100 RPM
Model	Liebherr D944 A7-25 (Stage V) or Liebherr D944 A7-24 (Tier 4 Final) or Liebherr D944 A7-20 (non-regulated only for select markets)
Type	4 cylinder in-line
Bore	130 mm
Stroke	150 mm
Displacement	7.964 l
Engine operation	4-stroke diesel Common-Rail, monoturbo
Exhaust gas treatment	DOC + DPF + SCR (Stage V) or SCR (Tier 4 Final) or without EGR (non-regulated only for select markets)
Cooling system	Water-cooled and integrated motor oil cooler, after-cooled and fuel cooled
Air cleaner	Dry-type air cleaner with pre-cleaner, primary and safety elements
Fuel tank	770 l
Urea tank	90 l
Electrical system	
Voltage	24 V
Batteries	2 x 180 Ah/ 12 V
Starter	24 V/7.8 kW
Alternator	Three-phase current 28 V/ 140 A
Engine idling	Sensor controlled
Motor management	Connection to the integrated excavator system controlling via CAN-BUS to the economical utilisation of the service that is available



Hydraulic Controls

Power distribution	Via control valves in single block with integrated safety valves
Flow summation	To boom and stick
Closed-loop circuit	For uppercarriage swing drive
Servo circuit	
Equipment and swing	Proportional via joystick levers
Travel	– Proportional control via foot pedals or removable levers – Speed pre-selection
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 315 l/min.
Max. pressure	380 bar
For swing drive	Reversible, variable displacement, swashplate pump, closed-loop circuit
Max. flow	205 l/min.
Max. pressure	400 bar
Pump management	Electronic pump management via the integrated system controlling (CAN-BUS) synchronous to the control block
Hydraulic tank	380 l
Hydraulic system	1,100 l with demolition equipment
Hydraulic oil filter	1 full flow filter (10 µm) in return line with integrated fine filter area (5 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 especially economical and environmentally friendly operation or for maximum digging performance and heavy-duty jobs
RPM adjustment	Stepless adjustment of engine output via RPM at each selected mode
Tool Control	20 pre-adjustable pump flows and pressures for add-on attachments
Attachment system	
Flow	315 l/min.
Pressure	380 bar
Attachment rotation system	
Flow	30 l/min.
Pressure	140 bar
Max. pressure	180 bar



Swing Drive

Drive	Liebherr swashplate motor with integrated brake valve
Transmission	Liebherr compact planetary reduction gears
Swing ring	Liebherr, sealed race ball bearing swing ring, internal teeth
Swing speed	0 – 7.5 RPM stepless
Swing torque	115,2 kNm
Holding brake	Wet multi-disc (spring applied, pressure released)



Operator's Cab

Cab	Safety cab structure, headlight integrated under the protection, a door with a sliding window (can be opened on both sides), large storing box and several stowing possibilities, shock-absorbing suspension, sound damping insulating, tinted laminated safety glass, separate window shades for the sunroof window and windscreen, cigarette lighter and 12 V plug, storage bins, lunchbox, cup holder, polycarbonate windows on right side
Operator's seat	Liebherr-Comfort seat, airsprung with automatic weight adjustment, vertical and longitudinal seat damping including consoles and joysticks. Seat and armrests adjustable separately and in combination, seat heating as standard
Arm consoles	Oscillating consoles with seat, tiltable console left
Operation and displays	Large high-resolution colour display with intuitive operation via touchscreen, video, additional colour display for front and side camera, versatile adjusting, control and monitoring facilities, e.g. climate control, implement and attachment parameters, specific demolition display
Air-conditioning	Standard automatic air-conditioning, ambient air function, fast de-icing and demisting at the press of a button, air vents can be operated via a menu. Ambient 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 The air conditioning system contains fluorinated greenhouse gases
Refrigerant	R134a
Global warming potential	1,430
Quantity at 25 °C *	1,260 g
CO ₂ equivalent	1.80 t
Vibration emission**	
Hand/arm vibrations	< 2.5 m/s ² , according with ISO 5349-1:2001
Whole-body vibrations	< 0.5 m/s ²
Measuring inaccuracy	According with standard EN 12096:1997
Noise emission	
ISO 6396	L _{pA} (inside cab) = 72 dB(A)
2000/14/EC	L _{WA} (surround noise) = 105 dB(A)



Undercarriage

Variantes	
VH-HD	Hydraulic variable gauge
LC-V	Mechanical variable gauge
LC/NLC	Standard
Drive	Liebherr swashplate motor with integrated brake valve
Transmission	Liebherr compact planetary reduction gear
Maximum travel speed	Low range 2.2 km/h High range 3.1 km/h
Drawbar pull on crawler	VH-HD: 400 kN LC-V: 347 kN LC/NLC: 296 kN
Track components	D7, D7G, maintenance-free
Track rollers/Carrier rollers	VH-HD: 10/3 LC-V: 10/3 LC/NLC: 9/2
Tracks	Sealed and greased
Track pads	Triple grouser
Holding brake	Wet multi-disc (spring applied, pressure released)



Equipment

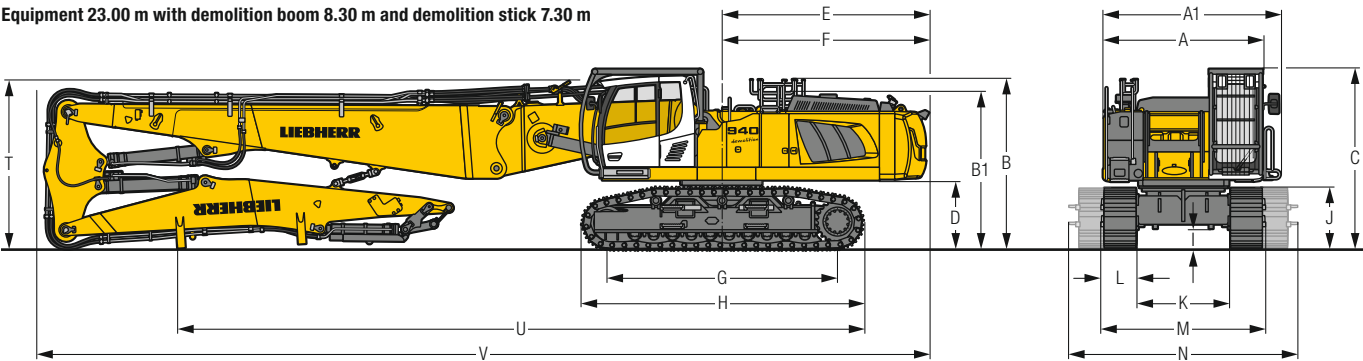
Type	Combination of resistant steel plates and cast steel components
Hydraulic cylinders	Liebherr cylinders with seal and guidance systems
Bearings	Sealed, low maintenance
Lubrication	Automatic central lubrication system (except link and tilt geometry)
Hydraulic connections	Pipes and hoses equipped with SAE split-flange connections
Buckets	Standard equipped with Liebherr tooth system

