



# R 940 Litronic

## LIEBHERR

Demolition excavator

### Generation

6

### 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



# Technical data



## Engine

<b>Rating per ISO 9249</b>	200 kW (272 HP) at 1,800 RPM
<b>Torque</b>	1,400 Nm at 1,100 RPM
<b>Model</b>	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)
<b>Type</b>	4 cylinder in-line
<b>Bore</b>	130 mm
<b>Stroke</b>	150 mm
<b>Displacement</b>	7.964 l
<b>Engine operation</b>	4-stroke diesel Common-Rail, monoturbo
<b>Exhaust gas treatment</b>	DOC + SCR Filter (Stage V) or SCR (Tier 4 Final) or without EGR (non-regulated only for select markets)
<b>Cooling system</b>	Water-cooled and integrated motor oil cooler, after-cooled and fuel cooled
<b>Air cleaner</b>	Dry-type air cleaner with pre-cleaner, primary and safety elements
<b>Fuel tank</b>	770 l
<b>Urea tank</b>	90 l
<b>Electrical system</b>	
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
<b>Motor management</b>	Connection to the integrated excavator system controlling via CAN-BUS to the economical utilisation of the service that is available



## Hydraulic controls

<b>Power distribution</b>	Via control valves in single block with integrated safety valves
Flow summation	To boom and stick
Closed-loop circuit	For uppercarriage swing drive
<b>Servo circuit</b>	
Equipment and swing	Proportional via joystick levers
Travel	– Proportional control via foot pedals or removable levers – Speed pre-selection
<b>Additional functions</b>	Proportional regulation via foot pedals or mini-joystick



## Hydraulic system

<b>Hydraulic system</b>	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
<b>Hydraulic pumps</b>	
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
<b>Pump management</b>	Electronic pump management via the integrated system controlling (CAN-BUS) synchronous to the control block
<b>Hydraulic tank</b>	380 l
<b>Hydraulic system</b>	1,100 l with demolition equipment
<b>Filtration</b>	1 full flow filter (10 µm) in return line with integrated fine filter area (5 µm)
<b>Cooling system</b>	Compact cooler, consisting of a water cooler, with hydraulic oil cooler, gearbox oil cooler, fuel cooler and after-cooler cores and hydrostatically driven fan
<b>MODE selection</b>	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
<b>RPM adjustment</b>	Stepless adjustment of engine output via RPM at each selected mode
<b>Tool Control</b>	20 pre-adjustable pump flows and pressures for add-on attachments
<b>Attachment system</b>	
Flow	315 l/min.
Pressure	380 bar
<b>Attachment rotation system</b>	
Flow	30 l/min.
Pressure	140 bar
Max. pressure	180 bar



## Swing drive

<b>Drive</b>	Liebherr swashplate motor with integrated brake valve
<b>Transmission</b>	Liebherr compact planetary reduction gears
<b>Swing ring</b>	Liebherr, sealed race ball bearing swing ring, internal teeth
<b>Swing speed</b>	0–7.5 min <sup>-1</sup> stepless
<b>Swing torque</b>	115.2 kNm
<b>Holding brake</b>	Wet multi-disc (spring applied, pressure released)



## Cab

<b>Cab</b>	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 12V plug, storage bins, lunchbox, cup holder, polycarbonate windows on right side
<b>Operator's seat</b>	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
<b>Arm consoles</b>	Oscillating consoles with seat, tiltable console left
<b>Operation and displays</b>	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
<b>Air-conditioning</b>	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 <sub>2</sub> equivalent	1.80 t
<b>Vibration emission**</b>	
Hand / arm vibrations	< 2.5 m/s <sup>2</sup> , according with ISO 5349-1:2001
Whole-body vibrations	< 0.5 m/s <sup>2</sup>
Measuring inaccuracy	According with standard EN 12096:1997
<b>Noise emission</b>	
ISO 6396	71 dB(A) = L <sub>PA</sub> (inside cab)
2000/14/EC	105 dB(A) = L <sub>WA</sub> (surround noise)



