

Equipment information demolition excavator

R 960

Litronic®

Engine

335 HP / 250 kW
Tier 4 Final

Operating weight

97,700 kg / 215,390 lb

Working height

33 m / 108'3"
H/2: 29 m / 95'2"

INTERAI
Innovation Awards
2015
SILVER



LIEBHERR

Technical data



Engine

Rating	per SAE J1349 335 HP (250 kW) at 1,800 rpm per ISO 9249 340 HP (250 kW) at 1,800 rpm
Torque	2,280 Nm at 1,000 rpm / 1,682 lbf ft at 1,000 rpm
Model	Liebherr D936 A7-24
Type	6 cylinder in-line
Bore	130 mm / 5.1 in
Stroke	150 mm / 5.9 in
Displacement	10.5 l / 641 in³
Engine operation	4-stroke diesel Common-Rail, monoturbo
Exhaust gas treatment	Tier 4 Final DOC + DPF + SCR Passive regeneration by thermo management
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 / 203 gal
Urea tank	96 l / 25 gal
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. / 2 x 100 gpm
Max. pressure	350 bar / 5,076 psi
For swing drive	Reversible, variable displacement, swashplate pump, closed-loop circuit
Max. flow	201 l/min. / 53 gpm
Max. pressure	375 bar / 5,439 psi
Pump regulation	Electro-hydraulic with electronic engine speed sensing regulation, pressure compensation, flow compensation
Hydraulic tank	394 l / 104 gal
Hydraulic system	1,350 l / 357 gal with demolition equipment
Hydraulic oil filter	2 full flow filters in return line with integrated fine filter area (5 µm / 2,500 mesh)
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. / 100 gpm
Pressure	350 bar / 5,076 psi
Attachment rotation system	
Flow	30 l/min. / 8 gpm
Pressure	180 bar / 2,611 psi



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 / 118,010 lbf ft
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 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
Control system	Arm consoles, swinging with the seat
Operation and displays	Large high-resolution color display with intuitive operation via touchscreen, video, additional color 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
Noise emission	
ISO 6396	L_{pA} (inside cab) = 72 dB(A)
2000/14/EC	L_{WA} (surround noise) = 106 dB(A)



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	Low range 2.0 km/h / 1.2 mph High range 3.2 km/h / 2.0 mph
Net drawbar pull on crawler	563 kN / 126,567 lbf
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)

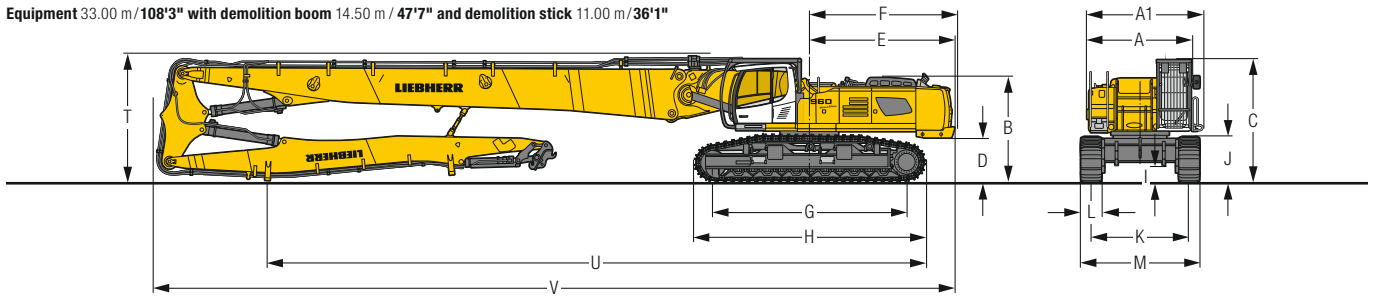


Equipment

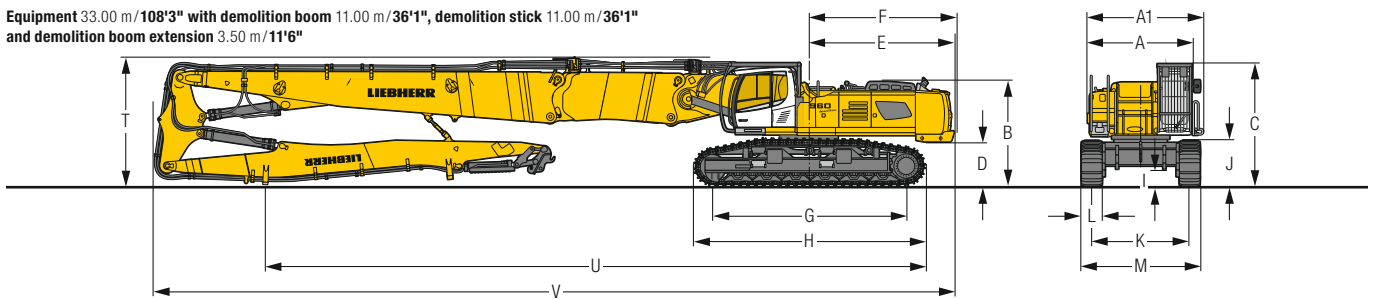
Type	Combination of resistant steel plates and cast steel components
Hydraulic cylinders	Liebherr cylinders with seal and guidance systems
Bearings	Sealed, low maintenance
Lubrication	Automatic central lubrication system (except link and tilt geometry)
Hydraulic connections	Pipes and hoses equipped with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

Dimensions

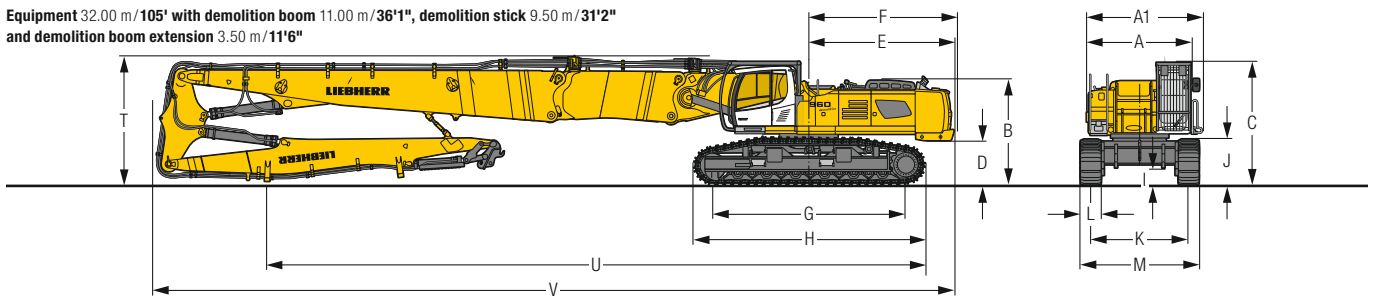
Equipment 33.00 m/108'3" with demolition boom 14.50 m/47'7" and demolition stick 11.00 m/36'1"