* Valid for standard machine without operator's cab elevation and without height adjustable cab

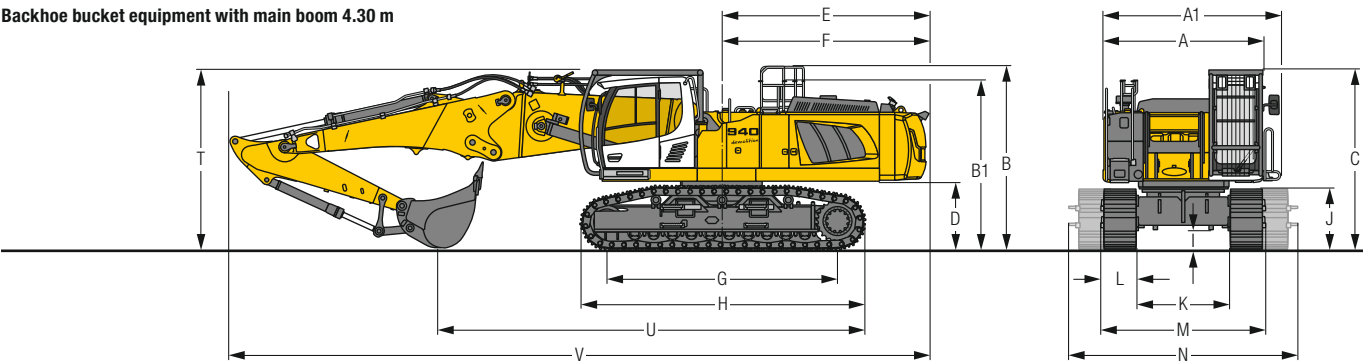
** For the risk assessment according to 2002/44/EC see ISO/TR 25398:2006

Dimensions

Equipment 23.00 m with demolition boom 8.30 m and demolition stick 7.30 m



Backhoe bucket equipment with main boom 4.30 m



	VH-HD	mm	LC-V	mm	LC	mm	NLC	mm
A	Uppercarriage width	2,985**		2,985**		2,985**		2,985**
A1	Uppercarriage width with catwalks	3,325		3,325		3,325		3,325
B	Uppercarriage height	3,450		3,560		3,405		3,405
B1	Uppercarriage height (handrails folded)	3,190		3,300		3,145		3,145
C	Cab height	3,400		3,510		3,355		3,355
D	Counterweight ground clearance	1,250		1,360		1,205		1,205
E	Rear-end length	3,945		3,945		3,945		3,945
F	Tail swing radius	3,945		3,945		3,945		3,945
G	Wheelbase	4,390		4,400		4,108		4,108
H	Undercarriage length	5,370		5,365		5,030		5,030
I	Undercarriage ground clearance	440		760		535		535
J	Track height	1,140		1,165		1,070		1,070
K	Track gauge	2,380 – 3,300		2,390 – 2,890		2,590		2,390
L	Track pad width	600		600		600		600
M	Width over tracks	2,980 – 3,930		2,990 – 3,490		3,190		2,990
N	Width over steps	3,090 – 4,310*		3,240 – 3,740*		3,180		2,980

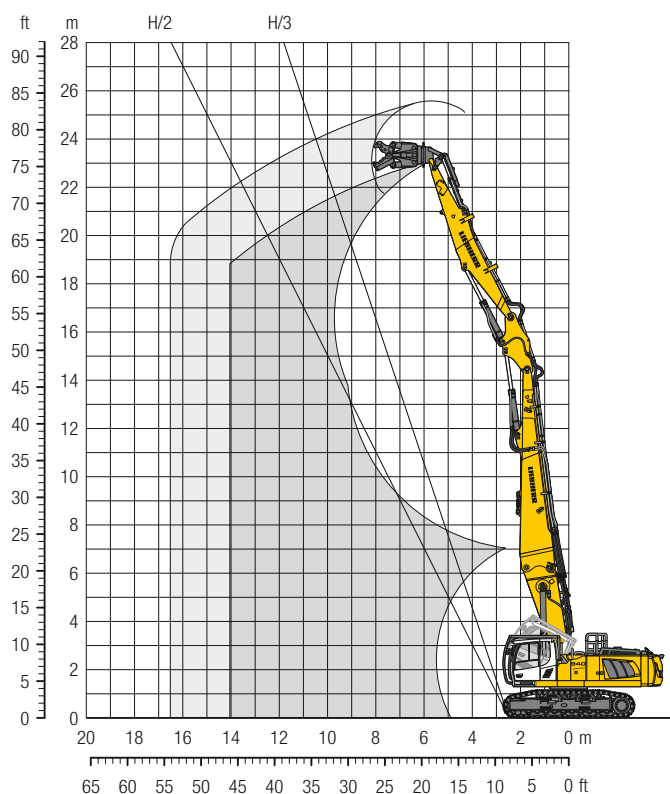
* width with removable steps

** without door stop device and spacer

Demolition equipment 23.00 m				
	VH-HD	LC-V	LC	NLC
T Boom height	3,200	3,300	3,150	3,150
U Length on ground	13,100	13,050	12,900	12,900
V Overall length	16,950	16,950	16,950	16,950

		Stick length m	Backhoe bucket equipment			
			VH-HD	LC-V	LC	NLC
T	Boom height	2,50	3,400	3,450	3,400	3,400
		2,80	3,450	3,500	3,450	3,450
U	Length on ground	2,50	8,150	8,000	7,800	7,800
		2,80	7,950	7,800	7,600	7,600
V	Overall length	2,50	13,400	13,400	13,400	13,400
		2,80	13,400	13,400	13,400	13,400

Demolition Equipment 23,00 m



Reach Limitation

		10 m	12 m	14 m
Demolition boom 8.30 m + Intermediate boom + Demolition stick 7.30 m VH-HD-Undercarriage		Attachment weight*		
		in t		
	lengthwise	3.00	3.00	3.00
	transverse	3.00	2.75	2.50
LC-V-Undercarriage		3.00	3.00	2.75
	lengthwise	3.00	2.25	1.75
LC-Undercarriage		3.00	3.00	2.75
	lengthwise	2.00	1.75	—
NLC-Undercarriage		3.00	3.00	2.50
	transverse	1.50	1.25	—

