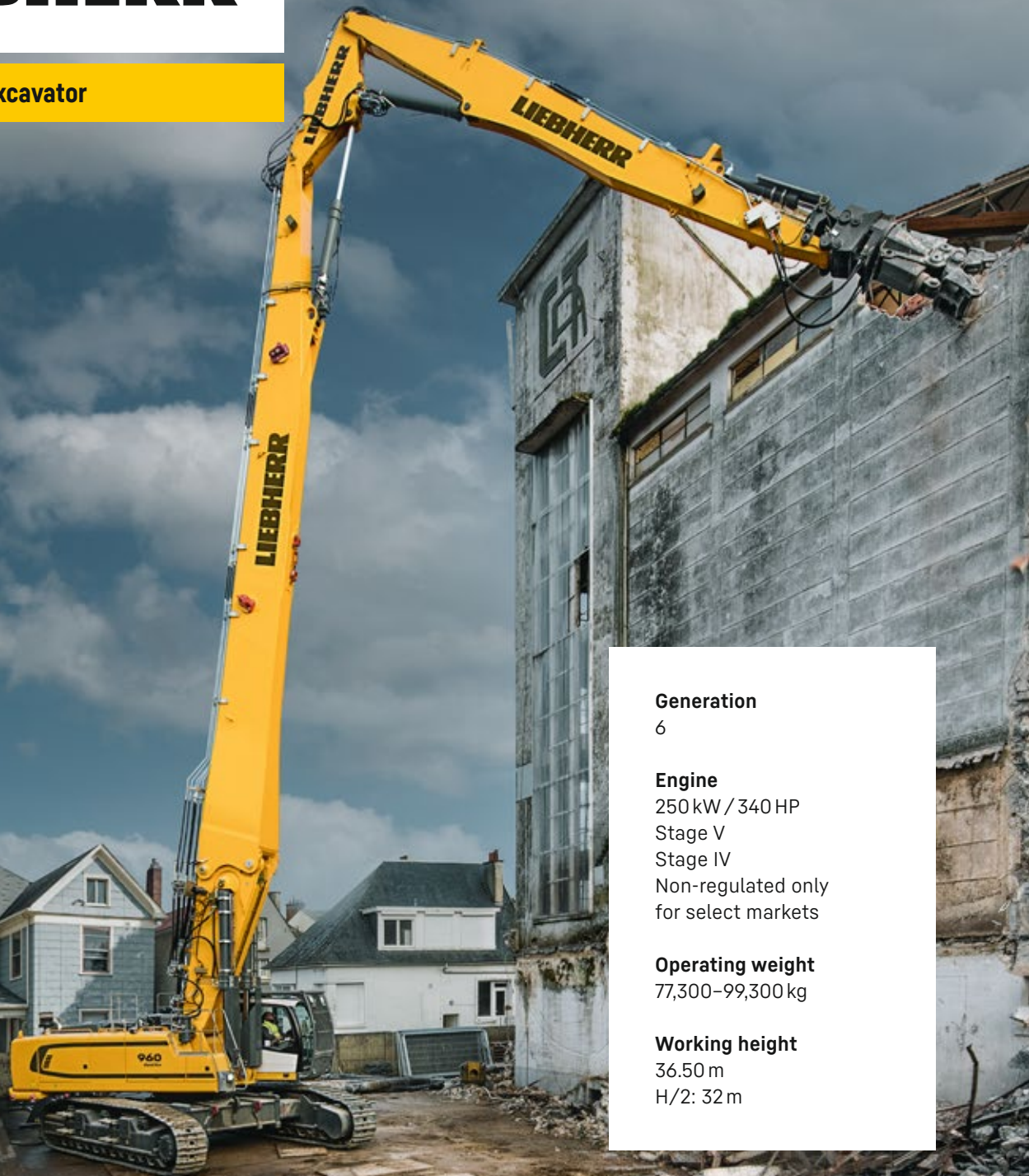


R 960 Litronic

LIEBHERR

Demolition excavator



Generation

6

Engine

250 kW / 340 HP
Stage V
Stage IV
Non-regulated only
for select markets

Operating weight

77,300–99,300 kg

Working height

36.50 m
H/2: 32 m

Technical data



Engine

Rating per ISO 9249	250 kW (340 HP) at 1,800 RPM
Torque	2,280 Nm at 1,000 RPM
Model	Liebherr D936 A7-25 (Stage V) or Liebherr D936 A7-24 (Stage IV) or Liebherr D936 A7-20 (non-regulated only for select markets)
Type	6 cylinder in-line
Bore	130 mm
Stroke	150 mm
Displacement	10.5 l
Engine operation	4-stroke diesel Common-Rail, monoturbo
Exhaust gas treatment	DOC + DPF + SCR (Stage V) or SCR (Stage IV) 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	96 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 pumps	
For equipment and travel drive	Liebherr, variable displacement, swashplate double pump
Max. flow	2 x 380 l/min.
Max. pressure	350 bar
For swing drive	Reversible, variable displacement, swashplate pump, closed-loop circuit
Max. flow	201 l/min.
Max. pressure	375 bar
Pump regulation	Electro-hydraulic with electronic engine speed sensing regulation, pressure compensation, flow compensation
Hydraulic tank	394 l
Hydraulic system	1,350 l with demolition equipment
Filtration	2 full flow filters in return line with integrated fine filter area (5 µm)
Cooling system	Compact cooler for water cooler, after-cooler, fuel cooler and transmission pump oil, sandwiched with cooler for oil and condenser of air-conditioning with hydrostatically controlled fan drives
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	380 l/min.
Pressure	350 bar
Attachment rotation system	
Flow	30 l/min.
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	0-5.8 RPM stepless
Swing torque	160 kNm
Holding brake	Wet multi-disc (spring applied, pressure released)



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 12V 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	Arm consoles, swinging with the seat
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 fully controlled on the display, 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 outside and standing on the ground. 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	72 dB(A) = L _{PA} (inside cab)
2000/14/EC	106 dB(A) = L _{WA} (surround noise)



Undercarriage

Versions	
VH-HD	Hydraulic variable gauge
HD-EW	Removable side frames
Drive	Liebherr swashplate motor with brake valves on both sides
Transmission	Liebherr compact planetary reduction gear
Maximum travel speed	2.0 km/h low range 3.2 km/h high range
Drawbar pull on crawler	563 kN
Track components	D8K, maintenance-free
Track rollers / Carrier rollers	11 / 2
Tracks	Sealed and greased
Track pads	Double grouser
Holding brake	Wet multi-disc (spring applied, pressure released)



Equipment

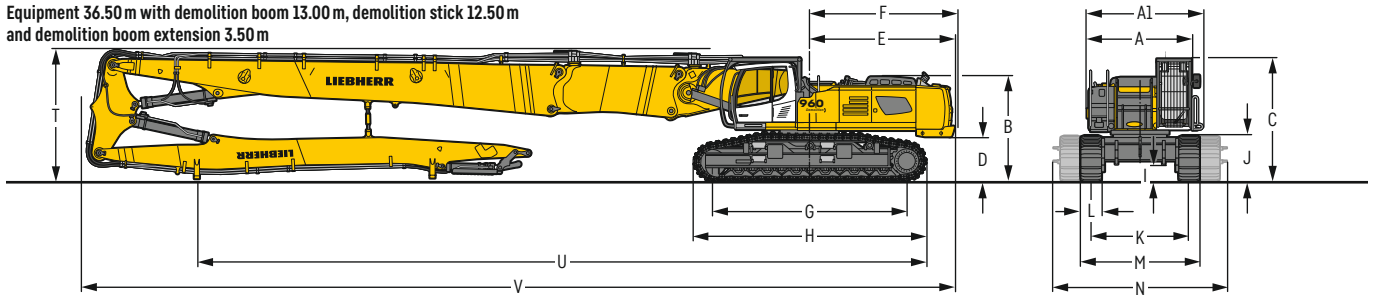
Type	Combination of resistant steel plates and cast steel components
Hydraulic cylinders	Liebherr cylinders with seal and guidance systems
Bearings	Sealed, low maintenance
Lubrication	Automatic central lubrication system (except link and tilt geometry)
Hydraulic connections	Pipes and hoses equipped with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

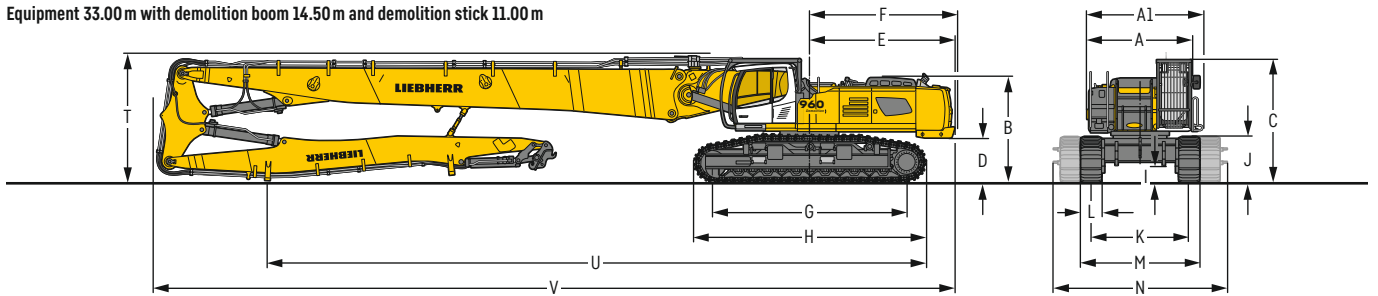
** For the risk assessment according to 2002/44/EC see ISO/TR 25398:2006