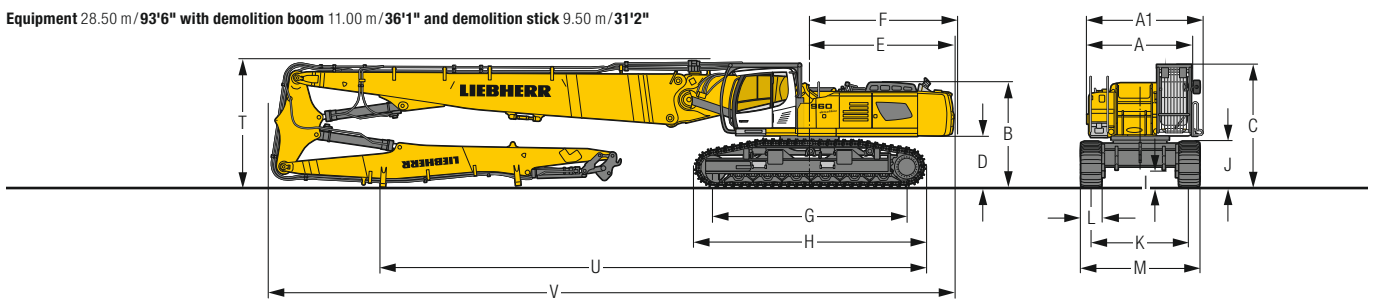
Equipment 33.00 m/108'3" with demolition boom 11.00 m/36'1", demolition stick 11.00 m/36'1" and demolition boom extension 3.50 m/11'6"



Equipment 32.00 m/105' with demolition boom 11.00 m/36'1", demolition stick 9.50 m/31'2" and demolition boom extension 3.50 m/11'6"



Equipment 28.50 m/93'6" with demolition boom 11.00 m/36'1" and demolition stick 9.50 m/31'2"



	VH-HD	mm/ft in	HD-EW	mm/ft in
A	Uppercarriage width	2,985 ³⁾ / 9'10"³⁾		2,985 ³⁾ / 9'10"³⁾
A1	Uppercarriage width with catwalks	3,380 / 11' 1"		3,380 / 11' 1"
B	Uppercarriage height	3,055 / 10'		3,115 / 10' 3"
C	Cab height	3,600 / 11'10"		3,660 / 12'
D	Counterweight ground clearance	1,275 / 1,445 ²⁾ / 4' 2" / 4' 9"²⁾		1,335 / 1,505 ²⁾ / 4' 5" / 4'11"²⁾
E	Rear-end length	4,235 / 4,155 ²⁾ / 13'11" / 13' 8"²⁾		4,235 / 4,155 ²⁾ / 13'11" / 13' 8"²⁾
F	Tail swing radius	4,280 / 4,200 ²⁾ / 14' 1" / 13' 9"²⁾		4,280 / 4,200 ²⁾ / 14' 1" / 13' 9"²⁾
G	Wheelbase	5,610 / 18' 5"		5,605 / 18' 5"
H	Undercarriage length	6,725 / 22' 1"		6,725 / 22' 1"
I	Undercarriage ground clearance	490 / 1' 7"		490 / 1' 7"
J	Track height	1,340 / 4' 5"		1,380 / 4' 6"
K	Track gauge	2,850 / 4,050 ⁴⁾ / 9'4" / 13' 3"⁴⁾		4,000 / 13' 1"
L	Track pad width	600 / 24"	500 / 20"	600 / 24" 750 / 30"
M	Width over tracks	3,500 / 4,820 ⁴⁾ / 11'6" / 15'10"⁴⁾	4,630 / 15' 2"	4,630 / 15' 2" 4,750 / 15' 7"
N	Width over steps	3,885 ¹⁾ / 5,085 ¹⁾ / 12'9"¹⁾ / 16' 8"¹⁾	5,050 ¹⁾ / 16' 7"¹⁾	5,050 ¹⁾ / 16' 7"¹⁾ 5,050 ¹⁾ / 16' 7"¹⁾

¹⁾ width with removable steps

²⁾ length with equipment 28,50 m / **93'6"**

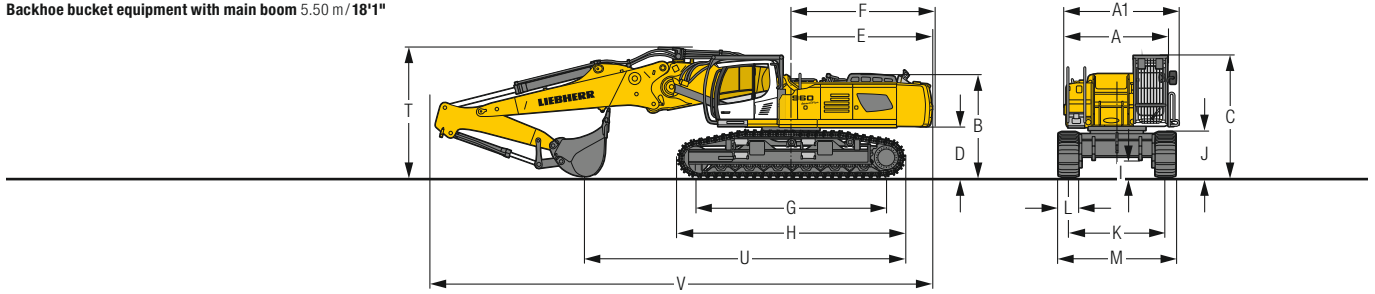
³⁾ without door stop device and spacer

⁴⁾ work position

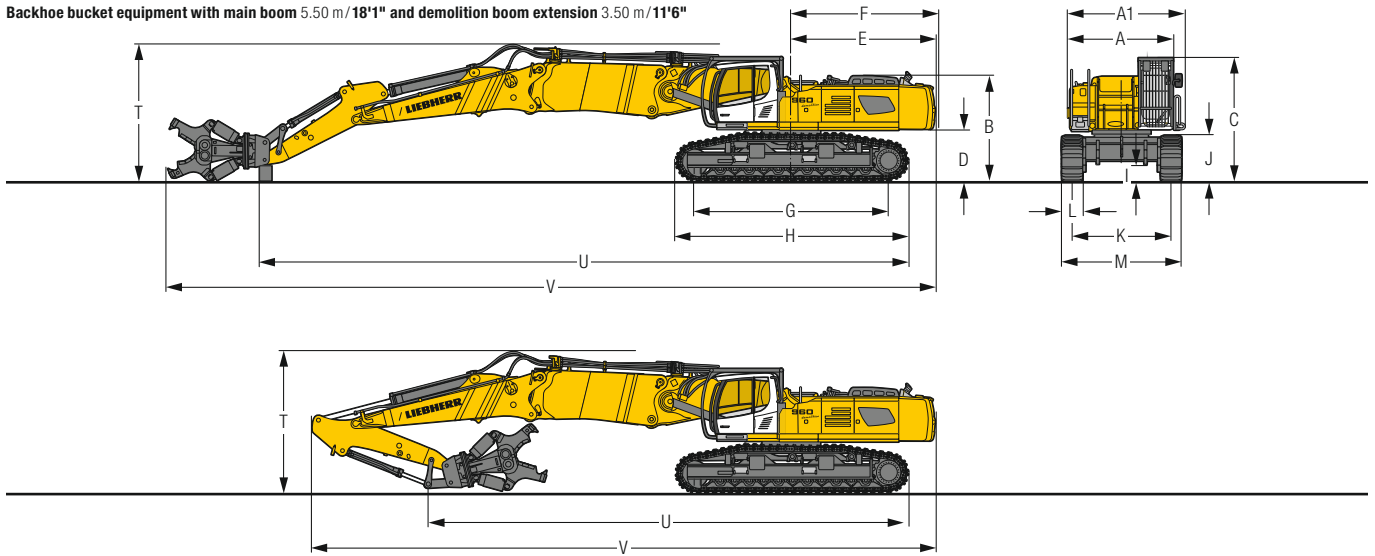
	Demolition equipment 33.00 m / 108'3" with demolition boom 14.50 m / 47'7"		Demolition equipment 33.00 m / 108'3" with demolition boom 11.00 m / 36'1"		Demolition equipment 32.00 m / 105'		Demolition equipment 28.50 m / 93'6"		
	mm/ft in		mm/ft in		mm/ft in		mm/ft in		
	VH-HD	HD-EW	VH-HD	HD-EW	VH-HD	HD-EW	VH-HD	HD-EW	
T	Boom height	3,750 / 12'4"	3,800 / 12'6"	3,750 / 12'4"	3,800 / 12'6"	3,750 / 12'4"	3,800 / 12'6"	3,750 / 12'4"	3,800 / 12'6"
U	Length on ground	19,200 / 63'	19,200 / 63'	19,200 / 63'	19,200 / 63'	19,200 / 63'	19,200 / 63'	15,750 / 51'8"	15,750 / 51'8"
V	Overall length	23,400 / 76'9"	23,400 / 76'9"	23,400 / 76'9"	23,400 / 76'9"	23,400 / 76'9"	23,400 / 76'9"	19,850 / 65'1"	19,850 / 65'1"