* included quick coupler, adapter plate and attachment

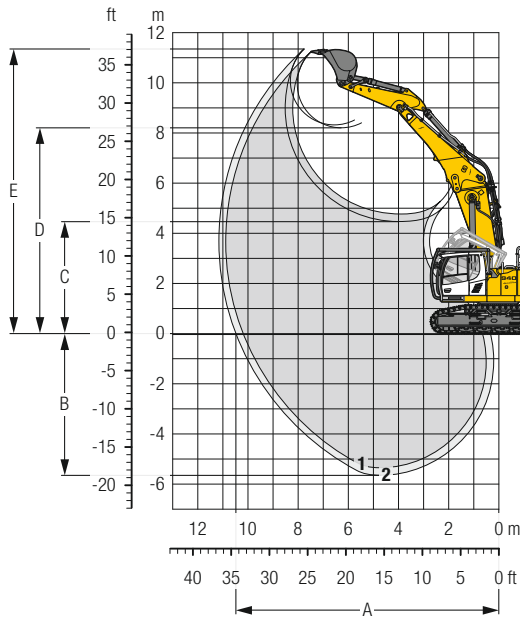
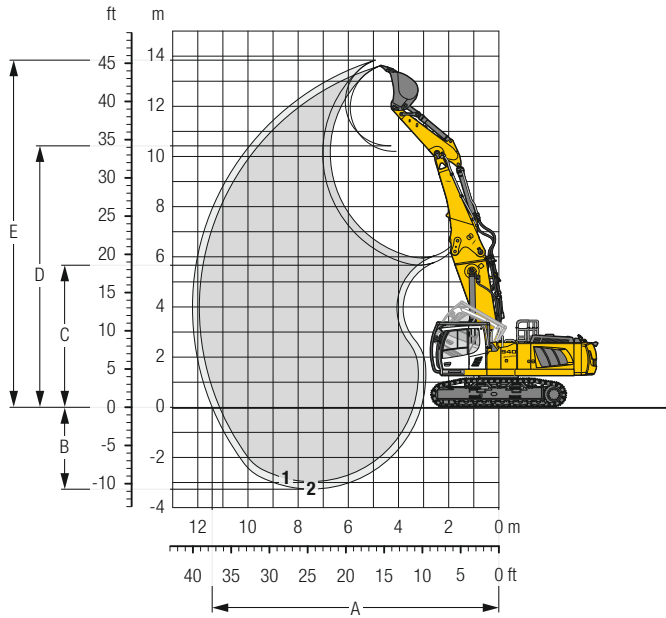
Operating Weight and Ground Pressure

The operating weight includes the basic machine with counterweight 11.0 t, demolition boom 8.30 m, intermediate boom 2.25 m, demolition stick 7.30 m and attachment 3.0 t.

Undercarriage		VH-HD	LC-V	LC	NLC
Pad width	mm	600	600	600	600
Weight	kg	63,900	59,800	54,700	54,600
Ground pressure	kg/cm ²	1.13	1.05	1.03	1.03

Backhoe Bucket

with Main Boom 4.30 m



Digging Envelope

Main Boom pinned in upper (in lower) bearing

		1	2
Stick length	m	2.50	2.80
A Max. reach at ground level	m	11.13 (10.19)	11.41 (10.48)
B Max. digging depth	m	2.96 (5.35)	3.26 (5.65)
C Min. dumping height	m	5.95 (4.77)	5.66 (4.47)
D Max. dumping height	m	10.20 (8.21)	10.42 (8.21)
E Max. cutting height	m	13.61 (11.23)	13.84 (11.35)

Forces

		1	2
Stick digging force (ISO 6015)	kN	168	156
Bucket digging force (ISO 6015)	kN	204	204
Stick digging force (SAE J1179)	kN	160	149
Bucket digging force (SAE J1179)	kN	178	178

Operating Weight and Ground Pressure

The operating weight includes the basic machine with counterweight 11.0 t, main boom 4.30 m, stick 2.50 m and bucket 2.00 m³ (1,210 kg).

Undercarriage		VH-HD	LC-V	LC	NLC
Pad width	mm	600	600	600	600
Weight	kg	58,000	53,900	48,800	48,700
Ground pressure	kg/cm ²	1.02	0.95	0.92	0.92

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

Cutting width mm	Capacity ISO 7451 m ³	Weight kg	VH-HD-Undercarriage (with track pads 600 mm)		LC-V-Undercarriage (with track pads 600 mm)		LC-Undercarriage (with track pads 600 mm)		NLC-Undercarriage (with track pads 600 mm)	
			Stick length (m)		Stick length (m)		Stick length (m)		Stick length (m)	
			2.50	2.80	2.50	2.80	2.50	2.80	2.50	2.80
1,550	1.60	1,110	▲	▲	▲	▲	▲	▲	▲	▲
1,650	1.75	1,160	▲	▲	▲	▲	▲	▲	▲	▲
1,550	1.85	1,170	▲	▲	▲	▲	▲	▲	▲	▲
1,650	2.00	1,210	▲	▲	▲	▲	▲	▲	▲	▲
1,750	2.15	1,260	▲	▲	▲	▲	▲	▲	▲	■

* Indicated loads are based on ISO 10567, at maximum reach, and may be swung 360° on firm and even ground

Max. material weight ▲ = ≤ 2.0 t/m³, ■ = ≤ 1.8 t/m³

Lift Capacities

with Main Boom 4.30 m (pinned in upper bearing), Counterweight 11.0 t and Track Pads 600 mm