Dimensions

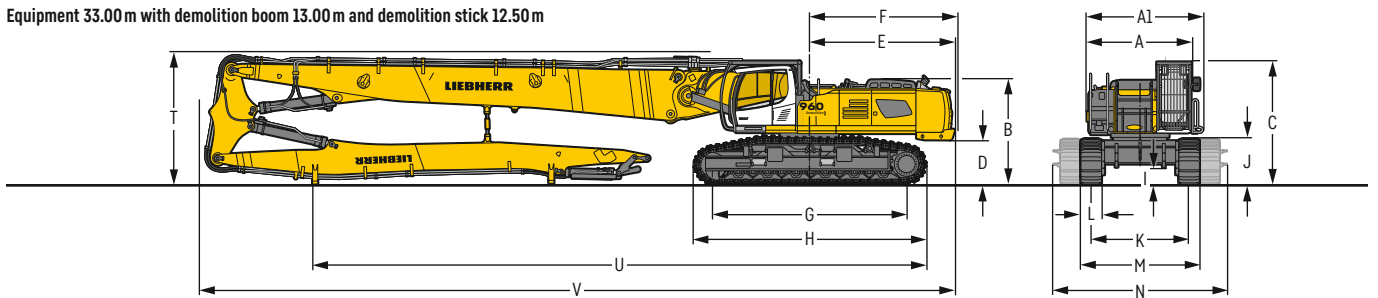
Equipment 36.50 m with demolition boom 13.00 m, demolition stick 12.50 m and demolition boom extension 3.50 m



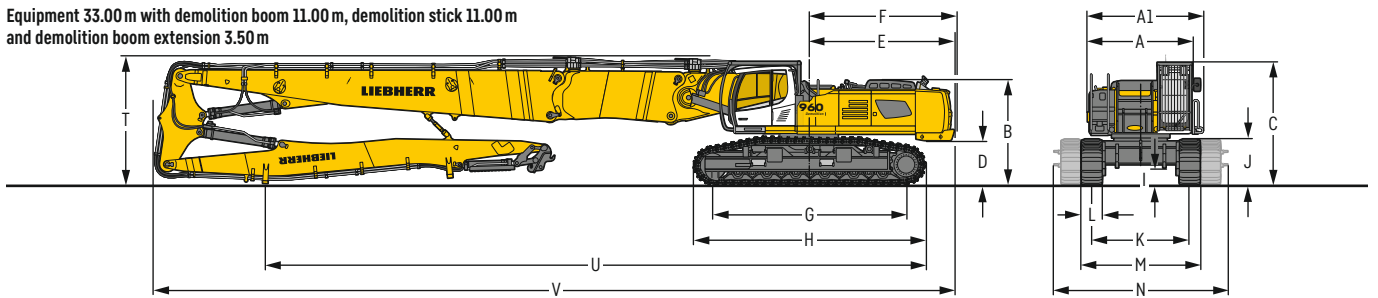
Equipment 33.00 m with demolition boom 14.50 m and demolition stick 11.00 m



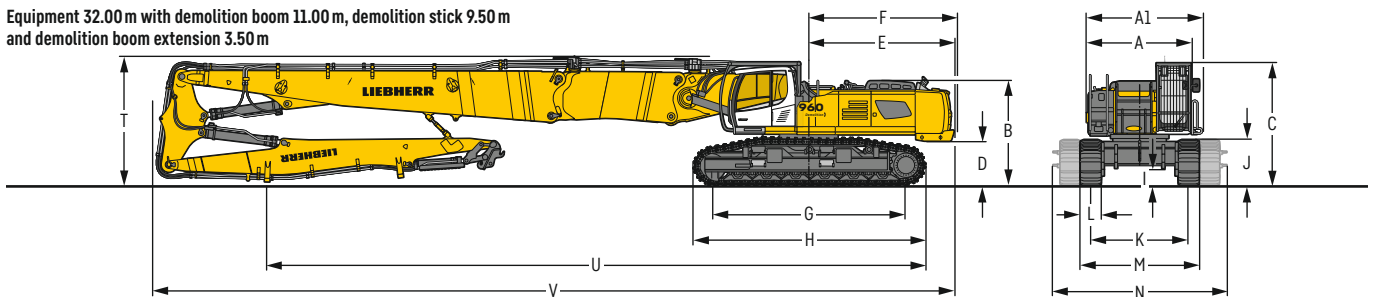
Equipment 33.00 m with demolition boom 13.00 m and demolition stick 12.50 m



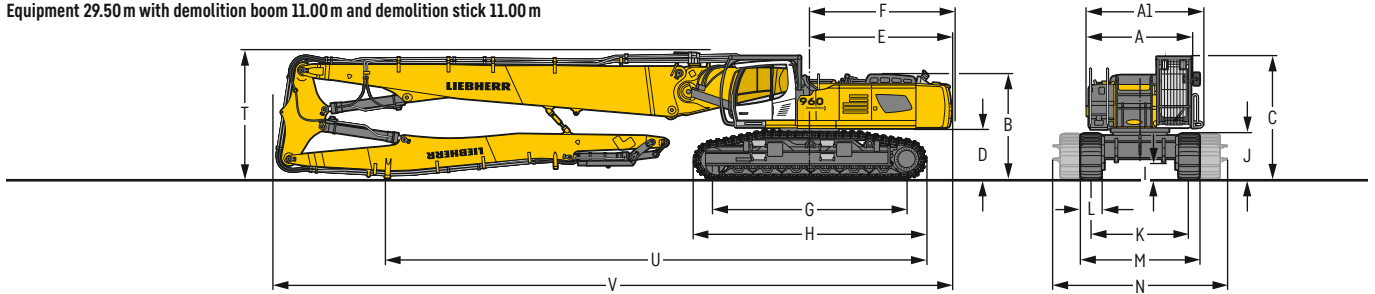
Equipment 33.00 m with demolition boom 11.00 m, demolition stick 11.00 m and demolition boom extension 3.50 m



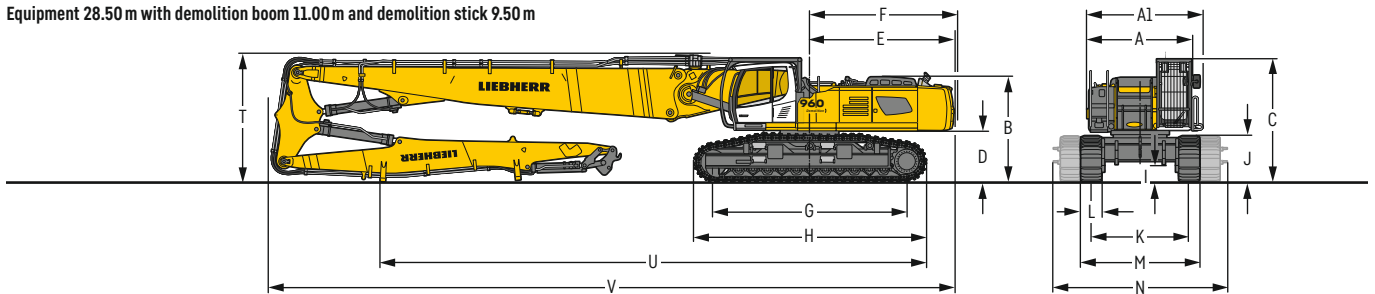
Equipment 32.00 m with demolition boom 11.00 m, demolition stick 9.50 m and demolition boom extension 3.50 m



Equipment 29.50 m with demolition boom 11.00 m and demolition stick 11.00 m



Equipment 28.50 m with demolition boom 11.00 m and demolition stick 9.50 m



		VH-HD	mm	HD-EW	mm
A	Uppercarriage width		2,985 ¹⁾		2,985 ¹⁾
A1	Uppercarriage width with catwalks		3,380		3,380
B	Uppercarriage height		3,055		3,115
C	Cab height		3,600		3,660
D	Counterweight ground clearance		1,275-1,445 ²⁾		1,335-1,505 ²⁾
E	Rear-end length		4,235-4,155 ²⁾		4,235-4,155 ²⁾
F	Tail swing radius		4,280-4,200 ²⁾		4,280-4,200 ²⁾
G	Wheelbase		5,610		5,605
H	Undercarriage length		6,725		6,725
I	Undercarriage ground clearance		490		490
J	Track height		1,340		1,380
K	Track gauge		2,850-4,050 ⁴⁾		4,000
L	Track pad width		600		500 600 750
M	Width over tracks		3,450-4,650 ⁴⁾		4,630 4,630 4,750
N	Width over steps		4,050 ¹⁾ -5,250 ¹⁾ 4)		5,050 ¹⁾ 5,050 ¹⁾ 5,050 ¹⁾