## Undercarriage

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



## Equipment

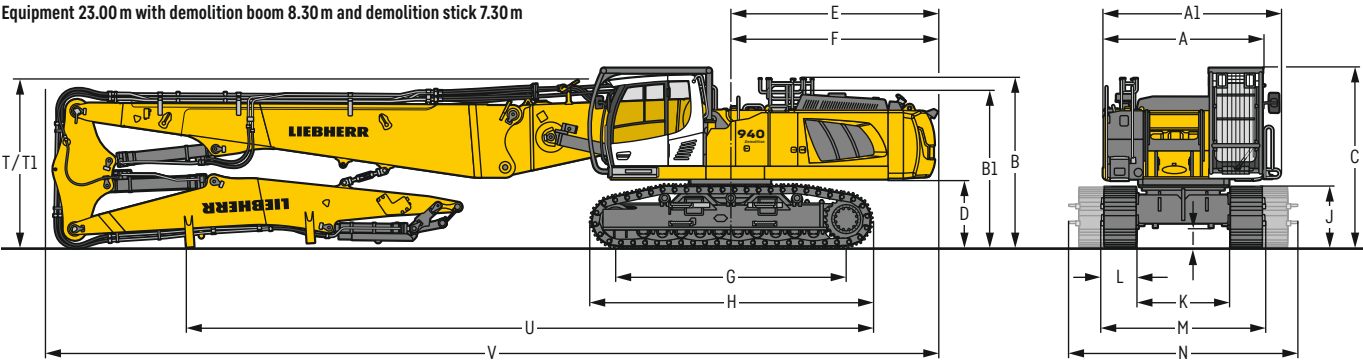
<b>Type</b>	Combination of resistant steel plates and cast steel components
<b>Hydraulic cylinders</b>	Liebherr cylinders with seal and guidance systems
<b>Bearings</b>	Sealed, low maintenance
<b>Lubrication</b>	Automatic central lubrication system (except link and tilt geometry)
<b>Hydraulic connections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

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

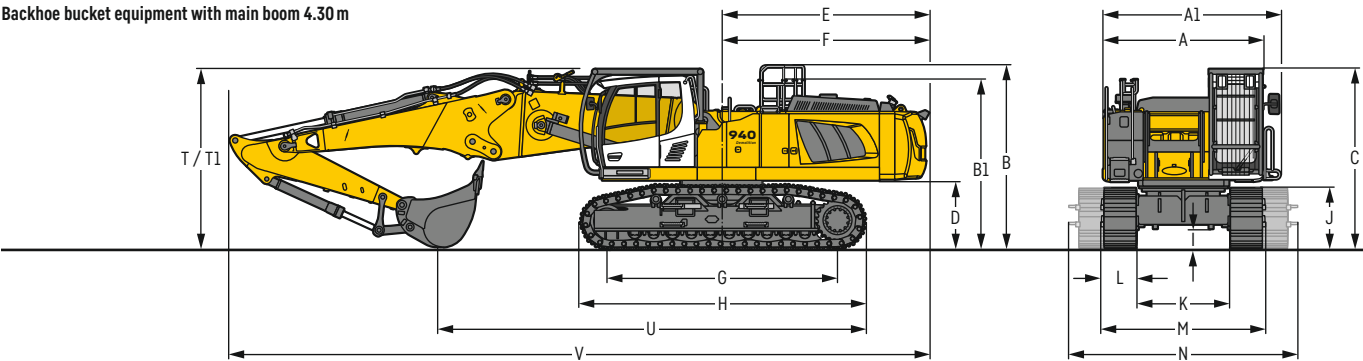
\*\* For the risk assessment according to 2002/44/EC see ISO/TR 25398:2006