Dimensions

Backhoe bucket equipment with main boom 5.50 m/18'11"



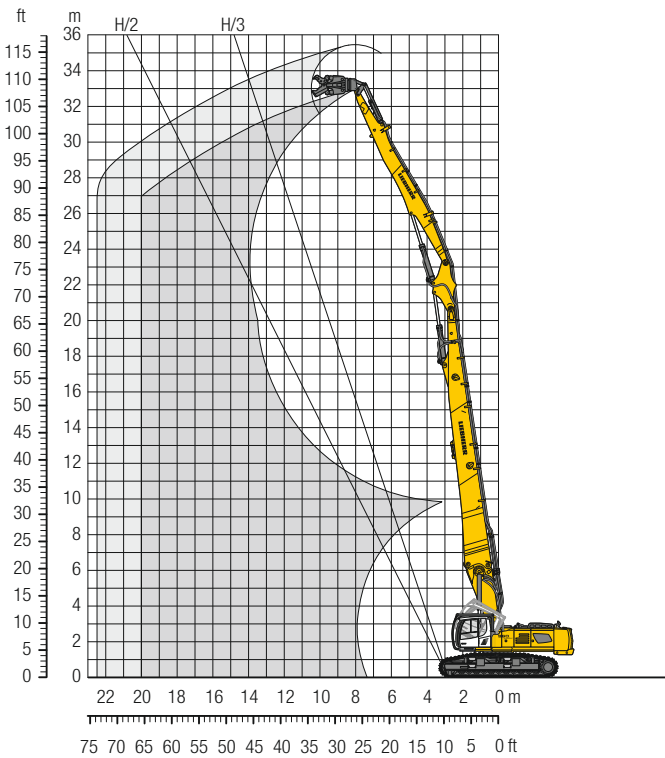
Backhoe bucket equipment with main boom 5.50 m/18'11" and demolition boom extension 3.50 m/11'6"



	Stick length m/ft in	Backhoe bucket equipment		Backhoe bucket equipment with demolition boom extension			
		VH-HD	mm/ft in	HD-EW	VH-HD	mm/ft in	HD-EW
T Boom height	2.35/7'9"	3,950/13'		3,950/13'	-		-
	2.90/9'6"	4,050/13'3"		4,050/13'3"	3,950/13'		3,950/13'
T1	2.90/9'6"	-		-	4,100/13'5"		4,100/13'5"
	2.35/7'9"	9,450/31'		9,450/31'	-		-
U Length on ground	2.90/9'6"	9,000/29'6"		9,000/29'6"	18,750/61'6"		18,750/61'6"
	2.90/9'6"	-		-	13,900/45'7"		13,900/45'7"
V Overall length	2.35/7'9"	14,800/48'7"		14,800/48'7"	-		-
	2.90/9'6"	14,800/48'7"		14,800/48'7"	22,250/73'		22,250/73'
V1	2.90/9'6"	-		-	18,050/59'3"		18,050/59'3"

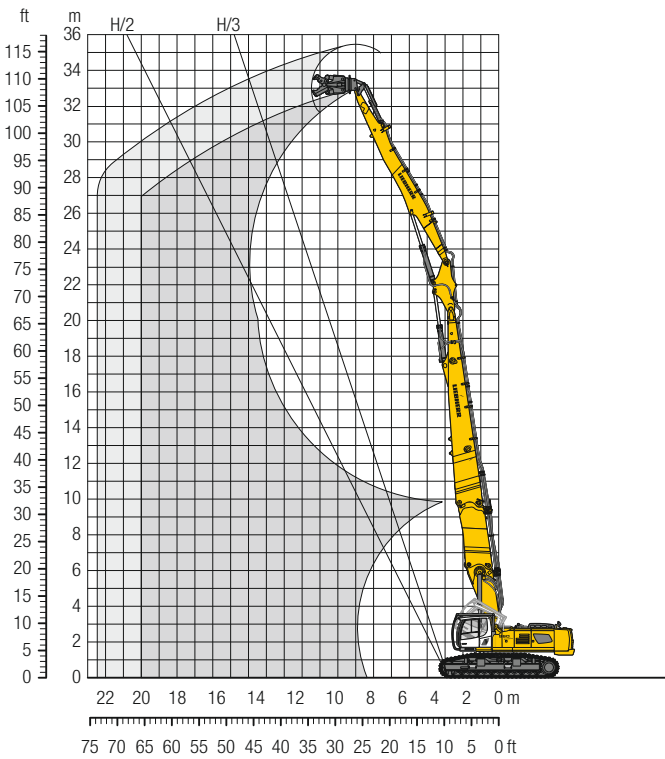
Demolition equipment 33.00 m / 108'3"

29.00 m / 95'2" at H/2



with demolition boom extension 3.50 m / 11'6"

29.00 m / 95'2" at H/2



Reach limitation

	14 m 45'11"	16 m 52'6"	18 m 59'1"	20 m 65'7"
Demolition boom 14.50 m / 47'7"				
+ Intermediate boom				
+ Demolition stick 11.00 m / 36'1" (Kinematic 932)	Attachment weight* in t / lb			
VH-HD-Undercarriage	lengthwise 3.50 / 7,720	3.50 / 7,720	3.50 / 7,720	3.50 / 7,720
	transverse 3.50 / 7,720	3.50 / 7,720	3.00 / 6,610	2.50 / 5,510
HD-EW-Undercarriage	lengthwise 3.50 / 7,720	3.50 / 7,720	3.50 / 7,720	3.50 / 7,720
	transverse 3.50 / 7,720	3.50 / 7,720	3.00 / 6,610	2.25 / 4,960
	14 m 45'11"	16 m 52'6"	18 m 59'1"	
Demolition boom 14.50 m / 47'7"				
+ Intermediate boom				
+ Demolition stick 11.00 m / 36'1" (Kinematic 946)	Attachment weight* in t / lb			
VH-HD-Undercarriage	lengthwise 4.00 / 8,820	4.00 / 8,820	4.00 / 8,820	4.00 / 8,820
	transverse 4.00 / 8,820	3.50 / 7,720	3.00 / 6,610	
HD-EW-Undercarriage	lengthwise 4.00 / 8,820	4.00 / 8,820	4.00 / 8,820	4.00 / 8,820
	transverse 4.00 / 8,820	3.50 / 7,720	2.70 / 5,950	

* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 11.8 t / 26,020 lb and 4 t / 8,820 lb removable, demolition boom 14.50 m / 47'7", intermediate boom 2.60 m / 8'6", demolition stick 11.00 m / 36'1" and attachment 3.5 t / 7,720 lb.