¹⁾ width with removable steps

²⁾ length with equipment 28.50 m

³⁾ without door stop device and spacer

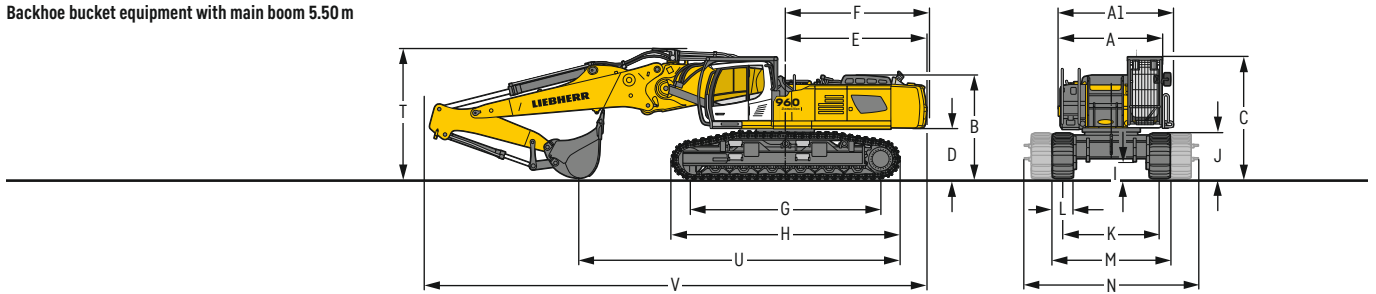
⁴⁾ work position

		Equipment 36.50 m with demolition boom 13.00 m mm		Equipment 33.00 m with demolition boom 14.50 m mm		Equipment 33.00 m with demolition boom 13.00 m mm		Equipment 33.00 m with demolition boom 11.00 m mm	
		VH-HD	HD-EW	VH-HD	HD-EW	VH-HD	HD-EW	VH-HD	HD-EW
T	Boom height	3,850	3,850	3,750	3,800	3,850	3,850	3,750	3,800
U	Length on ground	19,200	19,200	19,200	19,200	19,200	19,200	19,200	19,200
V	Overall length	23,400	23,400	23,400	23,400	23,400	23,400	23,400	23,400

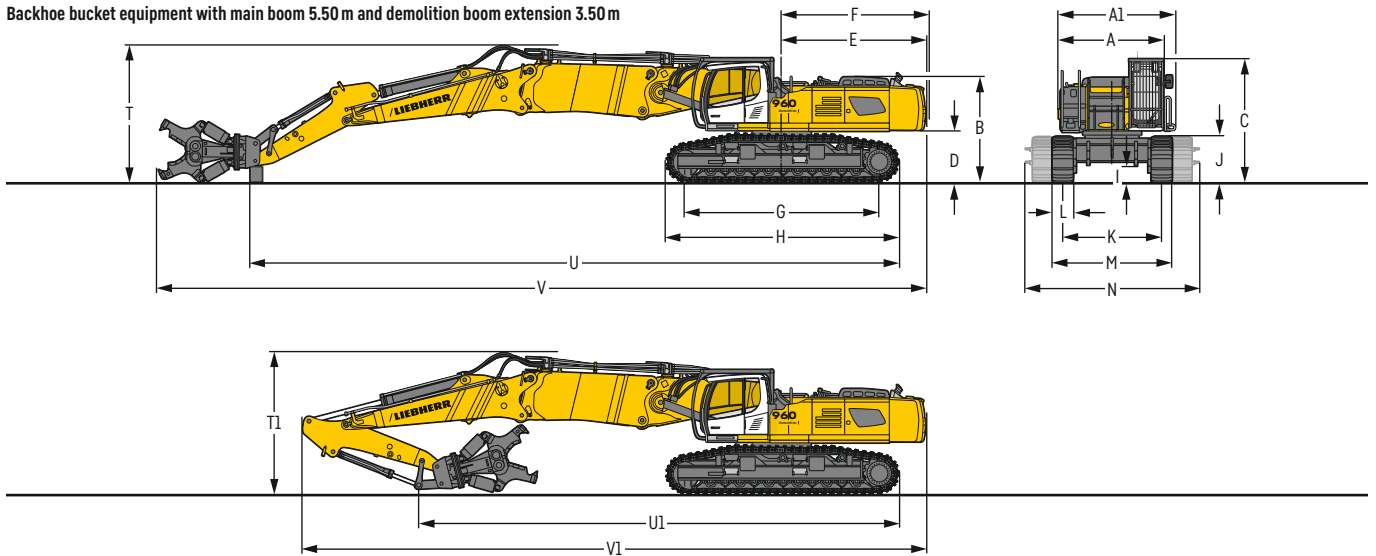
		Equipment 32.00 m with demolition boom 11.00 m mm		Equipment 29.50 m with demolition boom 11.00 m mm		Equipment 28.50 m with demolition boom 11.00 m mm	
		VH-HD	HD-EW	VH-HD	HD-EW	VH-HD	HD-EW
T	Boom height	3,750	3,800	3,750	3,800	3,750	3,800
U	Length on ground	19,200	19,200	19,200	19,200	15,750	15,750
V	Overall length	23,400	23,400	23,400	23,400	19,850	19,850

Dimensions

Backhoe bucket equipment with main boom 5.50 m



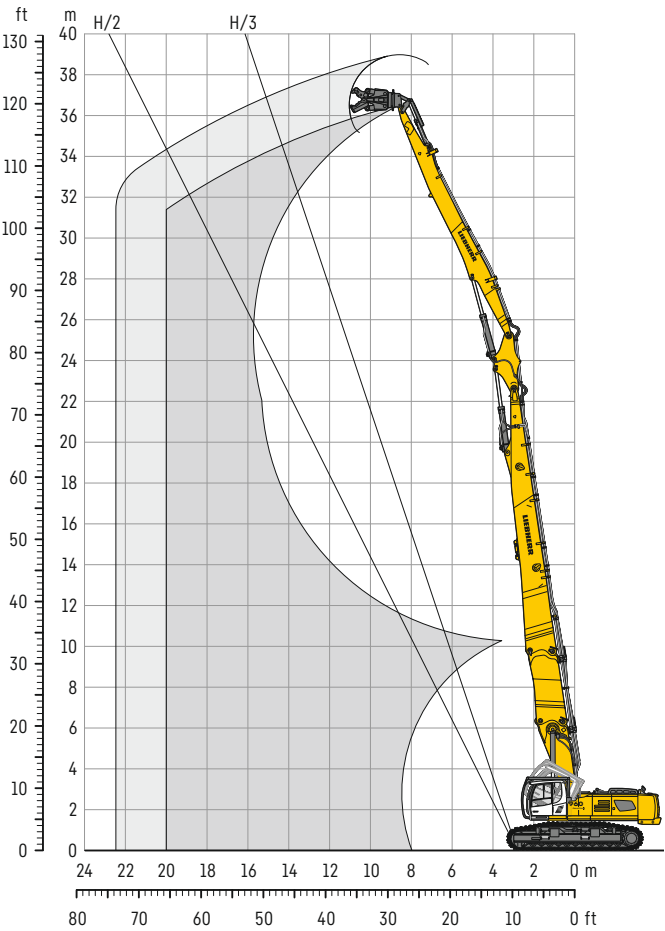
Backhoe bucket equipment with main boom 5.50 m and demolition boom extension 3.50 m



		Stick length m	Backhoe bucket equipment		Backhoe bucket equipment with demolition boom extension	
			mm		mm	
T	Boom height	2.35	VH-HD	HD-EW	VH-HD	HD-EW
		2.90	3,950	3,950	3,950	3,950
T1	Length on ground	2.90	-	-	4,100	4,100
		2.35	9,450	9,450	-	-
U	Length on ground	2.90	9,000	9,000	18,750	18,750
		2.35	-	-	13,900	13,900
U1	Overall length	2.90	-	-	22,250	22,250
		2.35	14,800	14,800	-	-
V	Overall length	2.90	-	-	18,050	18,050
		2.35	-	-	-	-
V1		2.90	-	-	-	-

Demolition equipment 36.50 m

with demolition boom extension 3.50 m
32.00 m at H/2



Reach limitation

		16 m	18 m	20 m
Demolition boom extension 3.50 m + Demolition boom 13.00 m + Intermediate boom + Demolition stick 12.50 m (kinematic 932) VH-HD undercarriage		Attachment weight* t		
	lengthwise	3.50	2.50	1.75
	transverse	1.75	1.75	-
HD-EW undercarriage				
	lengthwise	2.75	2.25	1.75
	transverse	1.50	-	-

* included quick coupler, adapter plate and attachment

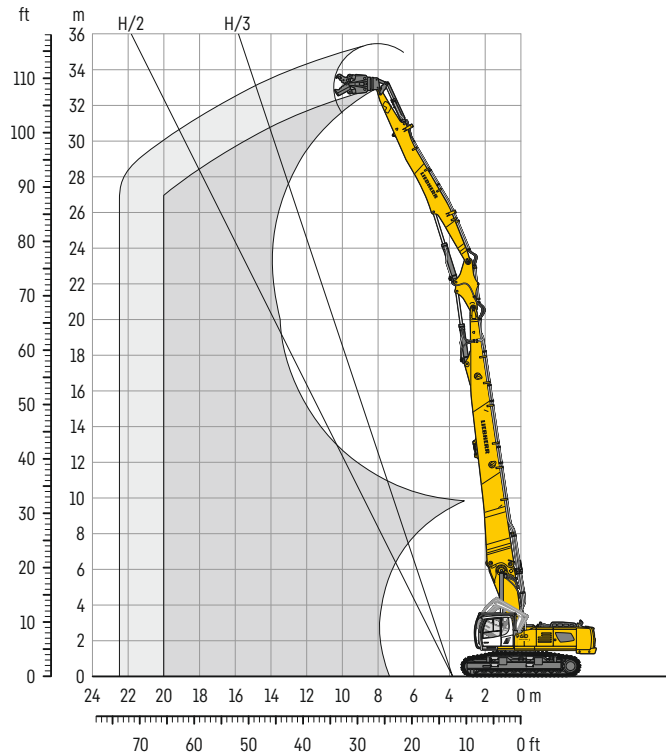
Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 11.8 t and 4 t removable, demolition boom extension 3.50 m, demolition boom 13.00 m, intermediate boom 2.60 m, demolition stick 12.50 m and attachment 3.5 t.