# 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



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

<sup>1)</sup> width with removable steps

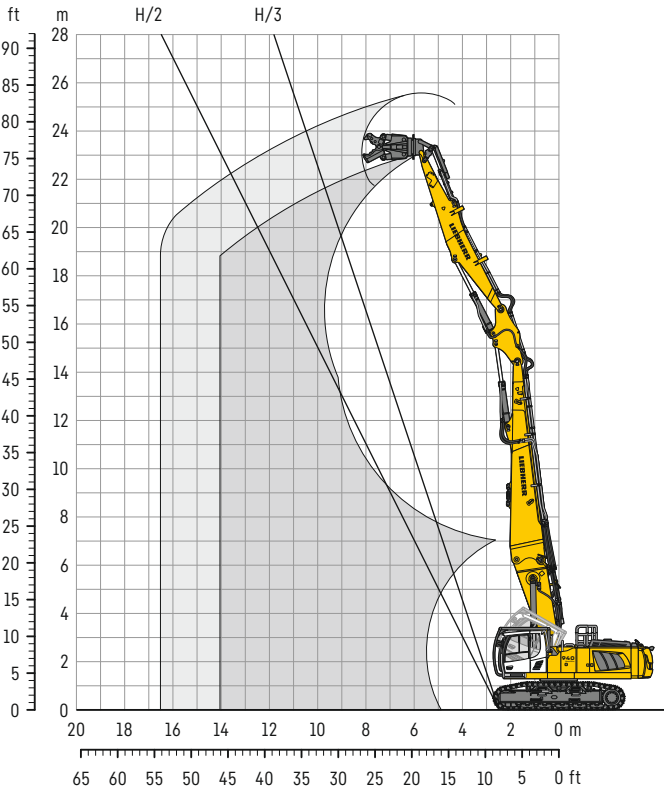
<sup>2)</sup> without door stop device and spacer

<sup>3)</sup> work position

		<b>Demolition equipment 23.00 m</b>			
		<b>VH-HD</b>	<b>LC-V</b>	<b>mm</b>	<b>NLC</b>
<b>T</b>	Boom height	3,200	3,300	3,150	3,150
<b>T1</b>	Boom height with automatic hydraulic coupling system	3,650	3,750	3,600	3,600
<b>U</b>	Length on ground	13,100	13,050	12,900	12,900
<b>V</b>	Overall length	16,950	16,950	16,950	16,950

		<b>Stick length m</b>	<b>Backhoe bucket equipment</b>			
			<b>VH-HD</b>	<b>LC-V</b>	<b>mm</b>	<b>NLC</b>
<b>T</b>	Boom height	2.50	3,400	3,450	3,400	3,400
		2.80	3,450	3,500	3,450	3,450
<b>T1</b>	Boom height with automatic hydraulic coupling system	2.50	3,850	3,900	3,850	3,850
		2.80	3,900	3,950	3,900	3,900
<b>U</b>	Length on ground	2.50	8,150	8,000	7,800	7,800
		2.80	7,950	7,800	7,600	7,600
<b>V</b>	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
		Attachment weight*		
		t		
Demolition boom 8.30 m + Intermediate boom + Demolition stick 7.30 m VH-HD undercarriage	lengthwise	3.00	3.00	3.00
	transverse	3.00	2.75	2.50
LC-V undercarriage	lengthwise	3.00	3.00	2.75
	transverse	3.00	2.25	1.75
LC undercarriage	lengthwise	3.00	3.00	2.75
	transverse	2.00	1.75	-
NLC undercarriage	lengthwise	3.00	3.00	2.50
	transverse	1.50	1.25	-