Undercarriage		VH-HD		HD-EW	
		mm/in	600/24"	750/30"	600/24"
Weight	kg / lb	93,500 / 206,130	94,700 / 208,780	88,600 / 195,330	89,800 / 197,980
Ground pressure	kg/cm ² / psi	1.30 / 18.5	1.05 / 14.9	1.23 / 17.5	1.00 / 14.2

Reach limitation

	14 m 45'11"	16 m 52'6"	18 m 59'1"	20 m 65'7"
Demolition boom extension 3.50 m / 11'6"				
+ Demolition boom 11.00 m / 36'1"				
+ Intermediate boom				
+ Demolition stick 11.00 m / 36'1" (Kinematic 932)	Attachment weight* in t / lb			
VH-HD-Undercarriage	lengthwise 3.50 / 7,720	3.50 / 7,720	3.50 / 7,720	3.50 / 7,720
	transverse 3.50 / 7,720	3.50 / 7,720	2.75 / 6,060	2.25 / 4,960
HD-EW-Undercarriage	lengthwise 3.50 / 7,720	3.50 / 7,720	3.50 / 7,720	3.00 / 6,610
	transverse 3.50 / 7,720	3.50 / 7,720	2.50 / 5,510	2.00 / 4,410
	14 m 45'11"	16 m 52'6"	18 m 59'1"	
Demolition boom extension 3.50 m / 11'6"				
+ Demolition boom 11.00 m / 36'1"				
+ Intermediate boom				
+ Demolition stick 11.00 m / 36'1" (Kinematic 946)	Attachment weight* in t / lb			
VH-HD-Undercarriage	lengthwise 4.00 / 8,820	4.00 / 8,820	4.00 / 8,820	4.00 / 8,820
	transverse 4.00 / 8,820	3.50 / 7,720	2.80 / 6,170	
HD-EW-Undercarriage	lengthwise 4.00 / 8,820	4.00 / 8,820	4.00 / 8,820	4.00 / 8,820
	transverse 4.00 / 8,820	3.25 / 7,170	2.50 / 5,510	

* included quick coupler, adapter plate and attachment

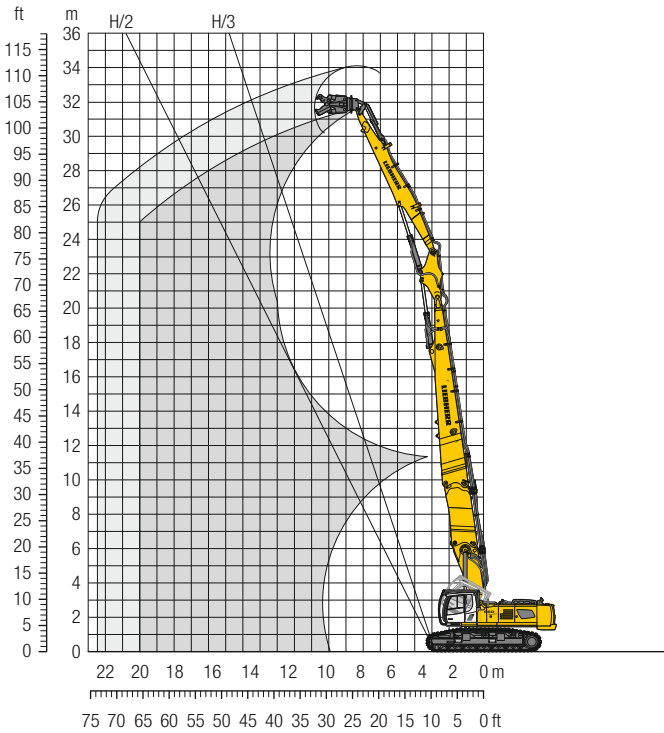
Operating weight and ground pressure

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Undercarriage		VH-HD		HD-EW	
		mm	600/24"	750/30"	600/24"
Weight	kg	96,500 / 212,750	97,700 / 215,390	91,600 / 201,940	92,800 / 204,590
Ground pressure	kg/cm ²	1.34 / 19.1	1.08 / 15.4	1.27 / 18.1	1.03 / 14.7

Demolition equipment 32.00 m / 105'

with demolition boom extension 3.50 m / 11'6"
27.50 m / 90'3" at H/2



Reach limitation

	14 m	16 m	18 m	20 m	
Demolition boom extension 3.50 m / 11'6"	45'11"	52'6"	59'1"	65'7"	
+ Demolition boom 11.00 m / 36'1"					
+ Intermediate boom					
+ Demolition stick 9.50 m / 31'2" (Kinematic 932)	Attachment weight* in t / lb				
VH-HD-Undercarriage	lengthwise	3.50 / 7,720	3.50 / 7,720	3.50 / 7,720	3.25 / 7,170
	transverse	3.50 / 7,720	3.50 / 7,720	3.00 / 6,610	2.25 / 4,960
HD-EW-Undercarriage	lengthwise	3.50 / 7,720	3.50 / 7,720	3.50 / 7,720	3.25 / 7,170
	transverse	3.50 / 7,720	3.25 / 7,170	2.50 / 5,510	2.00 / 4,410

* included quick coupler, adapter plate and attachment

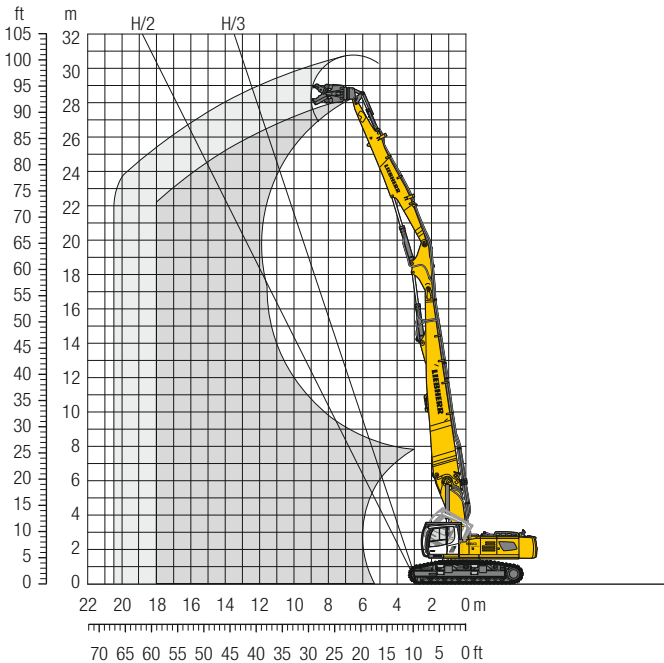
Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 11.8 t / 26,020 lb and 4 t / 8,820 lb removable, demolition boom extension 3.50 m / 11'6", demolition boom 11.00 m / 36'1", intermediate boom 2.60 m / 8'6", demolition stick 9.50 m / 31'2" and attachment 3.5 t / 7,720 lb.