Undercarriage		VH-HD		HD-EW	
Pad width	mm	600	750	600	750
Weight	kg	98,100	99,300	93,200	94,400
Ground pressure	kg/cm²	1.36	1.10	1.30	1.05

Demolition equipment 33.00 m

29.00 m at H/2



Reach limitation

		14 m	16 m	18 m	20 m
Demolition boom 14.50 m + Intermediate boom + Demolition stick 11.00 m (kinematic 932)		Attachment weight*			
		t			
VH-HD undercarriage	lengthwise	3.50	3.50	3.50	3.50
	transverse	3.50	3.50	3.00	2.50
HD-EW undercarriage	lengthwise	3.50	3.50	3.50	3.50
	transverse	3.50	3.50	3.00	2.25

		14 m	16 m	18 m
Demolition boom 14.50 m + Intermediate boom + Demolition stick 11.00 m (kinematic 946)		Attachment weight*		
		t		
VH-HD undercarriage	lengthwise	4.00	4.00	4.00
	transverse	4.00	3.50	3.00
HD-EW undercarriage	lengthwise	4.00	4.00	4.00
	transverse	4.00	3.50	2.70

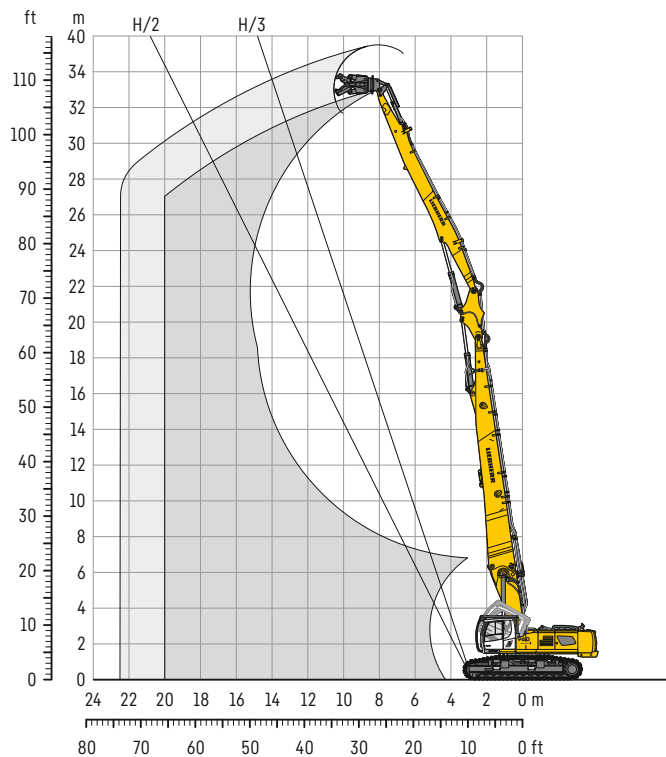
* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 11.8 t and 4 t removable, demolition boom 14.50 m, intermediate boom 2.60 m, demolition stick 11.00 m and attachment 3.5 t.

Undercarriage		VH-HD	HD-EW
Pad width	mm	600	750
Weight	kg	93,500	94,700
Ground pressure	kg/cm ²	1.30	1.05

29.00 m at H/2



Reach limitation

		16 m	18 m	20 m
+ Demolition boom 13.00 m + Intermediate boom + Demolition stick 12.50 m (kinematic 932)		Attachment weight*		
		t		
VH-HD undercarriage	lengthwise	3.50	3.50	3.50
	transverse	3.50	3.00	2.50
HD-EW undercarriage	lengthwise	3.25	3.25	2.50
	transverse	2.50	2.00	-

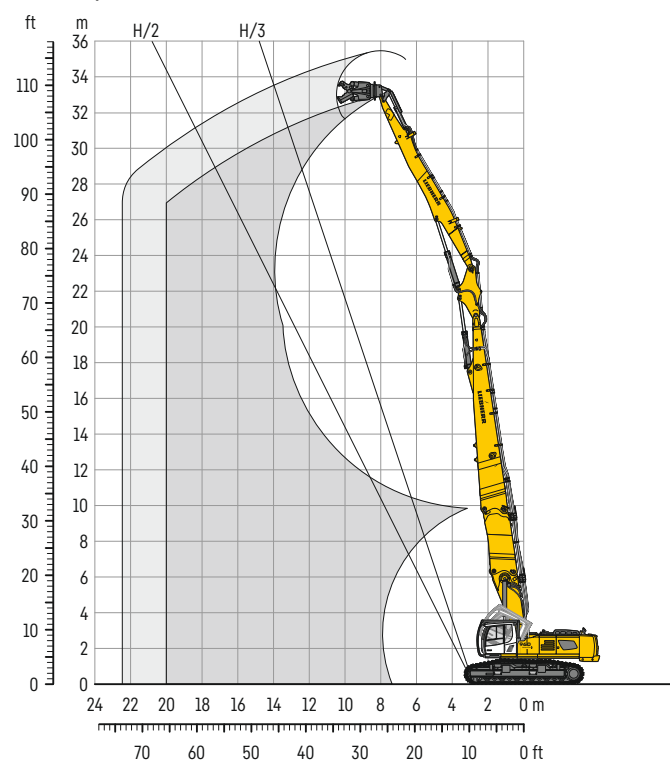
* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 11.8 t and 4 t removable, demolition boom 13.00 m, intermediate boom 2.60 m, demolition stick 12.50 m and attachment 3.5 t.

Undercarriage		VH-HD	HD-EW
Pad width	mm	600	750
Weight	kg	93,600	94,800
Ground pressure	kg/cm ²	1.30	1.05

with demolition boom extension 3.50 m
29.00 m at H/2



Reach limitation

		14 m	16 m	18 m	20 m
Demolition boom extension 3.50 m + Demolition boom 11.00 m + Intermediate boom + Demolition stick 11.00 m (kinematic 932) VH-HD undercarriage		Attachment weight* t			
	lengthwise	3.50	3.50	3.50	3.50
	transverse	3.50	3.50	2.75	2.25
HD-EW undercarriage					
	lengthwise	3.50	3.50	3.50	3.00
	transverse	3.50	3.50	2.50	2.00

		14 m	16 m	18 m
Demolition boom extension 3.50 m + Demolition boom 11.00 m + Intermediate boom + Demolition stick 11.00 m (kinematic 946) VH-HD undercarriage		Attachment weight* t		
	lengthwise	4.00	4.00	4.00
	transverse	4.00	3.50	2.80
HD-EW undercarriage				
	lengthwise	4.00	4.00	4.00
	transverse	4.00	3.25	2.50

* included quick coupler, adapter plate and attachment

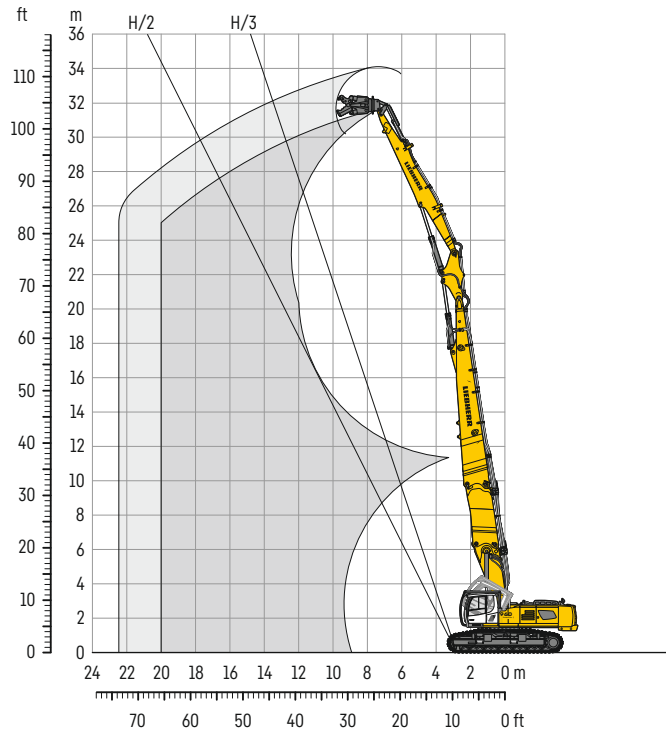
Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 11.8 t and 4 t removable, demolition boom extension 3.50 m, demolition boom 11.00 m, intermediate boom 2.60 m, demolition stick 11.00 m and attachment 3.5 t.