\* included quick coupler, adapter plate and attachment

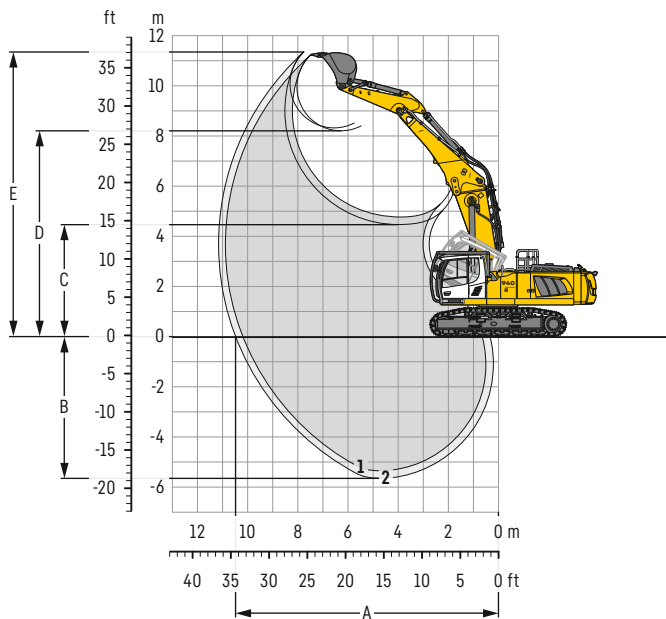
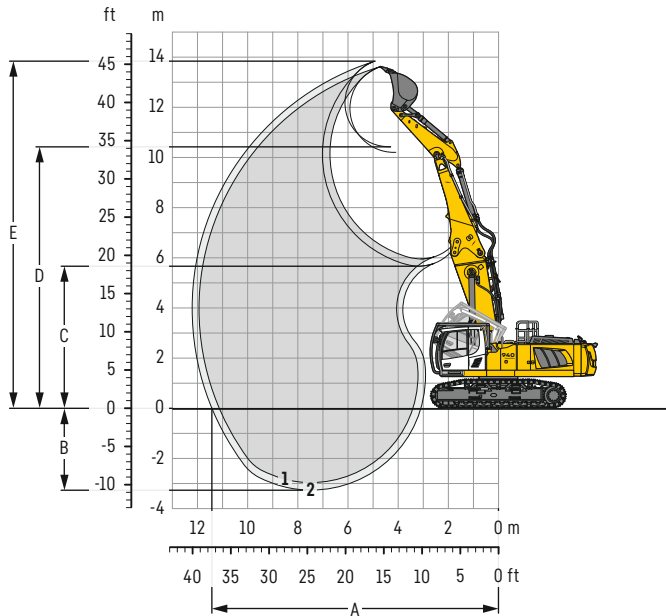
## Operating weight and ground pressure

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 3.0t.

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 <sup>2</sup>	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 m<sup>3</sup> (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 <sup>2</sup>	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 <sup>3</sup>	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/m<sup>3</sup>, ■ = ≤ 1.8 t/m<sup>3</sup>

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



# 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	4.5 m	6.0 m	7.5 m	9.0 m	10.5 m	Max. reach	m
Height							
Can be slewed through 360°							
In longitudinal position of undercarriage							
VH-HD							
10.5						8.3*	7.3
9.0						8.1*	8.5
7.5		12.9*	12.9*	11.5*	11.5*	8.1*	9.2
6.0	19.5*	19.5*	14.5*	14.5*	12.2*	12.2*	9.7
4.5		16.6*	16.6*	13.2*	13.2*	11.4*	9.9
3.0		18.4*	18.4*	14.2*	14.2*	11.1*	9.9
1.5		16.4*	16.4*	13.8*	14.8*	10.9*	9.7
0		18.4*	18.9*	13.6*	15.0*	10.7*	9.1
-1.5	12.0*	12.0*	18.0*	18.0*	13.5*	14.5*	8.3
-3.0		16.2*	16.2*	13.2*	13.2*		
-4.5							
LC-V							
10.5						8.3*	7.3
9.0						8.1*	8.5
7.5		13.0*	13.0*	11.5*	11.5*	8.1*	9.2
6.0	19.8*	19.8*	14.6*	14.6*	12.3*	12.3*	9.7
4.5		16.2*	16.7*	11.9*	13.3*	9.2*	9.9
3.0		15.1*	18.4*	11.4*	14.2*	8.9*	9.7
1.5		14.6*	16.4*	11.0*	14.9*	8.7*	9.1
0		14.5*	18.8*	10.8*	15.0*	8.5*	8.3
-1.5	12.5*	12.5*	14.5*	17.9*	10.7*	14.5*	
-3.0		14.7*	16.1*	10.9*	13.0*		
-4.5							
LC							
10.5						8.3*	7.3
9.0						8.1*	8.5
7.5		12.9*	12.9*	10.9*	11.5*	7.6*	9.2
6.0	19.3*	19.3*	14.5*	14.5*	10.5*	12.2*	9.7
4.5		13.4*	16.5*	10.0*	13.2*	7.7*	9.9
3.0		12.4*	18.3*	9.4*	14.2*	7.4*	9.9
1.5		11.9*	16.4*	9.0*	14.2*	7.2*	9.7
0		11.7*	18.9*	8.8*	13.9*	7.0*	9.1
-1.5	11.7*	11.7*	11.7*	18.0*	8.7*	13.8*	8.3
-3.0		11.9*	16.3*	8.9*	13.2*		
-4.5							
NLC							
10.5						8.3*	7.3
9.0						8.1*	8.5
7.5		12.9*	12.9*	10.2*	11.5*	7.0*	9.2
6.0	19.3*	19.3*	13.5*	14.5*	9.8*	12.2*	9.7
4.5		12.4*	16.5*	9.3*	13.2*	7.1*	9.9
3.0		11.4*	18.3*	8.7*	14.2*	6.8*	9.7
1.5		10.9*	16.4*	8.3*	14.1*	6.6*	9.1
0		10.7*	18.9*	8.1*	13.9*	6.5*	8.3
-1.5	11.7*	11.7*	10.7*	18.0*	8.0*	13.8*	
-3.0		10.9*	16.3*	8.1*	13.2*		
-4.5							