Undercarriage	VH-HD		HD-EW		
	mm / in		mm / in		
Pad width	600 / 24"	750 / 30"	600 / 24"	750 / 30"	
Weight	kg / lb	96,000 / 211,640	97,200 / 214,290	91,100 / 200,840	92,300 / 203,490
Ground pressure	kg/cm ² / psi	1.33 / 18.9	1.07 / 15.2	1.26 / 17.9	1.03 / 14.7

Demolition equipment 28.50 m / 93'6"

24.50 m / 80'5" at H/2



Reach limitation

	12 m	14 m	16 m	18 m	
Demolition boom 11.00 m / 36'1"	39'4"	45'11"	52'6"	59'1"	
+ Intermediate boom					
+ Demolition stick 9.50 m / 31'2" (Kinematic 932)	Attachment weight* in t / lb				
VH-HD-Undercarriage	lengthwise	3.50 / 7,720	3.50 / 7,720	3.50 / 7,720	3.50 / 7,720
	transverse	3.50 / 7,720	3.50 / 7,720	3.50 / 7,720	2.75 / 6,060
HD-EW-Undercarriage	lengthwise	3.50 / 7,720	3.50 / 7,720	3.50 / 7,720	3.50 / 7,720
	transverse	3.50 / 7,720	3.50 / 7,720	3.50 / 7,720	2.50 / 5,510

* included quick coupler, adapter plate and attachment

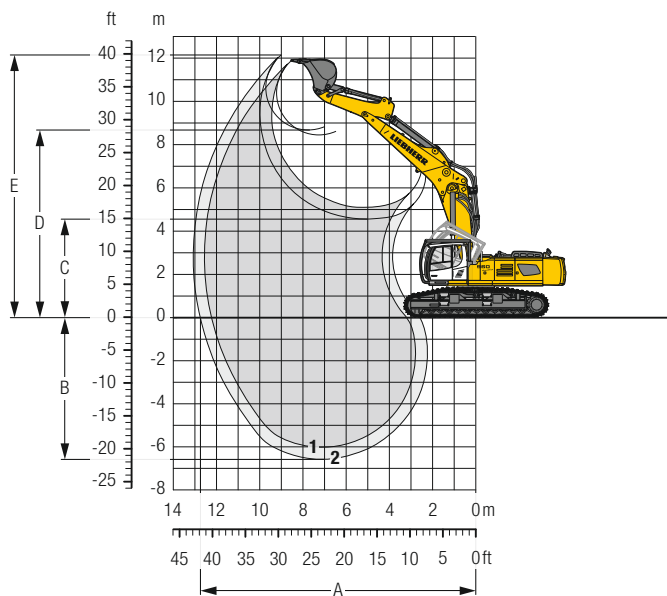
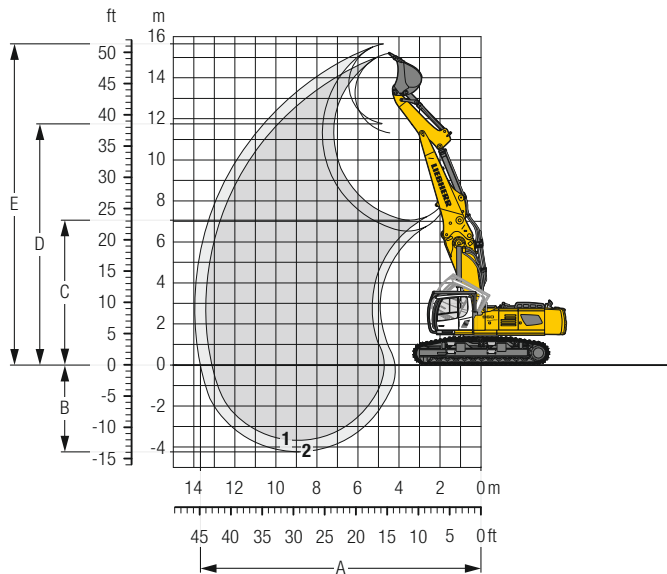
Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 11.8 t / 26,020 lb, demolition boom 11.00 m / 36'1", intermediate boom 2.60 m / 8'6", demolition stick 9.50 m / 31'2" and attachment 3.5 t / 7,720 lb.

Undercarriage	VH-HD		HD-EW		
	mm / in		mm / in		
Pad width	600 / 24"	750 / 30"	600 / 24"	750 / 30"	
Weight	kg / lb	87,500 / 192,900	88,700 / 195,550	82,600 / 182,100	83,800 / 184,750
Ground pressure	kg/cm ² / psi	1.22 / 17.4	0.98 / 13.9	1.15 / 16.4	0.93 / 13.2

Backhoe bucket

with main boom 5.50 m / 18'1"



Digging envelope

Main boom pinned in upper (in lower) bearing

		1	2
Stick length	m / ft in	2.35 / 7'9"	2.90 / 9'6"
A Max. reach at ground level	m / ft in	13.10 (12.10) / 43' (39'8")	13.65 (12.65) / 44' 9" (41'6")
B Max. digging depth	m / ft in	3.70 (6.20) / 12' 2" (20'4")	4.25 (6.75) / 13'11" (22'2")
C Min. dumping height	m / ft in	7.05 (5.05) / 23' 2" (16'7")	6.50 (4.50) / 21' 4" (14'9")
D Max. dumping height	m / ft in	11.30 (8.10) / 37' 1" (26'7")	11.80 (8.30) / 38' 9" (27'3")
E Max. cutting height	m / ft in	15.20 (11.45) / 49'10" (37'7")	15.65 (11.70) / 51' 4" (38'5")

Forces

		1	2
Stick digging force (ISO 6015)	kN / lbf	248 / 55,750	217 / 48,780
Bucket digging force (ISO 6015)	kN / lbf	313 / 70,370	313 / 70,370
Stick digging force (SAE J1179)	kN / lbf	233 / 52,380	206 / 46,310
Bucket digging force (SAE J1179)	kN / lbf	269 / 60,470	269 / 60,470

Max. bucket digging force ISO

345 kN / 77,560 lbf

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 13.5 t / 29,760 lb, main boom 5.50 m / 18'1", HD stick 2.35 m / 7'9" and HD bucket 2.35 m³ / 3.07 yd³ (3,050 kg / 6,720 lb).

Undercarriage		VH-HD		HD-EW	
Pad width	mm / in	600 / 24"	750 / 30"	600 / 24"	750 / 30"
Weight	kg / lb	82,200 / 181,220	83,400 / 183,870	77,300 / 170,420	78,500 / 173,060
Ground pressure	kg/cm ² / psi	1.14 / 16.2	0.93 / 13.2	1.07 / 15.2	0.87 / 12.4

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

Cutting width	Capacity ISO 7451	Weight	VH-HD- / HD-EW-Undercarriage (with track pads 600 mm / 24")	
			Stick length (m / ft in)	Stick length (m / ft in)
mm	m ³	kg	2.35	2.90
in	yd ³	lb	7'9"	9'6"
1,550	2.00	2,800		
61"	2.62	6,170	▲	▲
1,750	2.35	3,050	▲	▲
69"	3.07	6,720		
1,950	2.70	3,300	▲	■
77"	3.53	7,280		
2,100	3.00	3,450	■	■
83"	3.92	7,610		












* 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 / 3,400 lb/yd³, ■ = ≤ 1.8 t/m³ / 3,000 lb/yd³, ■ = ≤ 1.5 t/m³ / 2,500 lb/yd³

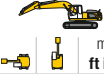









Lift capacities

with main boom 5.50 m / 18'1" (pinned in upper bearing), counterweight 13.5 t / 29,760 lb and track pads 750 mm / 30"