Stick 2.50 m

Under-carriage	4.5 m	6.0 m	7.5 m	9.0 m	10.5 m	
Height	4.5 m	6.0 m	7.5 m	9.0 m	10.5 m	Max. reach
12.0						9.5* 9.5* 6.7
10.5		11.2* 11.2*				8.6* 8.6* 8.2
9.0		11.2* 11.2*	10.9* 10.9*			8.2* 8.2* 9.3
7.5	14.5* 14.5*	13.1* 13.1*	12.4* 12.4*	10.0* 10.0*		8.1* 8.1* 10.0
6.0		17.0* 17.0*	13.8* 13.8*	11.3 11.8*		8.1* 8.1* 10.4
4.5		17.8* 17.8*	14.2 14.5*	11.0 12.1*		8.6 8.9* 10.6
3.0			13.7 14.9*	10.8 12.3*	8.7 9.9*	8.4* 8.4* 10.6
1.5			13.4 14.8*	10.6 12.2*	8.7 10.0*	8.6 8.9* 10.6
0		9.7* 9.7*	13.3 14.1*	10.5 11.6*		8.8 9.4* 10.4
-1.5		14.4* 14.4*	12.6* 12.6*	10.4* 10.4*		8.7* 8.7* 9.9
-3.0						
12.0						11.9* 11.9*
10.5		11.3* 11.3*				9.4* 9.4* 6.7
9.0		11.3* 11.3*	11.0* 11.0*			8.5* 8.5* 8.2
7.5	15.5* 15.5*	13.4* 13.4*	12.4 12.5*	9.3 10.2*		8.2* 8.2* 9.3
6.0		16.3 17.1*	11.9 13.8*	9.1 11.9*		7.7 8.1* 10.0
4.5		15.2 16.0*	11.4 14.5*	8.9 12.1*		7.2 8.2* 10.4
3.0			10.9 14.9*	8.6 12.3*	7.0 10.0*	6.9 8.5* 10.6
1.5			10.6 14.8*	8.4 12.2*	6.9 10.0*	6.9 9.0* 10.6
0		10.1* 10.1*	10.5 14.0*	8.3 11.5*		7.1 9.4* 10.4
-1.5		14.3* 14.3*	10.6 12.5*	8.4 10.3*		7.6 8.7* 9.9
-3.0						
12.0						9.6* 9.6* 6.7
10.5		11.2* 11.2*				8.6* 8.6* 8.2
9.0		11.2* 11.2*	10.6 10.9*			7.3 8.2* 9.3
7.5	13.9* 13.9*	13.0* 13.0*	10.4 12.3*	7.7 9.8*		6.4 8.1* 10.0
6.0		13.6 17.0*	9.9 13.8*	7.6 11.5		5.9 8.1* 10.4
4.5		12.5 18.5*	9.4 14.5*	7.3 11.2		5.6 8.4* 10.6
3.0			8.9 14.1	7.1 10.9	5.7 8.8	5.6 8.6* 10.6
1.5			8.6 13.7	6.9 10.7	5.7 8.7	5.8 8.9 10.4
0		9.5* 9.5*	8.5 13.6	6.8 10.6		6.2 8.7* 9.9
-1.5		11.6 14.5*	8.6 12.7*	6.8 10.4*		
-3.0						
12.0						9.6* 9.6* 6.7
10.5		11.2* 11.2*				8.4 8.6* 8.2
9.0		11.2* 11.2*	9.9 10.9*			6.8 8.2* 9.3
7.5	13.9* 13.9*	13.0* 13.0*	9.7 12.3*	7.2 9.8*		6.0 8.1* 10.0
6.0		12.6 17.0*	9.2 13.8*	7.0 11.5		5.5 8.1* 10.4
4.5		11.5 18.5*	8.7 14.5*	6.8 11.2		5.2 8.4* 10.6
3.0			8.2 14.0	6.5 10.9	5.3 8.8	5.2 8.6 10.6
1.5			7.9 13.7	6.3 10.7	5.2 8.7	5.3 8.8 10.4
0		9.5* 9.5*	7.8 13.6	6.3 10.6		5.7 8.7* 9.9
-1.5		10.6 14.5*	7.9 12.7*	6.3 10.4*		
-3.0						

Stick 2.80 m

Under-carriage	4.5 m	6.0 m	7.5 m	9.0 m	10.5 m	
Height	4.5 m	6.0 m	7.5 m	9.0 m	10.5 m	Max. reach
12.0						10.2* 10.2* 4.7
10.5		10.1* 10.1*				8.3* 8.3* 7.1
9.0		9.8* 9.8*	9.9* 9.9*			7.5* 7.5* 8.6
7.5	11.1* 11.1*	11.1* 11.1*	10.9* 10.9*	9.6* 9.6*		7.2* 7.2* 9.6
6.0		16.6* 16.6*	13.5* 13.5*	11.4 11.5*		7.1* 7.1* 10.3
4.5		18.2* 18.2*	14.3* 14.3*	11.1 12.0*	8.8* 8.8*	7.2* 7.2* 10.7
3.0			13.7 14.8*	10.8 12.2*	8.7 10.4*	7.4* 7.4* 10.9
1.5			13.4 14.8*	10.5 12.2*	8.6 10.1*	7.8* 7.8* 10.9
0		10.8* 10.8*	13.2 14.2*	10.4 11.7*	8.6 9.4*	8.5 8.5* 10.6
-1.5		15.1* 15.1*	12.9* 12.9*	10.5 10.6*		8.5* 8.5* 10.2
-3.0			10.8* 10.8*			9.3* 9.3* 8.7
12.0						10.0* 10.0* 4.7
10.5		10.0* 10.0*				8.2* 8.2* 7.1
9.0		9.8* 9.8*	9.9* 9.9*			7.5* 7.5* 8.6
7.5	11.5* 11.5*	11.3* 11.3*	11.0* 11.0*	9.4 9.7*		7.2* 7.2* 9.6
6.0		16.5 16.7*	12.0 13.6*	9.2 11.7*		7.1* 7.1* 10.3
4.5		15.3 18.2*	11.4 14.3*	8.9 12.0*	7.1 9.0*	6.9 7.2* 10.7
3.0			10.9 14.8*	8.6 12.2*	7.0 10.3	6.6 7.4* 10.9
1.5			10.6 14.8*	8.4 12.1*	6.9 10.1*	6.6 7.9* 10.9
0		11.1* 11.1*	10.5 14.1*	8.3 11.6*	6.9 9.3*	6.8 8.6* 10.6
-1.5		14.3 14.9*	10.5 12.8*	8.3 10.5*		7.3 8.5* 10.2
-3.0						8.7
12.0						10.4* 10.4* 4.7
10.5		10.1* 10.1*				8.3* 8.3* 7.1
9.0		9.8* 9.8*	9.9* 9.9*			7.5* 7.5* 8.6
7.5	10.8* 10.8*	11.0* 11.0*	10.5 10.8*	7.8 9.5*		7.0 7.2* 9.6
6.0		13.8 16.6*	10.0 13.5*	7.6 11.4*		6.1 7.1* 10.3
4.5		12.7 18.1*	9.5 14.2*	7.4 11.2	5.8 8.7*	5.7 7.2* 10.7
3.0			9.0 14.1	7.1 10.9	5.7 8.8	5.4 7.4* 10.9
1.5			8.6 13.7	6.9 10.7	5.6 8.7	5.4 7.8* 10.9
0		10.6* 10.6*	8.5 13.5	6.7 10.6	5.6 8.6	5.5 8.5* 10.6
-1.5		11.5 15.2*	8.5 13.0*	6.8 10.6		5.9 8.6* 10.2
-3.0			8.7 10.9*			7.2 9.1* 8.7
12.0						10.4* 10.4* 4.7
10.5		10.1* 10.1*				8.3* 8.3* 7.1
9.0		9.8* 9.8*	9.9* 9.9*			7.5* 7.5* 8.6
7.5	10.8* 10.8*	11.0* 11.0*	9.7 10.8*	7.3 9.5*		6.5 7.2* 9.6
6.0		12.8 16.6*	9.3 13.5*	7.1 11.4*		5.7 7.1* 10.3
4.5		11.6 18.1*	8.7 14.2*	6.8 11.2	5.4 8.7*	5.2 7.2* 10.7
3.0			8.2 14.1	6.5 10.9	5.3 8.8	5.0 7.4* 10.9
1.5			7.9 13.7	6.3 10.7	5.2 8.6	4.9 7.8* 10.9
0		10.4 10.6*	7.8 13.5	6.2 10.5	5.1 8.6	5.1 8.5 10.6
-1.5		10.5 15.2*	7.8 13.0*	6.2 10.5		5.4 8.6* 10.2
-3.0			8.0 10.9*			6.6 9.1* 8.7