## Stick 2.80 m

Under-carriage	4.5 m	6.0 m	7.5 m	9.0 m	10.5 m	Max. reach	m
Height							
Can be slewed through 360°							
In longitudinal position of undercarriage							
VH-HD							
10.5						8.3*	7.3
9.0						8.1*	8.5
7.5			8.2*	8.2*		7.3*	8.8
6.0	18.4*	18.4*	14.0*	14.0*	11.9*	11.9*	9.5
4.5		16.1*	16.1*	12.9*	12.9*	11.2*	10.0
3.0		18.0*	18.0*	13.9*	13.9*	11.1*	10.2
1.5		18.5*	18.5*	13.8*	14.7*	10.8*	10.2
0		18.4*	18.9*	13.6*	14.9*	10.7*	9.9
-1.5	12.0*	12.0*	18.2*	18.2*	13.5*	14.6*	9.4
-3.0	19.9*	19.9*	16.7*	16.7*	13.5*	13.5*	8.6
-4.5							7.1
LC-V							
10.5						8.3*	7.3
9.0						8.1*	8.5
7.5			8.4*	8.4*		7.3*	8.8
6.0	18.7*	18.7*	14.1*	14.1*	11.9*	11.9*	9.5
4.5		16.2*	16.2*	12.0*	13.0*	9.3*	10.0
3.0		15.3*	18.0*	11.4*	14.0*	8.9*	10.2
1.5		14.6*	18.5*	11.0*	14.7*	8.7*	10.2
0		14.4*	18.9*	10.7*	14.9*	8.5*	9.9
-1.5	12.4*	12.4*	14.4*	18.1*	10.7*	14.5*	9.4
-3.0	20.1*	20.1*	14.5*	16.5*	10.8*	13.4*	8.6
-4.5							7.1
LC							
10.5						8.0*	7.7
9.0						8.0*	8.8
7.5			8.0*	8.0*		7.3*	9.5
6.0	18.2*	18.2*	14.0*	14.0*	10.6*	11.9*	10.0
4.5		13.6*	16.0*	10.0*	12.9*	7.7*	10.2
3.0		12.6*	17.9*	9.5*	13.9*	7.4*	10.2
1.5		11.9*	18.5*	9.0*	14.2*	7.1*	10.2
0		11.7*	18.9*	8.8*	13.9*	7.0*	9.9
-1.5	11.8*	11.8*	11.6*	18.2*	8.7*	13.8*	9.4
-3.0	18.0*	19.5*	11.8*	16.7*	8.7*	13.5*	8.6
-4.5							7.1
NLC							
10.5						8.0*	7.7
9.0						8.0*	8.8
7.5			8.0*	8.0*		7.3*	9.5
6.0	18.2*	18.2*	13.7*	14.0*	9.9*	11.9*	10.0
4.5		12.6*	16.0*	9.3*	12.9*	7.2*	10.2
3.0		11.6*	17.9*	8.8*	13.9*	6.9*	10.2
1.5		10.9*	18.5*	8.3*	14.1*	6.6*	10.2
0		10.7*	18.9*	8.1*	13.8*	6.4*	9.9
-1.5	11.8*	11.8*	10.6*	18.2*	8.0*	13.7*	9.4
-3.0	16.3*	19.5*	10.8*	16.7*	8.0*	13.5*	8.6
-4.5							7.1

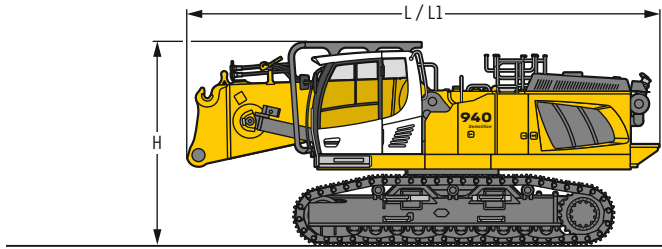
Height Can be slewed through 360° In longitudinal position of undercarriage Max. reach \* Limited by hydr. capacity

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.