Undercarriage		VH-HD		HD-EW	
Pad width	mm	600	750	600	750
Weight	kg	96,500	97,700	91,600	92,800
Ground pressure	kg/cm ²	1.34	1.08	1.27	1.03

Demolition equipment 32.00 m

with demolition boom extension 3.50 m
27.50 m at H/2



Reach limitation

		14 m	16 m	18 m	20 m
Demolition boom extension 3.50 m + Demolition boom 11.00 m + Intermediate boom + Demolition stick 9.50 m (kinematic 932)		Attachment weight* t			
VH-HD undercarriage	lengthwise	3.50	3.50	3.50	3.25
	transverse	3.50	3.50	3.00	2.25
HD-EW undercarriage	lengthwise	3.50	3.50	3.50	3.25
	transverse	3.50	3.25	2.50	2.00

* included quick coupler, adapter plate and attachment

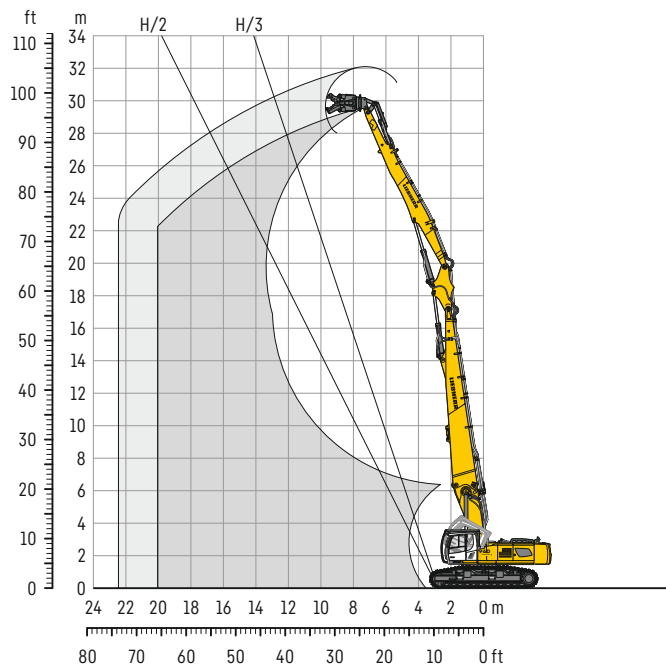
Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 11.8 t and 4 t removable, demolition boom extension 3.50 m, demolition boom 11.00 m, intermediate boom 2.60 m, demolition stick 9.50 m and attachment 3.5 t.

Undercarriage		VH-HD	HD-EW
Pad width	mm	600	750
Weight	kg	96,000	97,200
Ground pressure	kg/cm ²	1.33	1.07

Demolition equipment 29.50 m

25.50 m at H/2



Reach limitation

		14 m	16 m	18 m
Demolition boom 11.00 m + Intermediate boom + Demolition stick 11.00 m (kinematic 932)		Attachment weight* t		
VH-HD undercarriage	lengthwise	3.50	3.50	3.50
	transverse	3.50	3.50	3.00
HD-EW undercarriage	lengthwise	3.50	3.50	3.50
	transverse	3.50	3.50	2.75

		14 m	16 m	18 m
Demolition boom 11.00 m + Intermediate boom + Demolition stick 11.00 m (kinematic 946)		Attachment weight* t		
VH-HD undercarriage	lengthwise	4.00	4.00	4.00
	transverse	4.00	4.00	3.00
HD-EW undercarriage	lengthwise	4.00	4.00	4.00
	transverse	4.00	3.50	2.50

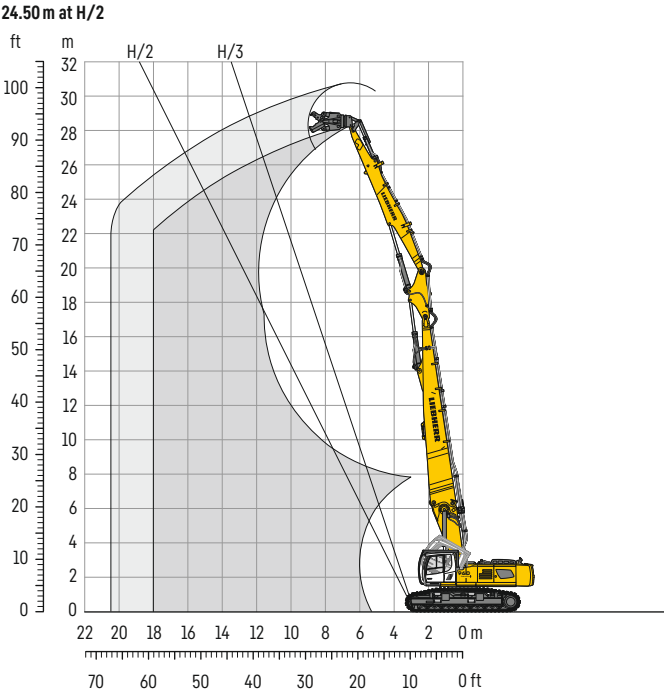
* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 11.8 t and 4 t removable, demolition boom 11.00 m, intermediate boom 2.60 m, demolition stick 11.00 m and attachment 3.5 t.

Undercarriage		VH-HD	HD-EW
Pad width	mm	600	750
Weight	kg	91,900	93,100
Ground pressure	kg/cm ²	1.28	1.04

Demolition equipment 28.50 m



Reach limitation

		12m	14m	16m	18m
+ Demolition boom 11.00m		Attachment weight*			
+ Intermediate boom					
+ Demolition stick 9.50 m (kinematic 932)		t			
VH-HD undercarriage	lengthwise	3.50	3.50	3.50	3.50
	transverse	3.50	3.50	3.50	2.75
HD-EW undercarriage	lengthwise	3.50	3.50	3.50	3.50
	transverse	3.50	3.50	3.50	2.50

* included quick coupler, adapter plate and attachment

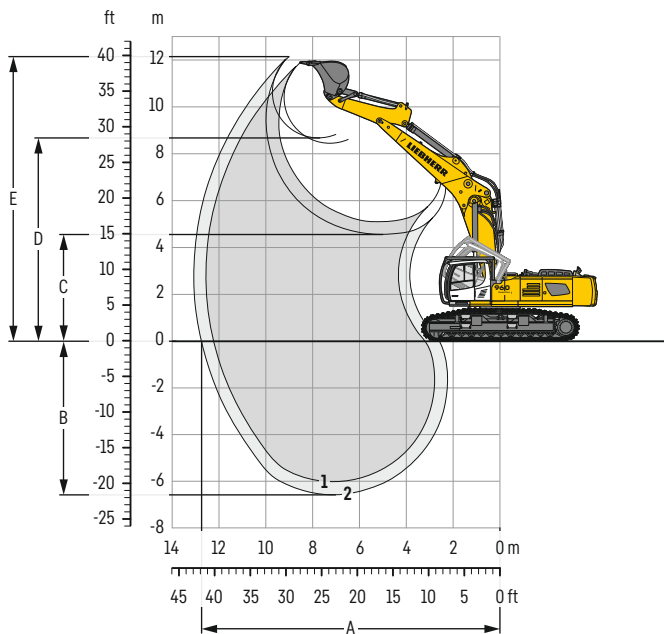
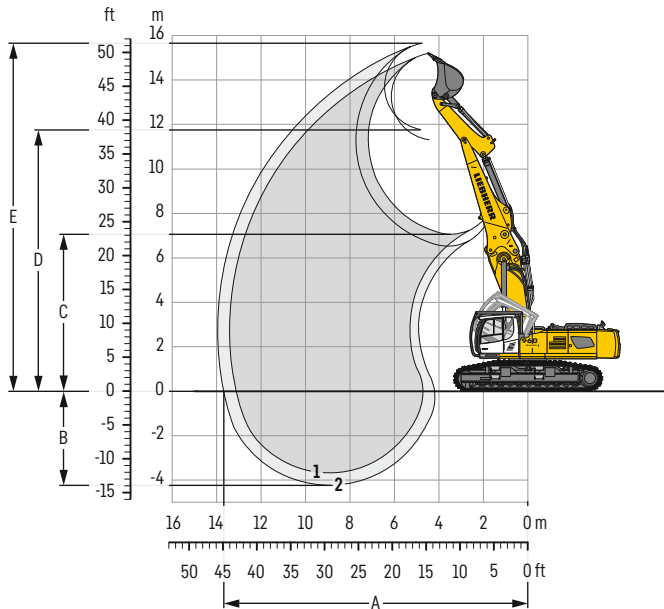
Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 11.8 t, demolition boom 11.00m, intermediate boom 2.60m, demolition stick 9.50m and attachment 3.5t.