Stick 2.35 m / 7'9"

Under-carriage	↓	4.5 m 15 ft		6.0 m 20 ft		7.5 m 25 ft		9.0 m 30 ft		10.5 m 35 ft			m	ft in
														
13.5 m t														
45 ft lb														
12.0 m t				18.9*	18.9*							13.6*	13.6*	6.6
40 ft lb				37.4*	37.4*							30.9*	30.9*	20'8"
10.5 m t				19.7*	19.7*	18.8*	18.8*					11.5*	11.5*	8.4
35 ft lb				43.5*	43.5*	39.4*	39.4*					25.7*	25.7*	26'11"
9.0 m t	23.4*	23.4*	22.3*	22.3*	21.4*	21.4*	17.8*	17.8*				10.5*	10.5*	9.6
30 ft lb	48.2*	48.2*	47.9*	47.9*	46.2*	46.2*	35.3*	35.3*				23.3*	23.3*	31'1"
7.5 m t			31.5*	31.5*	25.7*	25.7*	19.5*	22.5*				9.9*	9.9*	10.4
25 ft lb			67.7*	67.7*	55.7*	55.7*	42.1*	47.7*				22.0*	22.0*	34'
6.0 m t					24.8	27.7*	19.0	23.4*	15.1	18.6*		9.7*	9.7*	11.0
20 ft lb					53.5	59.9*	41.0	50.8*	32.6	35.5*		21.4*	21.4*	35'11"
4.5 m t					23.7	29.7*	18.4	24.4*	14.9	21.2*		9.6*	9.6*	11.3
15 ft lb					51.3	64.0*	39.8	53.0*	32.0	45.9		21.2*	21.2*	37'1"
3.0 m t					23.0	28.6*	18.0	25.2*	14.6	21.0		9.8*	9.8*	11.4
10 ft lb					49.7	66.5*	38.8	54.6*	31.5	45.3		21.6*	21.6*	37'7"
1.5 m t					22.7	26.8*	17.7	25.4*	14.4	20.9		10.1*	10.1*	11.4
5 ft lb					49.0	66.5*	38.2	55.0*	31.2	45.0		22.3*	22.3*	37'4"
0 m t					22.7	29.5*	17.6	24.8*	14.4	20.8*		10.8*	10.8*	11.1
0 ft lb					49.0	64.1*	38.0	53.8*	31.1	44.9*		23.7*	23.7*	36'5"
-1.5 m t							17.7	23.2*				15.6	20.6*	9.9
-5 ft lb							38.3	50.3*				34.6	45.8*	32'5"

Stick 2.90 m / 9'6"

Under-carriage	↓	4.5 m 15 ft		6.0 m 20 ft		7.5 m 25 ft		9.0 m 30 ft		10.5 m 35 ft			m	ft in
														
13.5 m t														
45 ft lb														
12.0 m t				15.9*	15.9*								10.1*	10.1*
40 ft lb				34.9*	34.9*								22.9*	22.9*
10.5 m t				15.4*	15.4*	15.6*	15.6*	10.3*	10.3*				8.8*	8.8*
35 ft lb				34.2*	34.2*	33.9*	33.9*						19.6*	19.6*
9.0 m t			16.6*	16.6*	16.8*	16.8*	15.6*	15.6*					8.1*	8.1*
30 ft lb			36.1*	36.1*	36.6*	36.6*	33.2*	33.2*					17.9*	17.9*
7.5 m t			29.6*	29.6*	21.4*	21.4*	18.4*	18.4*	13.6*	13.6*			7.7*	7.7*
25 ft lb			57.5*	57.5*	45.2*	45.2*	39.3*	39.3*	26.2*	26.2*			17.0*	17.0*
6.0 m t					25.1	26.8*	19.1	22.8*	15.2	17.3*			7.5*	7.5*
20 ft lb					73.3*	73.3*	54.2	57.9*	41.3	49.4*			16.6*	16.6*
4.5 m t					24.0	28.9*	18.5	23.9*	14.9	20.8*			7.5*	7.5*
15 ft lb					51.8	62.4*	40.0	51.8*	32.1	44.2*			16.5*	16.5*
3.0 m t					23.2	30.3*	18.0	24.8*	14.6	21.0			7.6*	7.6*
10 ft lb					50.0	65.6*	38.9	53.8*	31.4	45.3			16.7*	16.7*
1.5 m t					22.7	30.7*	17.7	25.3*	14.4	20.8			7.9*	7.9*
5 ft lb					49.0	66.6*	38.1	54.8*	31.0	44.8			17.3*	17.3*
0 m t					22.6	30.0*	17.5	25.0*	14.3	20.7			8.3*	8.3*
0 ft lb					48.7	65.2*	37.8	54.2*	30.8	44.6			18.3*	18.3*
-1.5 m t					22.7	28.3*	17.6	23.8*	14.3	19.8*			13.7	17.5*
-5 ft lb					48.9	61.6*	37.9	51.6*	31.0	42.4*			30.4	39.6*

 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) / lb x 1,000 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 750 mm / 30" 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 / 1,820 lb. Lifting capacity of the excavator is limited by machine stability and hydraulic capacity.


Lift capacities

with main boom 5.50 m / 18'1" (pinned in lower bearing), counterweight 13.5 t / 29,760 lb and track pads 750 mm / 30"

Stick 2.35 m / 7'9"

Under-carriage	↓ ↑	4.5 m 15 ft	6.0 m 20 ft	7.5 m 25 ft	9.0 m 30 ft	10.5 m 35 ft		m	ft	in		
VH-HD	10.5 m t											
	35 ft lb											
	9.0 m t			18.5*	18.5*			10.1*	10.1*	8.5		
	30 ft lb			39,0*	39,0*			22,4*	22,4*	27,7*		
	7.5 m t			19.7*	19.7*	16.3*	16.3*	9.7*	9.7*	9.5		
	25 ft lb			42,9*	42,9*	30,7*	30,7*	21,5*	21,5*	30*10**		
	6.0 m t		27.3*	27.3*	22.1*	22.1*	19.7*	19.7*	9.6*	9.6*	10.1	
	20 ft lb		58,3*	58,3*	47,7*	47,7*	43,0*	43,0*	21,2*	21,2*	33*	
	4.5 m t			24.3	24.3	19.4	19.4	9.8*	9.8*	10.5		
	15 ft lb			49,9*	49,9*	53,8*	53,8*	41,8	46,2*	21,6*	21,6*	34*2**
HD-EW	3.0 m t			24.3	27.7*	18.8	23.0*	10.2*	10.2*	10.6		
	10 ft lb			52,4	59,8*	40,6	49,8*	22,5*	22,5*	34*8**		
	1.5 m t			23.7	29.7*	18.4	24.4*	11.3*	11.3*	10.5		
	5 ft lb			51,0	64,3*	39,7	53,0*	24,0*	24,0*	34*6**		
	0 m t			21.6*	21.6*	23.4	30.9*	12.1*	12.1*	10.2		
	0 ft lb			52,1*	52,1*	50,4	67,0*	39,2	55,2*	26,6*	26,6*	34*6**
	-1.5 m t			32.8	36.7*	23.4	31.3*	18.2	25.8*	13.9*	13.9*	9.7
	-5 ft lb			70,6	85,3*	50,3	67,8*	39,2	55,9*	30,8*	30,8*	31*7**
	-3.0 m t			33.2	37.9*	23.6	30.5*	17.3*	17.3*	8.8		
	-10 ft lb			71,3	82,2*	50,9	66,0*			38,5*	38,5*	28*10**