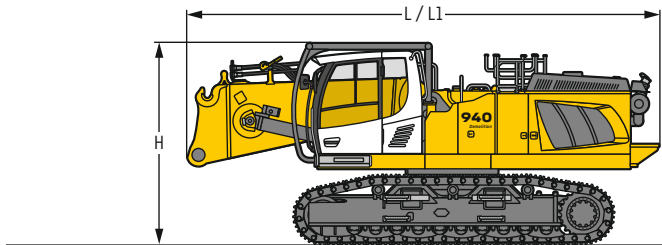
# Dimensions and weights



## Basic machine

without counterweight with cab tiltable 30° and integral protection grid

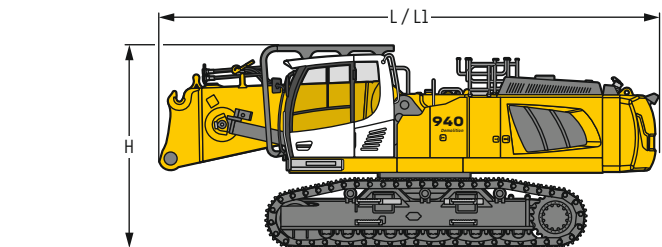
		VH-HD	LC-V	LC	NLC
L	mm	8,000	8,000	8,000	8,000
L1 with automatic hydraulic coupling system	mm	8,250	8,250	8,250	8,250
H	mm	3,400	3,510	3,355	3,355
Weight	kg	40,900	36,800	31,700	31,600
Weight with automatic hydraulic coupling system	kg	41,800	37,700	32,600	32,500



## Basic machine

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

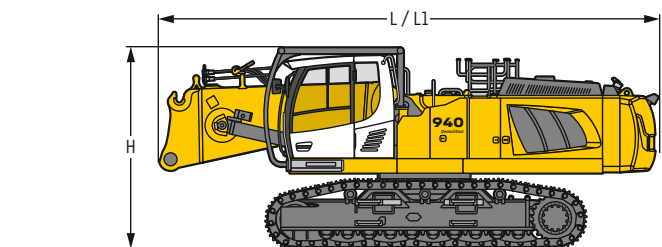
		VH-HD	LC-V	LC	NLC
L	mm	8,000	8,000	8,000	8,000
L1 with automatic hydraulic coupling system	mm	8,250	8,250	8,250	8,250
H	mm	3,400	3,510	3,355	3,355
Weight	kg	41,300	37,200	32,100	32,000
Weight with automatic hydraulic coupling system	kg	42,200	38,100	33,000	32,900



## Basic machine

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

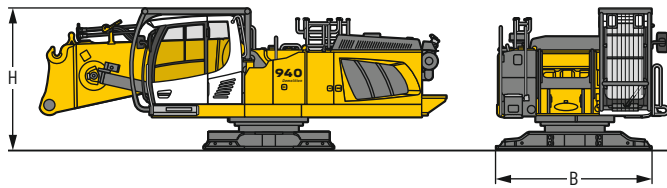
		VH-HD	LC-V	LC	NLC
L	mm	8,450	8,450	8,450	8,450
L1 with automatic hydraulic coupling system	mm	8,700	8,700	8,700	8,700
H	mm	3,400	3,510	3,355	3,355
Weight	kg	51,900	47,800	42,700	42,600
Weight with automatic hydraulic coupling system	kg	52,800	48,700	43,600	43,500