Undercarriage		VH-HD		HD-EW	
Pad width	mm	600	750	600	750
Weight	kg	87,500	88,700	82,600	83,800
Ground pressure	kg/cm²	1.22	0.98	1.15	0.93

Backhoe bucket

with main boom 5.50 m



Digging envelope

Main boom pinned in upper (in lower) bearing

		1	2
Stick length	m	2.35	2.90
A Max. reach at ground level	m	13.10 (12.10)	13.65 (12.65)
B Max. digging depth	m	3.70 (6.20)	4.25 (6.75)
C Min. dumping height	m	7.05 (5.05)	6.50 (4.50)
D Max. dumping height	m	11.30 (8.10)	11.80 (8.30)
E Max. cutting height	m	15.20 (11.45)	15.65 (11.70)

Forces

		1	2
Stick digging force (ISO 6015)	kN	248	217
Bucket digging force (ISO 6015)	kN	313	313
Stick digging force (SAE J1179)	kN	233	206
Bucket digging force (SAE J1179)	kN	269	269

Max. bucket digging force ISO

345 kN

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 13.5 t, main boom 5.50 m, HD stick 2.35 m and HD bucket 2.35 m³ (3,050 kg).

Undercarriage		VH-HD	HD-EW
Pad width	mm	600 750	600 750
Weight	kg	82,200 83,400	77,300 78,500
Ground pressure	kg/cm ²	1.14 0.93	1.07 0.87

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

Cutting width	Capacity	Weight		
mm	m ³	kg		
1,550	2.00	2,800	2.35	2.90
1,750	2.35	3,050	▲	▲
1,950	2.70	3,300	▲	■
2,100	3.00	3,450	■	■

* 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, ■ = ≤ 1.5 t/m³

Lift capacities

with main boom 5.50 m (pinned in upper bearing), counterweight 13.5 t and track pads 600 mm

Stick 2.35 m

Under-carriage	4.5 m	6.0 m	7.5 m	9.0 m	10.5 m		
m							m
13.5						12.5* 12.5*	6.6
12.0		17.4* 17.4*				10.6* 10.6*	8.4
10.5		18.1* 18.1*	17.3* 17.3*			9.6* 9.6*	9.6
9.0	21.5* 21.5*	20.5* 20.5*	19.7* 19.7*	16.3* 16.3*		9.1* 9.1*	10.4
7.5		28.6* 28.6*	23.3* 23.3*	19.3 20.3*		8.9* 8.9*	11.0
6.0			24.4 25.0*	18.7 21.1*	14.9 17.0*	8.8* 8.8*	11.3
4.5			23.3 26.7*	18.1 22.0*	14.6 19.1*	9.0* 9.0*	11.4
3.0			22.6 26.3*	17.7 22.6*	14.3 19.4*	9.3* 9.3*	11.4
1.5			22.3 24.7*	17.4 22.8*	14.1 19.3*	9.9* 9.9*	11.1
0			22.3 26.4*	17.3 22.2*	14.1 18.6*	15.3 18.5*	9.9
-1.5				17.3 20.8*			
13.5		17.4* 17.4*				12.5* 12.5*	6.6
12.0		18.1* 18.1*	17.3* 17.3*			10.6* 10.6*	8.4
10.5		20.5* 20.5*	19.7* 19.7*	16.3* 16.3*		9.6* 9.6*	9.6
9.0	21.5* 21.5*	28.6* 28.6*	23.3* 23.3*	17.8 20.3*		9.1* 9.1*	10.4
7.5			22.6 25.0*	17.3 21.1*	13.7 17.0*	8.9* 8.9*	11.0
6.0			21.5 26.7*	16.7 22.0*	13.4 19.1*	8.8* 8.8*	11.3
4.5			20.7 26.3*	16.2 22.6*	13.2 19.3	9.0* 9.0*	11.4
3.0			20.4 24.7*	15.9 22.8*	13.0 19.1	9.3* 9.3*	11.4
1.5			20.4 26.4*	15.8 22.2*	12.9 18.6*	9.9* 9.9*	11.1
0				15.9 20.8*		14.0 18.5*	9.9
-1.5							

Stick 2.90 m

Under-carriage	4.5 m	6.0 m	7.5 m	9.0 m	10.5 m		
m							m
13.5						12.5* 12.5*	5.0
12.0		14.6* 14.6*				9.3* 9.3*	7.5
10.5		14.2* 14.2*	14.3* 14.3*	9.4* 9.4*		8.1* 8.1*	9.1
9.0		15.2* 15.2*	15.4* 15.4*	14.3* 14.3*		7.4* 7.4*	10.2
7.5		27.1* 27.1*	19.6* 19.6*	16.8* 16.8*	12.5* 12.5*	7.0* 7.0*	11.0
6.0			24.2* 24.2*	18.9 20.5*	15.0 15.9*	6.9* 6.9*	11.5
4.5			23.6 26.0*	18.2 21.5*	14.6 18.7*	6.8* 6.8*	11.9
3.0			22.7 27.3*	17.7 22.3*	14.3 19.1*	6.9* 6.9*	12.0
1.5			22.3 27.6*	17.3 22.7*	14.1 19.2*	7.2* 7.2*	11.9
0			22.1 26.9*	17.2 22.4*	14.0 18.9*	7.6* 7.6*	11.6
-1.5			22.2 25.3*	17.2 21.3*	14.0 17.7*	13.4 16.0*	10.9
13.5		14.6* 14.6*				12.5* 12.5*	5.0
12.0		14.2* 14.2*	14.3* 14.3*	9.4* 9.4*		8.1* 8.1*	9.1
10.5		15.2* 15.2*	15.4* 15.4*	14.3* 14.3*		7.4* 7.4*	10.2
9.0		27.1* 27.1*	19.6* 19.6*	16.8* 16.8*	12.5* 12.5*	7.0* 7.0*	11.0
7.5			22.9 24.2*	17.4 20.5*	13.8 15.9*	6.9* 6.9*	11.5
6.0			21.8 26.0*	16.8 21.5*	13.5 18.7*	6.8* 6.8*	11.9
4.5			20.9 27.3*	16.3 22.3*	13.1 19.1*	6.9* 6.9*	12.0
3.0			20.4 27.6*	15.9 22.7*	12.9 19.0	7.2* 7.2*	11.9
1.5			20.3 26.9*	15.7 22.4*	12.8 18.9*	7.6* 7.6*	11.6
0			20.4 25.3*	15.8 21.3*	12.9 17.7*	12.3 16.0*	10.9
-1.5							

with main boom 5.50 m (pinned in upper bearing), counterweight 13.5 t and track pads 600 mm

Stick 2.35 m

Under-carriage	4.5 m	6.0 m	7.5 m	9.0 m	10.5 m		
m							m
10.5						9.1* 9.1*	8.5
9.0			16.7* 16.7*			8.7* 8.7*	9.5
7.5			17.9* 17.9*	14.8* 14.8*		8.7* 8.7*	10.1
6.0		24.8* 24.8*	20.0* 20.0*	17.8* 17.8*		8.8* 8.8*	10.5
4.5			22.5* 22.5*	19.1 19.2*		9.2* 9.2*	10.6
3.0			23.9 25.0*	18.5 20.7*	11.6* 11.6*	9.9* 9.9*	10.5
1.5			23.3 26.8*	18.1 22.0*	10.2* 10.2*	10.9* 10.9*	10.2
0		19.7* 19.7*	23.0 27.9*	17.9 22.9*		12.7* 12.7*	9.7
-1.5		32.3 33.6*	23.0 28.2*	17.8 23.2*		15.8* 15.8*	8.8
-3.0		32.6 34.1*	23.2 27.4*				
-4.5							
10.5			16.7* 16.7*			9.1* 9.1*	8.5
9.0			17.9* 17.9*	14.8* 14.8*		8.7* 8.7*	9.5
7.5			20.0* 20.0*	17.8* 17.8*		8.7* 8.7*	10.1
6.0		24.8* 24.8*	22.5* 22.5*	17.7 19.2*		8.8* 8.8*	10.5
4.5			22.1 25.0*	17.1 20.7*	11.6* 11.6*	9.2* 9.2*	10.6
3.0			21.5 26.8*	16.7 22.0*	10.2* 10.2*	9.9* 9.9*	10.5
1.5			21.2 27.9*	16.4 22.9*		10.9* 10.9*	10.2
0		19.7* 19.7*	21.2 27.9*	16.4 22.9*		12.7* 12.7*	9.7
-1.5		29.7 33.6*	21.1 28.2*	16.4 23.2*		15.8* 15.8*	8.8
-3.0		30.0 34.1*	21.3 27.4*				
-4.5							