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

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 410 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 Main Boom 4.30 m (pinned in lower bearing), Counterweight 11.0 t and Track Pads 600 mm

Stick 2.50 m

Under-carriage	m	4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m	
VR-HD	10.5											8.3*	8.3*
	9.0											8.1*	8.1*
	7.5											8.1*	8.1*
	6.0	19.5*	19.5*	14.5*	14.5*	12.2*	12.2*	10.0*	10.0*			8.1*	8.1*
	4.5			16.6*	16.6*	13.2*	13.2*	11.4	11.4*			8.4*	8.4*
	3.0			18.4*	18.4*	14.2*	14.2*	11.1	11.9*			9.0*	9.0*
	1.5			16.4*	16.4*	13.8	14.8*	10.9	12.3*			9.5	9.8*
	0			18.4	18.9*	13.6	15.0*	10.7	12.3*			9.8	11.3*
	-1.5	12.0*	12.0*	18.0*	18.0*	13.5	14.5*	10.7	11.7*			10.5	11.5*
	-3.0			16.2*	16.2*	13.2*	13.2*					11.6*	11.6*
LC-V	10.5											8.3*	8.3*
	9.0											8.1*	8.1*
	7.5											8.1*	8.1*
	6.0	19.8*	19.8*	14.6*	14.6*	12.3*	12.3*	9.5	10.2*			8.1*	8.1*
	4.5			16.2	16.7*	11.9	13.3*	9.2	11.5*			8.2	8.4*
	3.0			15.1	18.4*	11.4	14.2*	8.9	11.9*			7.8	9.0*
	1.5			14.6	16.4*	11.0	14.9*	8.7	12.3*			7.7	9.9*
	0			14.5	18.8*	10.8	15.0*	8.5	12.3*			7.9	11.4*
	-1.5	12.5*	12.5*	14.5	17.9*	10.7	14.5*	8.5	11.7*			8.5	11.5*
	-3.0			14.7	16.1*	10.9	13.0*					9.7	11.5*
LC	10.5											8.3*	8.3*
	9.0											8.1*	8.1*
	7.5											8.1*	8.1*
	6.0	19.3*	19.3*	14.5*	14.5*	10.5	12.2*	7.9	9.8*			7.6	8.1*
	4.5			13.4	16.5*	10.0	13.2*	7.7	11.4*			6.8	8.4*
	3.0			12.4	18.3*	9.4	14.2*	7.4	11.3			6.4	8.9*
	1.5			11.9	16.4*	9.0	14.2	7.2	11.0			6.3	9.6
	0			11.7	18.9*	8.8	13.9	7.0	10.8			6.4	9.9
	-1.5	11.7*	11.7*	11.7	18.0*	8.7	13.8	7.0	10.8			6.9	10.6
	-3.0			11.9	16.3*	8.9	13.2*					7.8	11.6*
NLC	10.5											8.3*	8.3*
	9.0											8.1*	8.1*
	7.5											8.1*	8.1*
	6.0	19.3*	19.3*	13.5	14.5*	9.8	12.2*	7.4	9.8*			7.0	8.1*
	4.5			12.4	16.5*	9.3	13.2*	7.1	11.4*			6.3	8.4*
	3.0			11.4	18.3*	8.7	14.2*	6.8	11.2			5.9	8.9*
	1.5			10.9	16.4*	8.3	14.1	6.6	11.0			5.8	9.6
	0			10.7	18.9*	8.1	13.9	6.5	10.8			5.9	9.8
	-1.5	11.7*	11.7*	10.7	18.0*	8.0	13.8	6.4	10.8			6.3	10.6
	-3.0			10.9	16.3*	8.1	13.2*					7.2	11.6*

Stick 2.80 m

Under-carriage	m	4.5 m		6.0 m		7.5 m		9.0 m		10.5 m		m	
VR-HD	10.5											7.3*	7.3*
	9.0											7.1*	7.1*
	7.5											7.1*	7.1*
	6.0	18.4*	18.4*	14.0*	14.0*	11.9*	11.9*	9.8*	9.8*			7.1*	7.1*
	4.5			16.1*	16.1*	12.9*	12.9*	11.2*	11.2*			7.4*	7.4*
	3.0			18.0*	18.0*	13.9*	13.9*	11.1	11.7*			7.8*	7.8*
	1.5			18.5*	18.5*	13.8	14.7*	10.8	12.1*			8.6*	8.6*
	0			18.4	18.9*	13.6	14.9*	10.7	12.3*			9.4	9.7*
	-1.5	12.0*	12.0*	18.2*	18.2*	13.5	14.6*	10.6	11.9*			10.0	11.2*
	-3.0	19.9*	19.9*	16.7*	16.7*	13.5*	13.5*					11.3*	11.3*
LC-V	10.5											7.3*	7.3*
	9.0											7.1*	7.1*
	7.5											7.1*	7.1*
	6.0	18.7*	18.7*	14.1*	14.1*	11.9*	11.9*	9.5	9.9*			7.2*	7.2*
	4.5			16.2*	16.2*	12.0	13.0*	9.3	11.2*			7.4*	7.4*
	3.0			15.3	18.0*	11.4	14.0*	8.9	11.8*			7.5	7.9*
	1.5			14.6	18.5*	11.0	14.7*	8.7	12.2*			7.4	8.6*
	0			14.4	18.9*	10.7	14.9*	8.5	12.3*			7.5	9.8*
	-1.5	12.4*	12.4*	14.4	18.1*	10.7	14.5*	8.5	11.8*			8.1	11.2*
	-3.0	20.1*	20.1*	14.5	16.5*	10.8	13.4*					9.2	11.3*
LC	10.5											7.3*	7.3*
	9.0											7.1*	7.1*
	7.5											7.1*	7.1*
	6.0	18.2*	18.2*	14.0*	14.0*	10.6	11.9*	8.0	9.7*			7.1*	7.1*
	4.5			13.6	16.0*	10.0	12.9*	7.7	11.2*			6.6	7.4*
	3.0			12.6	17.9*	9.5	13.9*	7.4	11.3			6.2	7.8*
	1.5			11.9	18.5*	9.0	14.2	7.1	11.0			6.0	8.5*
	0			11.7	18.9*	8.8	13.9	7.0	10.8			6.1	9.5
	-1.5	11.8*	11.8*	11.6	18.2*	8.7	13.8	6.9	10.7			6.5	10.1
	-3.0	18.0	19.5*	11.8	16.7*	8.7	13.5*					7.4	11.3*
NLC	10.5											7.3*	7.3*
	9.0											7.1*	7.1*
	7.5											7.1*	7.1*
	6.0	18.2*	18.2*	13.7	14.0*	9.9	11.9*	7.4	9.7*			6.7	7.1*
	4.5			12.6	16.0*	9.3	12.9*	7.2	11.2*			6.1	7.4*
	3.0			11.6	17.9*	8.8	13.9*	6.9	11.3			5.7	7.8*
	1.5			10.9	18.5*	8.3	14.1	6.6	11.0			5.6	8.5*
	0			10.7	18.9*	8.1	13.8	6.4	10.8			5.7	9.4
	-1.5	11.8*	11.8*	10.6	18.2*	8.0	13.7	6.4	10.7			6.0	10.1
	-3.0	16.3	19.5*	10.8	16.7*	8.0	13.5*					6.8	11.3*