## Basic machine

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

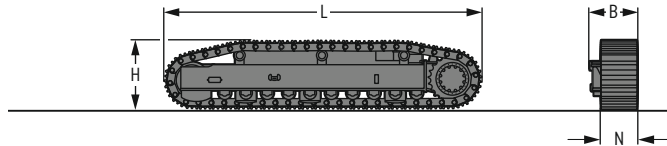
		VH-HD	LC-V	LC	NLC
L	mm	8,450	8,450	8,450	8,450
L1 with automatic hydraulic coupling system	mm	8,700	8,700	8,700	8,700
H	mm	3,400	3,510	3,355	3,355
Weight	kg	52,300	48,200	43,100	43,000
Weight with automatic hydraulic coupling system	kg	53,200	49,100	44,000	43,900



### Basic machine

without side frames

B	mm	2,995
H Height	mm	2,750
Weight	kg	24,700
Weight with automatic hydraulic coupling system	kg	25,600



### Side frame

for LC-V undercarriage

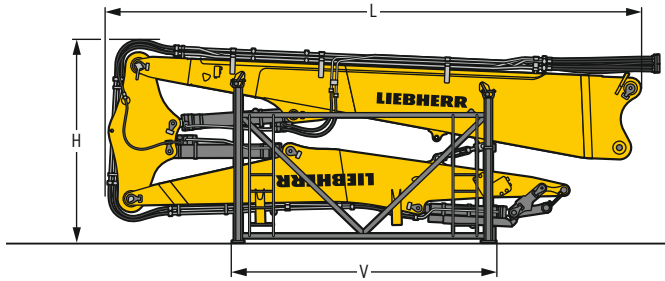
L	Length	mm	5,555
H	Height	mm	1,175
N		mm	600
B		mm	795
	Weight	kg	6,250



### Counterweight

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

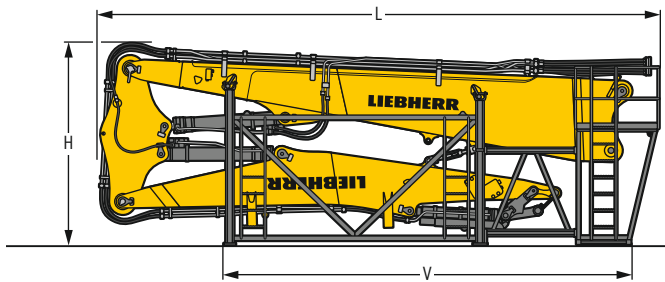
# Dimensions and weights



## Demolition equipment

with storage rack

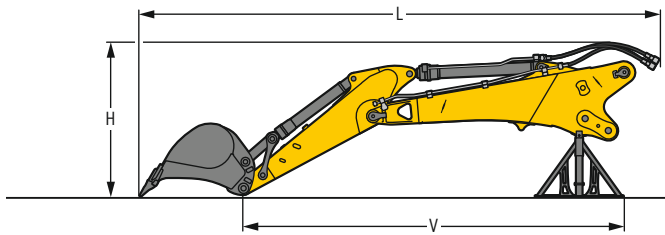
L	Length	mm	23,00
H	Height	mm	9,050
V	Width	mm	3,400
	Weight without attachment	kg	4,450
	Weight with automatic hydraulic coupling system	kg	2,500



## Demolition equipment

with storage rack with catwalks

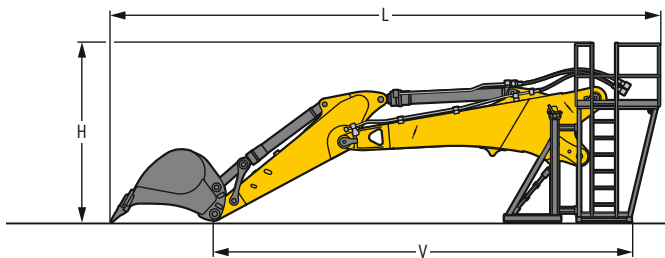
L	Length	mm	23,00
H	Height	mm	9,500
V	Width	mm	3,400
	Weight without attachment	kg	6,900
	Weight with automatic hydraulic coupling system	kg	2,500



## Backhoe equipment

with storage rack

	Main boom length	m	4,30
	Stick length	m	2,50 2,80
L	Length	mm	8,800 9,100
H	Height	mm	2,600 2,600
V	Width	mm	6,450 6,750
	Weight without bucket	kg	2,500 2,500
	Weight with automatic hydraulic coupling system	kg	5,100 5,200