Stick 2.90 m

Under-carriage	4.5 m	6.0 m	7.5 m	9.0 m	10.5 m		
m							m
10.5						7.6* 7.6*	7.9
9.0				8.6* 8.6*		7.0* 7.0*	9.1
7.5				14.0* 14.0*		6.7* 6.7*	10.0
6.0		22.8* 22.8*	18.8* 18.8*	16.8* 16.8*	8.4* 8.4*	6.7* 6.7*	10.6
4.5		27.9* 27.9*	21.4* 21.4*	18.3* 18.3*	12.8* 12.8*	6.8* 6.8*	11.0
3.0		16.1* 16.1*	24.0* 24.0*	18.6 19.9*	14.9 15.6*	7.1* 7.1*	11.1
1.5		16.0* 16.0*	23.4 26.1*	18.1 21.4*	14.6 16.7*	7.6* 7.6*	11.0
0		21.7* 21.7*	23.0 27.4*	17.8 22.5*	13.5* 13.5*	8.3* 8.3*	10.7
-1.5	14.9* 14.9*	31.1* 31.1*	22.9 28.0*	17.7 23.0*		9.5* 9.5*	10.2
-3.0	25.3* 25.3*	32.3 34.8*	23.0 27.7*	17.8 22.7*		11.5* 11.5*	9.4
-4.5			23.4 25.9*			21.6 24.2*	7.9
10.5						7.6* 7.6*	7.9
9.0				8.6* 8.6*		7.0* 7.0*	9.1
7.5				14.0* 14.0*		6.7* 6.7*	10.0
6.0		22.8* 22.8*	18.8* 18.8*	16.8* 16.8*	8.4* 8.4*	6.7* 6.7*	10.6
4.5		27.9* 27.9*	21.4* 21.4*	17.8 18.3*	12.8* 12.8*	6.8* 6.8*	11.0
3.0		16.1* 16.1*	22.3 24.0*	17.2 19.9*	13.7 15.6*	7.1* 7.1*	11.1
1.5		16.0* 16.0*	21.6 26.1*	16.7 21.4*	13.5 16.7*	7.6* 7.6*	11.0
0		21.7* 21.7*	21.2 27.4*	16.4 22.5*	13.3 13.5*	8.3* 8.3*	10.7
-1.5	14.9* 14.9*	29.5 31.1*	21.0 28.0*	16.3 23.0*		9.5* 9.5*	10.2
-3.0	25.3* 25.3*	29.7 34.8*	21.1 27.7*	16.4 22.7*		11.5* 11.5*	9.4
-4.5			21.5 25.9*			19.9 24.2*	7.9

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

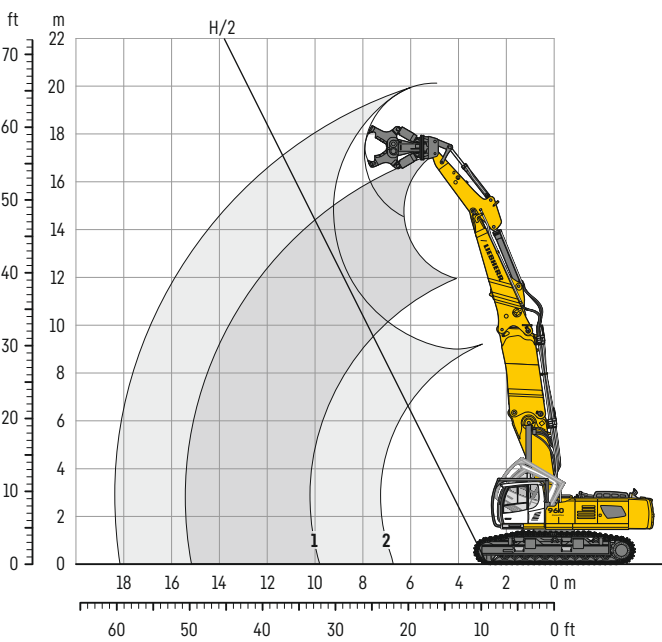
The load values are quoted in tons (t) at stick end (without bucket), and may be swung 360° on firm and even ground. Adjacent values are valid for the undercarriage when in the longitudinal position. Capacities are valid for 600 mm wide track pads. Indicated loads are based on ISO 10567 standard and 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 825 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.

Backhoe bucket

with main boom 5.50 m and demolition boom extension 3.50 m



Operating weight and ground pressure

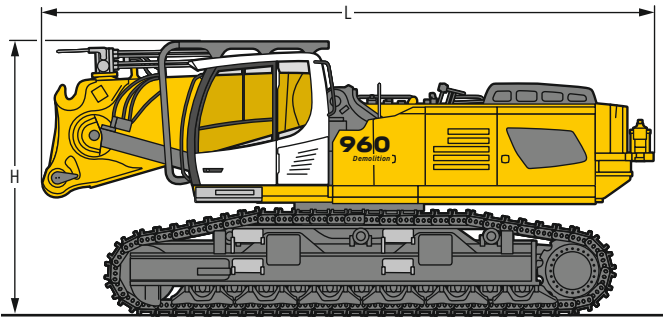
The operating weight includes the basic machine with counterweight 13.5 t, main boom 5.50 m, demolition boom extension 3.50 m, HD stick 2.90 m and attachment* 4.25 t.

Undercarriage	VH-HD		HD-EW	
Pad width	mm		600	750
Weight	kg		88,000	89,200
Ground pressure	kg/cm ²		1.22	0.99

* included quick coupler, adapter plate and attachment

- 1 reach at stick end
- 2 reach at attachment end

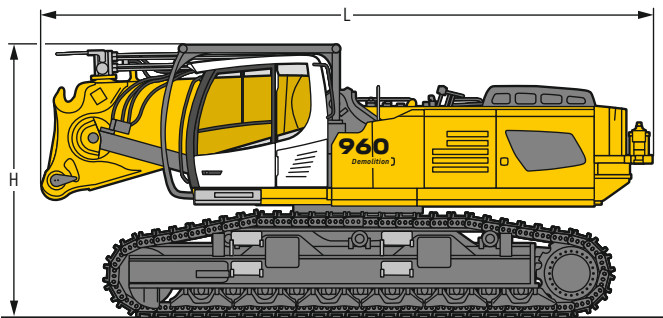
Dimensions and weights



Basic machine

without counterweight with cab tiltable 30° and integral protection grid

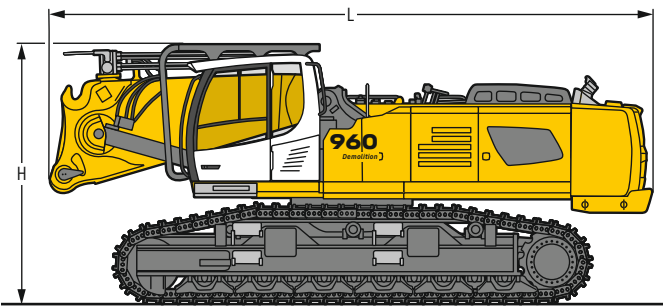
		VH-HD	HD-EW
L	mm	8,100	8,100
H	mm	3,600	3,660
Weight	kg	59,100	54,100



Basic machine

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

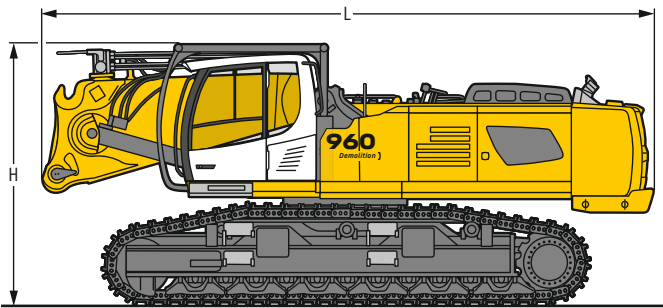
		VH-HD	HD-EW
L	mm	8,100	8,100
H	mm	3,600	3,660
Weight	kg	59,500	54,500



Basic machine

with counterweight 11.8 t and 4 t removable, cab tiltable 30° and integral protection grid

		VH-HD	HD-EW
L	mm	8,450	8,450
H	mm	3,600	3,660
Weight	kg	75,100	70,100

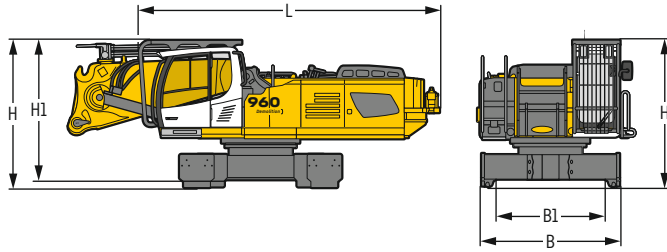


Basic machine

with counterweight 11.8 t and 4 t removable, cab tiltable 30° and integral protection grid on tilting device

		VH-HD	HD-EW
L	mm	8,450	8,450
H	mm	3,600	3,660
Weight	kg	75,500	70,500

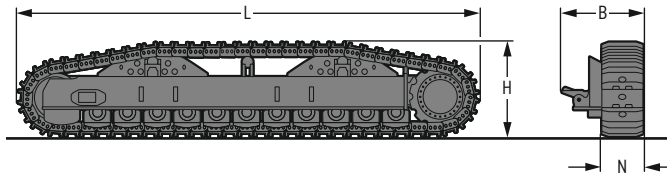
Dimensions and weights



Basic machine

without side frames

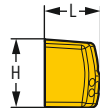
B	mm	3,200
B1	mm	3,035
L Length	mm	6,550
H Height	mm	2,990
H1 Height	mm	2,360
Weight	kg	30,100



Side frame

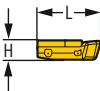
for HD-EW undercarriage

L Length	mm	6,725
H Height	mm	1,380
N	mm	500 600 750
B	mm	1,200 1,200 1,260
Weight	kg	11,200 11,700 12,300