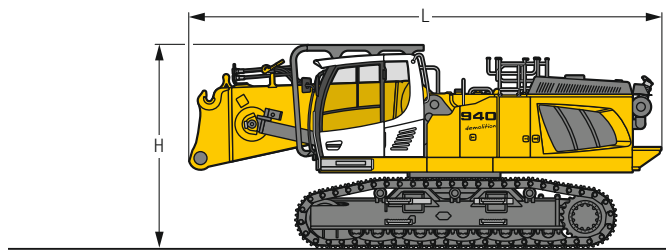
↑ Height Can be slewed through 360° In longitudinal position of undercarriage Max. reach * Limited by hydr. capacity

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 410 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.

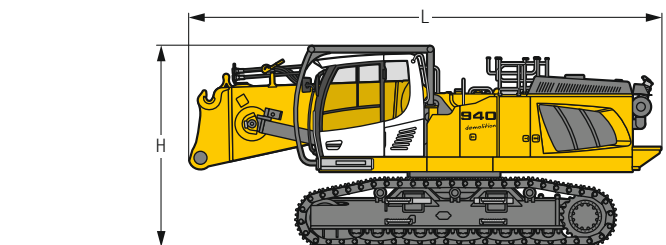
Dimensions and Weights



Basic Machine

without counterweight with cab tiltable 30° and integral protection grid

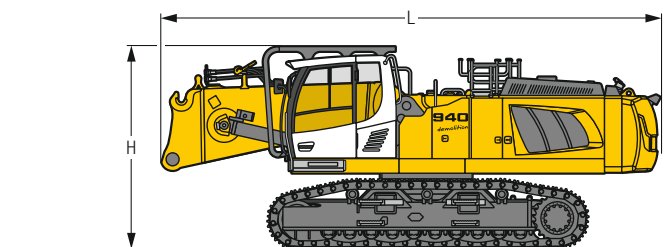
		VH-HD	LC-V	LC	NLC
L	mm	8,000	8,000	8,000	8,000
H	mm	3,400	3,510	3,355	3,355
Weight	kg	40,900	36,800	31,700	31,600



Basic Machine

without counterweight with cab tiltable 30° and integral protection grid on tilting device

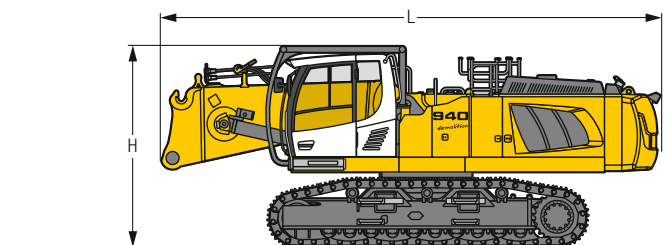
		VH-HD	LC-V	LC	NLC
L	mm	8,000	8,000	8,000	8,000
H	mm	3,400	3,510	3,355	3,355
Weight	kg	41,300	37,200	32,100	32,000



Basic Machine

with counterweight 11.0 t, cab tiltable 30° and integral protection grid

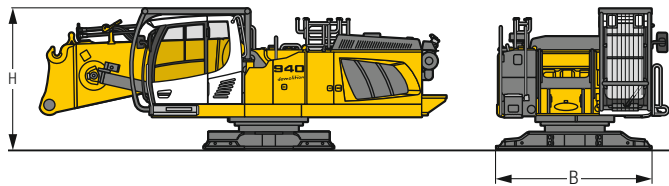
		VH-HD	LC-V	LC	NLC
L	mm	8,450	8,450	8,450	8,450
H	mm	3,400	3,510	3,355	3,355
Weight	kg	51,900	47,800	42,700	42,600



Basic Machine

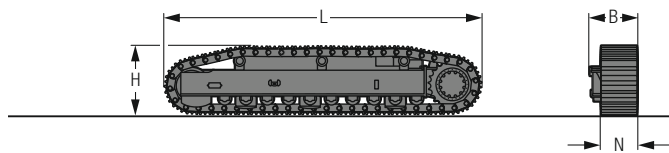
with counterweight 11.0 t, cab tiltable 30° and integral protection grid on tilting device

		VH-HD	LC-V	LC	NLC
L	mm	8,450	8,450	8,450	8,450
H	mm	3,400	3,510	3,355	3,355
Weight	kg	52,300	48,200	43,100	43,000



Basic Machine without side frames

B	mm	2,995
H Height	mm	2,750
Weight	kg	24,700



Side Frame for LC-V-Undercarriage

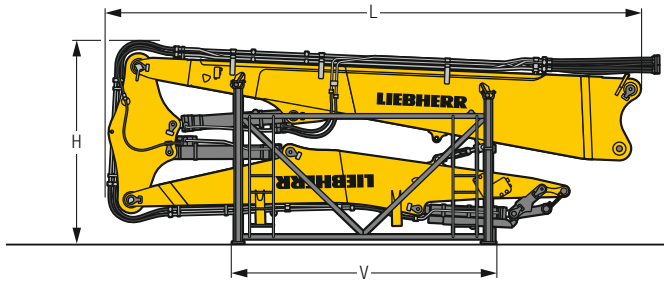
L Length	mm	5,555
H Height	mm	1,175
N	mm	600
B	mm	795
Weight	kg	6,250



Counterweight

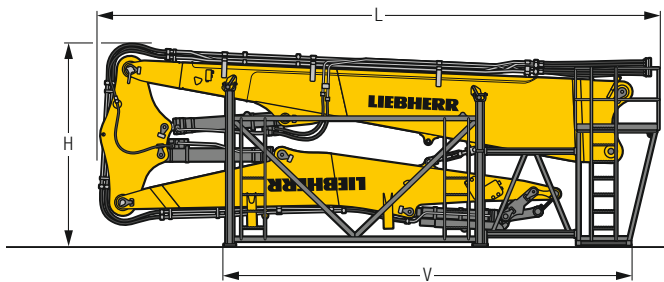
L Length	mm	940
H Height	mm	1,420
Width	mm	2,970
Weight	kg	11,000