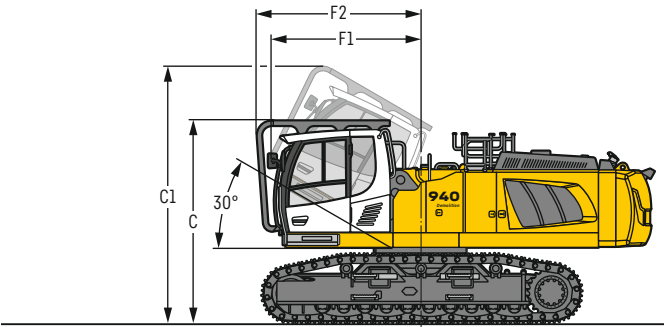
## Backhoe equipment

with storage rack with catwalks

	Main boom length	m	4,30
	Stick length	m	2,50 2,80
L	Length	mm	9,300 9,600
H	Height	mm	3,020 3,020
V	Width	mm	7,050 7,350
	Weight without bucket	kg	2,500 2,500
	Weight with automatic hydraulic coupling system	kg	5,700 5,800



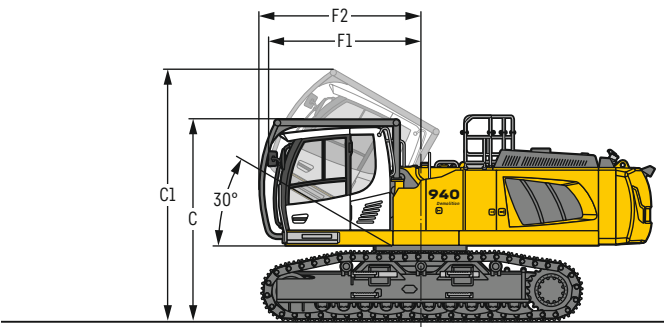
# Choice of cab elevations



## 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 + SCR  
Fixed geometry turbocharger  
Fuel pre-filter and water separator  
Intercooler  
Power Pack EU Stage V  
Power Pack non-regulated countries (for select markets)



## Cab

9" 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 meter, 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	+

## Upper-carriage

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	● <sup>1)</sup>
Headlight on uppercarriage, front right, LED+, 1 piece, protection included	+ <sup>1)</sup>
Headlight on uppercarriage, lateral left, LED+, 1 piece	+ <sup>1)</sup>
Headlights on uppercarriage, rear, LED+, 2 pieces	+ <sup>1)</sup>
Lighting for tank area	+ <sup>1)</sup>
Lighting for uppercarriage access	+ <sup>1)</sup>
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 (240V)	+

## Engine

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

## 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	● <sup>1)</sup>
Headlights on cab, front, LED+, 2 pieces	+ <sup>1)</sup>
Luminosity control (LED+ headlights)	+ <sup>1)</sup>
Operator seat Comfort	●
Operator seat Premium	+
Radio Comfort	+
Radio pre-installation	●
Rotating beacon on cabin, LED, 1 piece	+
Sun visor	+

## Equipment

Automatic hydraulic coupling system	+
Boom cylinders rod protection	+
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	● <sup>1)</sup>
Headlight on boom, on each side, LED+, 1 piece, protection included	+ <sup>1)</sup>
Headlights on equipment, LED, 4 pieces, protections included	●
Headlights on equipment, LED+, 4 pieces, protections included	+
High pressure circuit for backhoe equipment	+
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	+
Solidlink for quick coupler SWA 66 hydraulic	+
Standard boom with multicouplers for demolition boom and backhoe equipment	+
Stick bottom protection	+
Storage rack with catwalks	+
Tool Management	+

● = Standard, + = Option

<sup>1)</sup> 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.

# 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-run company which now has more than 50,000 employees and comprises over 150 companies across every continent. The holding company of the Group is Liebherr-International AG in Bulle, Switzerland, whose shareholders are exclusively members of the Liebherr family.

## Technology leadership and pioneering spirit

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

## Diversified product programme

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

## Customised solutions and maximum customer value

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

[www.liebherr.com](http://www.liebherr.com)

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