Stick 2.90 m / 9'6"

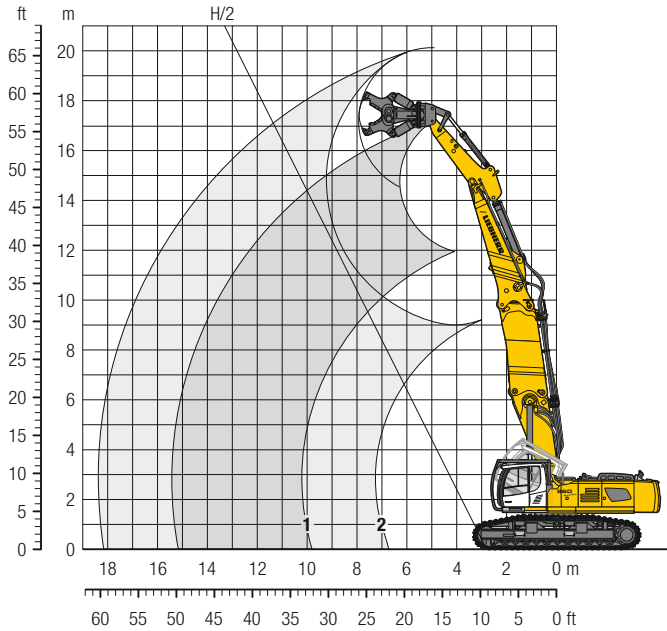
Under-carriage	↓ ↑	4.5 m 15 ft	6.0 m 20 ft	7.5 m 25 ft	9.0 m 30 ft	10.5 m 35 ft		m	ft	in				
VH-HD	10.5 m t													
	35 ft lb													
	9.0 m t					9.5*	9.5*			7.8*	7.8*	9.1		
	30 ft lb									17,3*	17,3*	29*8**		
	7.5 m t				18.4*	18.4*	15.4*	15.4*	9.3*	9.3*	7.5*	7.5*	10.0	
	25 ft lb				40,0*	40,0*	31,8*	31,8*			16,6*	16,6*	32*8**	
	6.0 m t			25.1*	25.1*	20.8*	20.8*	18.7*	18.7*	9.3*	9.3*	7.5*	7.5*	10.6
	20 ft lb			53,8*	53,8*	44,9*	44,9*	40,7*	40,7*			16,5*	16,5*	34*8**
	4.5 m t			30.8*	30.8*	23.7*	23.7*	19.5	20.4*	14.0*	14.0*	7.6*	7.6*	11.0
	15 ft lb			65,9*	65,9*	51,2*	51,2*	42,1	44,2*	26,4*	26,4*	16,7*	16,7*	35*11**
HD-EW	3.0 m t			17.7*	17.7*	24.5	26.6*	18.9	22.1*	15.2	17.1*	7.9*	7.9*	11.1
	10 ft lb			45,8*	45,8*	52,8	57,4*	40,8	48,0*	32,7	32,8*	17,4*	17,4*	36*5**
	1.5 m t			17.6*	17.6*	23.8	28.9*	18.4	23.8*	14.9	18.3*	8.4*	8.4*	11.0
	5 ft lb			43,0*	43,0*	51,2	62,6*	39,8	51,6*	32,1	34,0*	18,5*	18,5*	36*2**
	0 m t			23.8*	23.8*	23.4	30.5*	18.1	25.0*	14.7	14.9*	9.2*	9.2*	10.7
	0 ft lb			56,2*	56,2*	50,4	66,0*	50,4	66,0*	54,2*	54,2*	20,3*	20,3*	35*2**
	-1.5 m t		16.4*	16.4*	32.6	34.0*	23.2	31.1*	18.1	25.6*	10.5*	10.5*	10.2	
	-5 ft lb		37,9*	37,9*	70,1	79,5*	50,1	67,5*	38,9	55,6*	23,2*	23,2*	33*6**	
	-3.0 m t		27.7*	27.7*	32.9	38.6*	23.4	30.8*	18.2	25.3*	12.7*	12.7*	9.4	
	-10 ft lb		63,4*	63,4*	70,7	83,7*	50,4	66,8*	39,3	48,6*	28,2*	28,2*	30*10**	

 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) / lb x 1,000 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 750 mm / 30" 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 / 1,820 lb Lifting capacity of the excavator is limited by machine stability and hydraulic capacity.

Backhoe bucket

with main boom 5.50 m / 18'1" and demolition boom extension 3.50 m / 11'6"



Operating weight and ground pressure

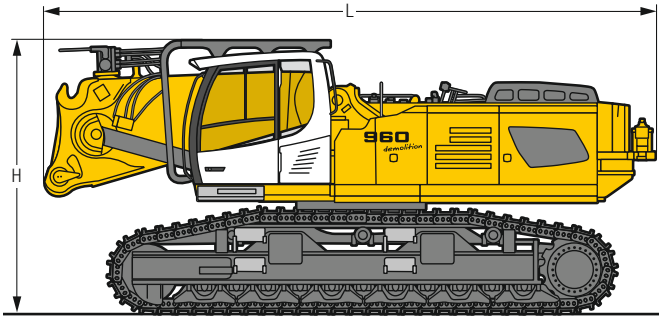
The operating weight includes the basic machine with counterweight 13.5 t / **29,760 lb**, demolition boom extension 3.50 m / **11'6"**, main boom 5.50 m / **18'1"**, HD bucket 2.90 m / **9'6"** and attachment* 4.25 t / **9,370 lb**.

Undercarriage	VH-HD		HD-EW		
	mm / in	600 / 24"	750 / 30"	600 / 24"	750 / 30"
Weight	kg / lb	88,000 / 194,010	89,200 / 196,650	83,000 / 182,980	84,200 / 185,630
Ground pressure	kg/cm ² / psi	1.22 / 17.4	0.99 / 14.1	1.15 / 16.4	0.94 / 13.4

* included quick coupler, adapter plate and attachment

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

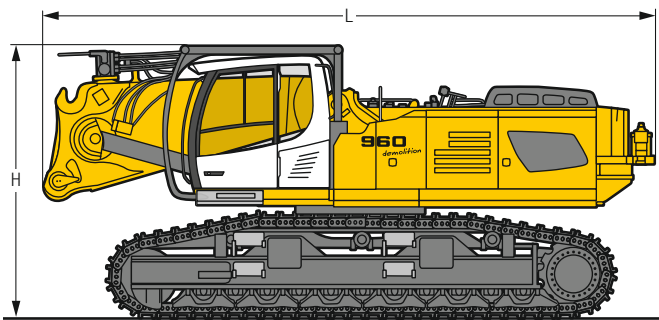
Dimensions and weights



Basic machine

without counterweight with cab tiltable 30° and integral protection grid

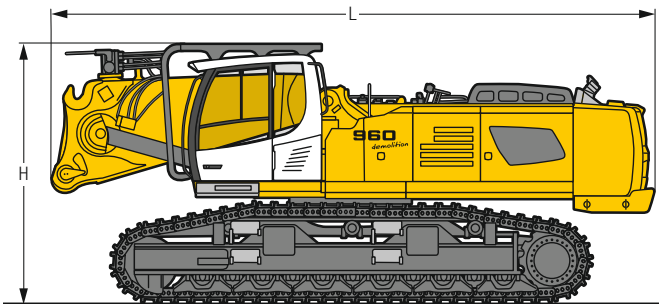
		VH-HD	HD-EW
L	mm/ft in	8,100/26' 7"	8,100/26' 7"
H	mm/ft in	3,600/11' 10"	3,660/12'
Weight	kg/lb	59,100/130,290	54,100/119,270