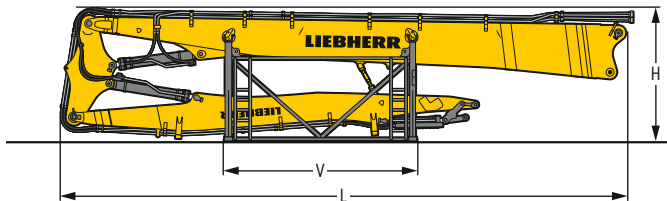
Counterweight

L Length	mm	1,035
H Height	mm	1,290
Width	mm	2,970
Weight	kg	11,800



Additional counterweight

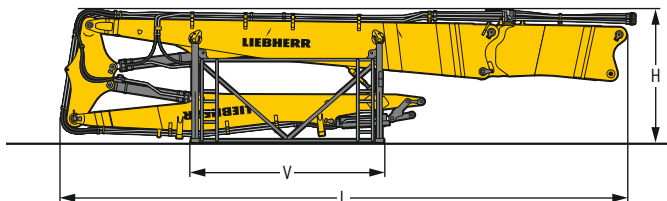
L Length	mm	1,115
H Height	mm	350
Width	mm	2,990
Weight	kg	4,000



Demolition equipment

with storage rack

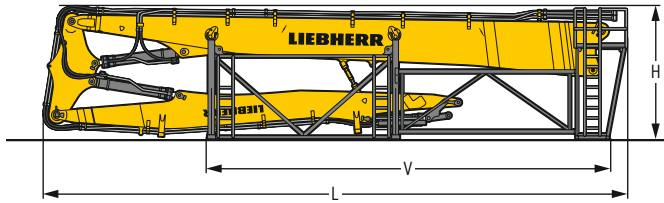
		29.50 m	33.00 m	36.50 m
L Length	mm	12,050	15,510	14,050
H Height	mm	3,600	3,600	3,850
V	mm	5,270	5,270	5,270
Width	mm	2,410	2,410	2,410
Weight without attachment	kg	14,600	17,000	16,450



Demolition equipment with demolition boom extension

with storage rack

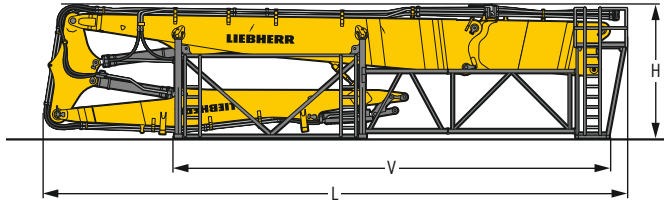
		29.50 m	33.00 m
L Length	mm	15,550	17,550
H Height	mm	3,600	3,850
V	mm	5,270	5,270
Width	mm	2,410	2,410
Weight without attachment	kg	19,000	20,250



Demolition equipment

with storage rack with catwalks

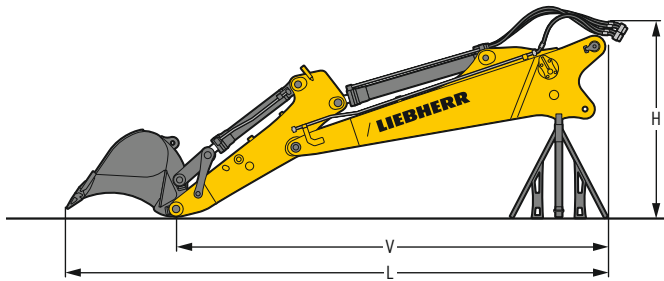
		29.50m	33.00m	36.50m	
L	Length	mm	12,510	15,990	17,970
H	Height	mm	3,600	3,600	3,850
V		mm	8,450	11,010	12,650
	Width	mm	2,490	2,490	2,490
	Weight without attachment	kg	15,350	18,050	21,500



Demolition equipment with demolition boom extension

with storage rack with catwalks

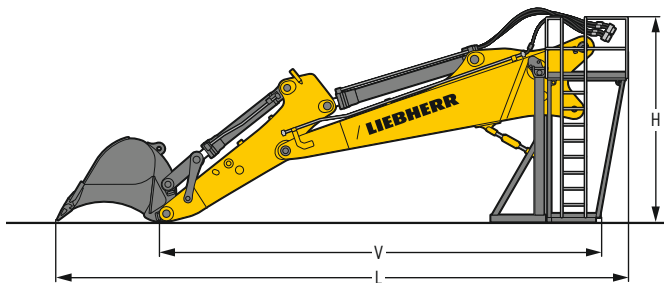
			29,50 m
L	Length	mm	15,990
H	Height	mm	3,600
V		mm	11,920
	Width	mm	2,490
	Weight without attachment	kg	20,200



Backhoe equipment

with storage rack

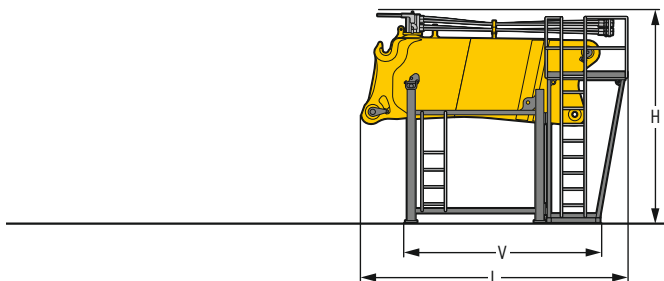
	Main boom length	m	5.50	
	Stick length	m	2.35	2.90
L	Length	mm	9,960	10,540
H	Height	mm	3,600	3,600
V		mm	7,700	8,270
	Width	mm	2,250	2,250
	Weight without bucket	kg	8,810	9,100



Backhoe equipment

with storage rack with catwalks

	Main boom length	m	5.50	
	Stick length	m	2.35	2.90
L	Length	mm	9,480	10,060
H	Height	mm	3,600	3,600
V		mm	7,700	8,270
	Width	mm	2,500	2,500
	Weight without bucket	kg	8,810	8,970

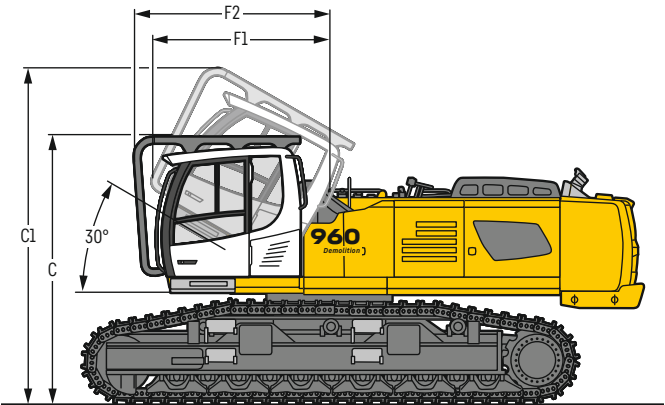


Demolition boom extension

with storage rack with catwalks

L	Length	mm	4,630
H	Height	mm	3,650
V		mm	3,380
	Width	mm	2,490
	Weight	kg	5,550

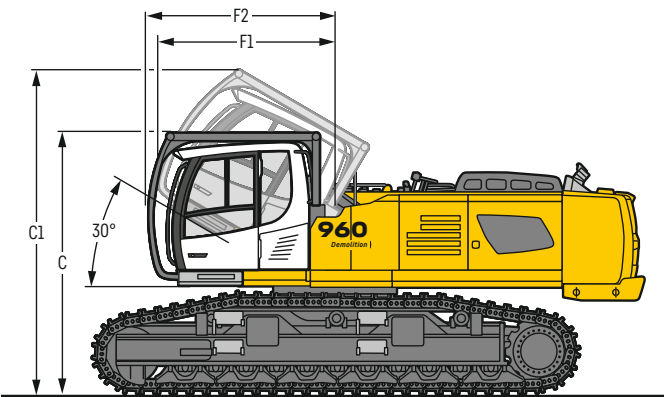
Choice of cab elevations



Version

with cab tiltable 30° and integral protection grid

		VH-HD	HD-EW
C	mm	3,600	3,660
C1	mm	4,520	4,580
F1	mm	2,415	2,415
F2	mm	2,650	2,650



Version

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

		VH-HD	HD-EW
C	mm	3,600	3,660
C1	mm	4,440	4,580
F1	mm	2,450	2,415
F2	mm	2,605	2,650

Serial equipment



Undercarriage

Lashing eyes
Sprocket double-toothed
Track rollers, lifetime-lubricated



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
Removable counterweight
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)



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
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 multicouplers for demolition boom and backhoe equipment

* 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	+
Steps	●
Steps wide	+
Tracks, sealed and greased	●
Undercarriage HD-EW	+
Undercarriage VH-HD	+

Upper carriage

Air compressor	+
Boxing ring	+
Catwalks tiltable left and right	+
Electric socket on uppercarriage (24 V)	+
Extended tool set including tool box	+
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 left, 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	+
Hydraulic for counterweight	+
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	+
Emergency stop in cab	+
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

Boom bottom protection	+
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	● 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	+
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 quick change coupling	+
Stick bottom protection	+
Storage rack with catwalks	+
Tool Management	+

● = Standard, + = Option

¹⁾ 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.

Liebherr-France SAS

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