Dimensions and Weights



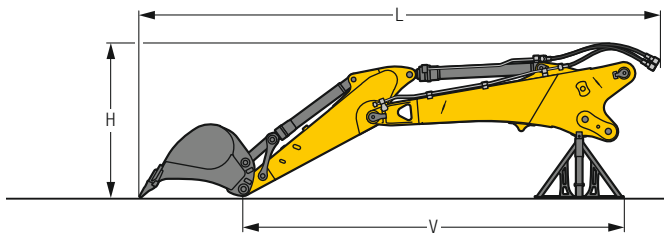
Demolition Equipment with storage rack

		23.00 m
L	Length	mm 9,050
H	Height	mm 3,400
V		mm 4,450
	Width	mm 2,500
	Weight without attachment	kg 10,100



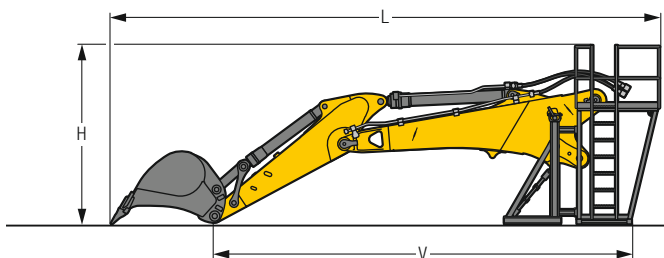
Demolition Equipment with storage rack with catwalks

		23.00 m
L	Length	mm 9,500
H	Height	mm 3,400
V		mm 6,900
	Width	mm 2,500
	Weight without attachment	kg 10,900



Backhoe Equipment with storage rack

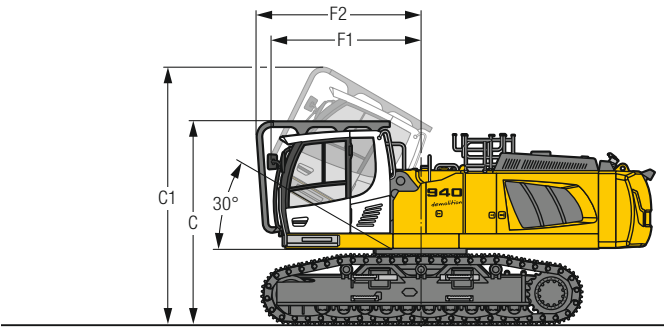
		m	4.30
	Main boom length	m	2.50
	Stick length	m	2.80
L	Length	mm	8,800
		mm	9,100
H	Height	mm	2,600
		mm	2,600
V		mm	6,450
		mm	6,750
	Width	mm	2,500
	Weight without bucket	kg	5,100
		kg	5,200



Backhoe Equipment with storage rack with catwalks

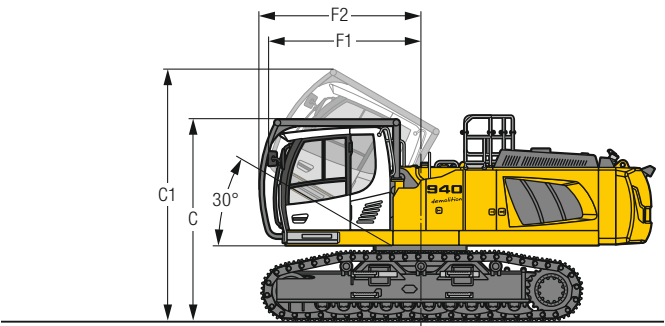
		m	4.30
	Main boom length	m	2.50
	Stick length	m	2.80
L	Length	mm	9,300
		mm	9,600
H	Height	mm	3,020
		mm	3,020
V		mm	7,050
		mm	7,350
	Width	mm	2,500
	Weight without bucket	kg	5,700
		kg	5,800

Choice of Cab Elevations



Version
with cab tiltable 30° and integral protection grid

		VH-HD	LC-V	LC	NLC
C	mm	3,400	3,510	3,365	3,365
C1	mm	4,325	4,435	4,290	4,290
F1	mm	2,530	2,530	2,530	2,530
F2	mm	2,770	2,770	2,770	2,770



Version
with cab tiltable 30° and integral protection grid on tilting device

		VH-HD	LC-V	LC	NLC
C	mm	3,400	3,510	3,355	3,355
C1	mm	4,245	4,355	4,210	4,210
F1	mm	2,570	2,570	2,570	2,570
F2	mm	2,730	2,730	2,730	2,730

Serial Equipment

Undercarriage

Lashing eyes
Sprocket with dirt ejector
Track rollers, lifetime-lubricated
Tracks, sealed and greased

Uppercarriage

Anti-skid surfaces
Automatic swing brake lock
Centralised lubrication system (automatic)
Engine hood with gas spring opening
Handrails
Lockable fuel tank cap
Lockable tool box
Sound insulation

Hydraulic System

Filter with integrated fine filters
High pressure circuit with Tool Control and LDC
Hydraulic pressure measuring ports
Medium pressure circuit
Pressure accumulator for controlled lowering of equipment with engine turned off
Shut-off valve between hydraulic tank and pumps

Engine

Air filter with automatic dust ejector
Automatic engine idling / speed increase, controlled via joystick sensors
Common-Rail injection system
Exhaust gas after-treatment system – DOC + DPF + SCR
Fixed geometry turbocharger
Fuel pre-filter and water separator
Intercooler
Power Pack EU Stage V
Power Pack non-regulated countries (for select markets)

Operator's Cab

7" multifunction colour touchscreen + demolition display for LDC
Air conditioning, automatic, tri-zone, controlled via display
Bottle holder
Cab door sliding windows
Cigarette lighter
Coat hook
DEF level on touchscreen
Emergency stop in cab
Engine oil level on touchscreen
Fuel level on touchscreen
Hydraulic oil level on touchscreen
Impact resistant one-piece windscreen
Impact resistant roof window
Integral front wiper and washer
Integral protection guard
Interior lighting
Left hand side view monitoring camera
LiDAT Plus (Liebherr data transfer system) *
Mechanical hour meters, visible from ground level
Rear view monitoring camera
Rear window emergency exit
Right hand side view monitoring camera
Roll-down sun blinds for windscreen and roof window
Roof wiper and washer
Rubber floor mat, fixed on floor and removable
Storage spaces
Visco-elastic damping
Work mode selector

Equipment

Pipe fracture safety valves for boom cylinders
Standard boom with quick change coupling

* optionally extendable after one year

Equipment Standard/Option

Undercarriage

Chain guide 1 piece	•
Chain guide 4 pieces	+
Chain guide full length	+
Chain scrapers	+
Special painting	+
Tracks, sealed and greased	•
Undercarriage LC	+
Undercarriage LC-V	+
Undercarriage NLC	+
Undercarriage VH-HD	+

Uppercarriage

Air compressor	+
Boxing ring	+
Catwalks tiltable left and right	+
Electric socket on uppercarriage (24 V)	+
Fogging system	+
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⁾
Headlights on uppercarriage, rear, LED+, 2 pieces	+ ¹⁾
Lighting for tank area	+ ¹⁾
Lighting for uppercarriage access	+ ¹⁾
Radiator fine mesh protection grid	+
Reversible fan drive	+
Rock protection (swing gear and lubrication pipes)	+
Special painting	+
Tank refilling pump fuel	+
Tool set including storage case	•
Transport device for the counterweight	+
Uppercarriage bottom and side protection	+

Hydraulic System

Bypass filter for hydraulic oil	+
Filter for hydraulic hammer return flow	+
High flow	+
Liebherr hydraulic oil	•
Liebherr hydraulic oil, adapted for extreme climate conditions	+
Liebherr hydraulic oil, biodegradable	+
Pre-heating system for hydraulic oil (240 V)	+

Engine

Automatic engine shutdown after idling	+
Pre-heating system for fuel, coolant and engine oil (240 V)	+



Operator's Cab

2" seat belt with retractor	•
3" seat belt with retractor, orange colour	+
4-points seat belt	+
Acoustic travel alarm deactivatable	+
Additional air filtration	+
Air system for roof window cleaning	+
Auxiliary heater programmable	+
Coming/Leaving Home with lighting for cabin access	+
Cool box (12 V)	+
Dark tinted windows	+
Electrically adjustable and heated outside rear-view mirrors	+
Electronic immobiliser	+
Fire extinguisher	+
Footrest	+
Headlights on cab, front, LED, 2 pieces	• ¹⁾
Headlights on cab, front, LED+, 2 pieces	+ ¹⁾
Luminosity control (LED+ headlights)	+ ¹⁾
Operator seat Comfort	•
Operator seat Premium	+
Radio Comfort	+
Radio pre-installation	•
Rotating beacon on cabin, LED, 1 piece	+
Sun visor	+



Equipment

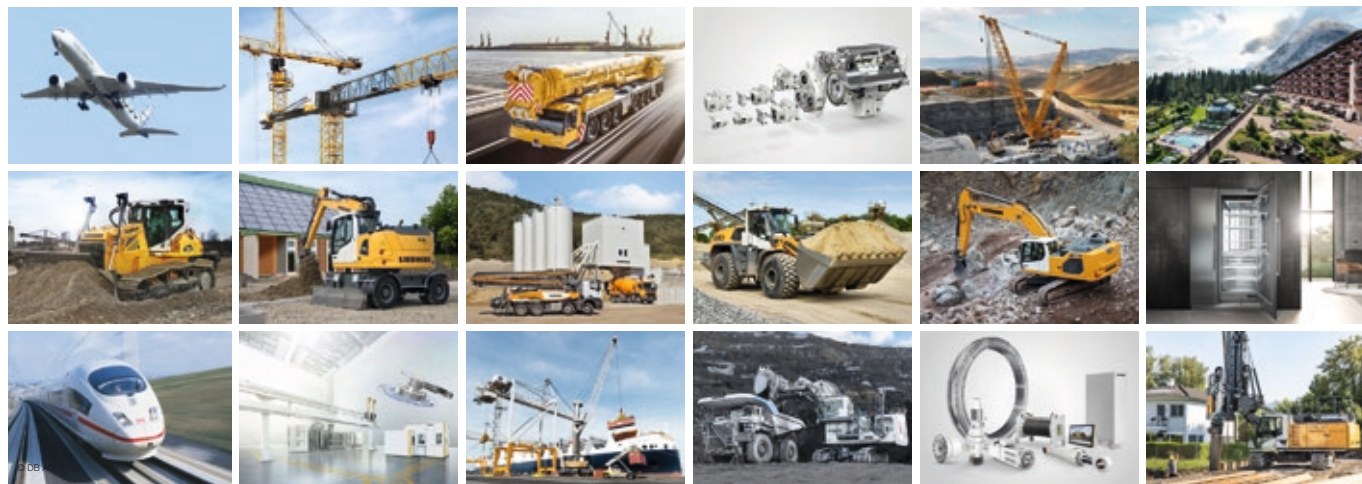
Bucket cylinder rod protection for backhoe equipment	+
Camera for equipment	+
Centralised lubrication extended for connecting link for backhoe equipment	+
Fogging system for backhoe equipment	+
Fogging system for demolition equipment	+
Headlight on boom, on each side, LED, 1 piece, protection included	• ¹⁾
Headlight on boom, on each side, LED+, 1 piece, protection included	+ ¹⁾
Headlights on equipment, LED, 4 pieces, protections included	•
Headlights on equipment, LED+, 4 pieces, protections included	+
High pressure circuit for backhoe equipment	+
Boom cylinder rods protection	+
LIKUFIX for quick coupler SWA 66 hydraulic	+
Medium pressure circuit for backhoe equipment	+
Overload warning system	+
Pipe fracture safety valve for stick cylinder for backhoe equipment	+
Quick coupler for standard boom	+
Quick coupler SWA 66 hydraulic	+
Quick coupler SWA 66 mechanical	+
Standard boom with multicouplers for demolition boom and backhoe equipment	+
Stick bottom protection	+
Storage rack with catwalks	+
Tool Management	+

• = Standard, + = Option

¹⁾ Equipment not individually available, but only as predefined lighting packages
Non-exhaustive list, please contact us for further information.

Options and/or special equipments, 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 of Companies



Wide Product Range

The Liebherr Group is one of the largest construction equipment manufacturers in the world. Liebherr's high-value products and services enjoy a high reputation in many other fields. The wide range includes domestic appliances, aerospace and transportation systems, machine tools and maritime cranes.

Exceptional Customer Benefit

Every product line provides a complete range of models in many different versions. With both their technical excellence and acknowledged quality, Liebherr products offer a maximum of customer benefits in practical applications.

State-of-the-art Technology

To provide consistent, top quality products, Liebherr attaches great importance to each product area, its components and core technologies. Important modules and components are developed and manufactured in-house, for instance the entire drive and control technology for construction equipment.

Worldwide and Independent

Hans Liebherr founded the Liebherr family company in 1949. Since then, the family business has steadily grown to a group of more than 130 companies with more than 48,000 employees located on all continents. The corporate headquarters of the Group is Liebherr-International AG in Bulle, Switzerland. The Liebherr family is the sole owner of the company.

www.liebherr.com

Liebherr-France SAS

2 avenue Joseph Rey, B.P. 90287, FR-68005 Colmar Cedex
☎ +33 389 21 30 30, Fax +33 389 21 37 93
www.liebherr.com, E-Mail: info.lfr@liebherr.com
www.facebook.com/LiebherrConstruction