Basic machine

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

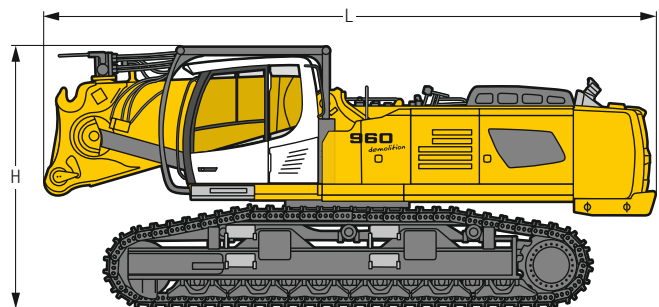
		VH-HD	HD-EW
L	mm/ft in	8,100/26' 7"	8,100/26' 7"
H	mm/ft in	3,600/11' 10"	3,660/12'
Weight	kg/lb	59,500/131,180	54,500/120,150



Basic machine

with counterweight 11.8 t/26,020 lb and 4 t/8,820 lb removable, cab tiltable 30° and integral protection grid

		VH-HD	HD-EW
L	mm/ft in	8,450/27' 9"	8,450/27' 9"
H	mm/ft in	3,600/11' 10"	3,660/12'
Weight	kg/lb	75,100/165,570	70,100/154,540

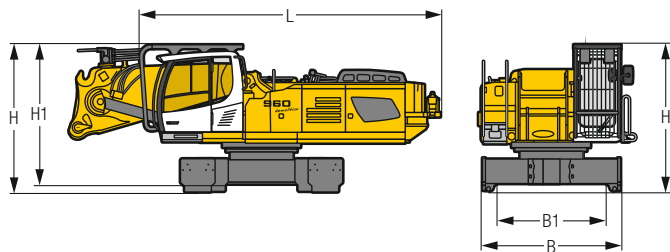


Basic machine

with counterweight 11.8 t/26,020 lb and 4 t/8,820 lb removable, cab tiltable 30° and integral protection grid on tilting device

		VH-HD	HD-EW
L	mm/ft in	8,450/27' 9"	8,450/27' 9"
H	mm/ft in	3,600/11' 10"	3,660/12'
Weight	kg/lb	75,500/166,450	70,500/155,430

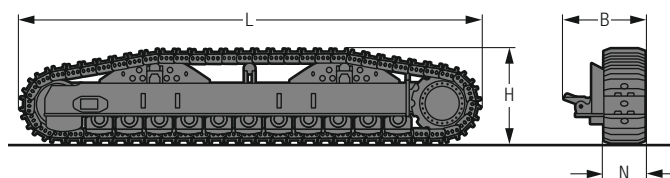
Dimensions and weights



Basic machine

without side frames

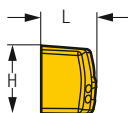
B	mm / ft in	3,200 / 10' 6"
B1	mm / ft in	3,035 / 9'11"
L Length	mm / ft in	6,550 / 21' 6"
H Height	mm / ft in	2,990 / 9'10"
H1 Height	mm / ft in	2,360 / 7' 9"
Weight	kg / lb	30,100 / 66,360



Side frame

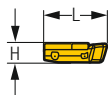
for HD-EW-Undercarriage

L Length	mm / ft in	6,725 / 22' 1"		
H Height	mm / ft in	1,380 / 4' 6"		
N	mm / ft in	500 / 20"	600 / 24"	750 / 30"
B	mm / ft in	1,200 / 3'11"	1,200 / 3'11"	1,260 / 4' 2"
Weight	kg / lb	11,200 / 24,690	11,700 / 25,790	12,300 / 27,120



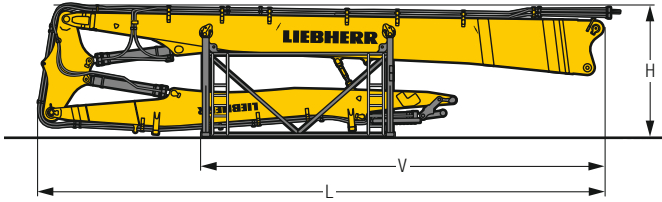
Counterweight

L Length	mm / ft in	1,035 / 3'5"
H Height	mm / ft in	1,290 / 4'3"
Width	mm / ft in	2,970 / 9'9"
Weight	kg / lb	11,800 / 26,020



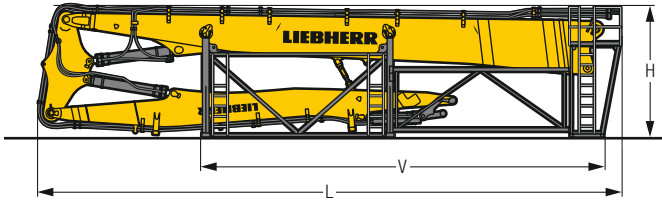
Additional counterweight

L Length	mm / ft in	1,115 / 3' 8"
H Height	mm / ft in	350 / 1' 2"
Width	mm / ft in	2,990 / 9'10"
Weight	kg / lb	4,000 / 8,820



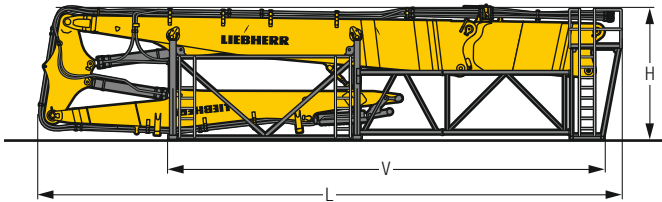
Demolition equipment with storage rack

		29.50 m/96'9"	33 m/108' 3"
L Length	mm/ft in	12,050/39' 6"	15,550/51'
H Height	mm/ft in	3,600/11'10"	3,600/11'10"
V Width	mm/ft in	5,300/17' 5"	5,300/17' 5"
Width	mm/ft in	2,450/ 8'	2,450/ 8'
Weight without attachment	kg/lb	14,400/31,750	17,000/37,480



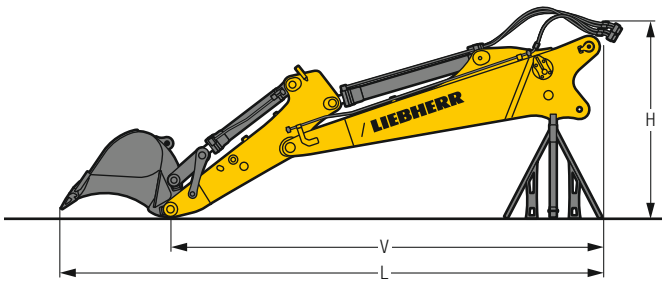
Demolition equipment with storage rack with catwalks

		29.50 m/96'9"	33 m/108' 3"
L Length	mm/ft in	12,500/41'	16,000/52' 6"
H Height	mm/ft in	3,600/11'10"	3,600/11'10"
V Width	mm/ft in	8,450/27' 9"	11,050/36' 3"
Width	mm/ft in	2,500/ 8' 2"	2,500/ 8' 2"
Weight without attachment	kg/lb	15,000/33,070	18,050/39,790



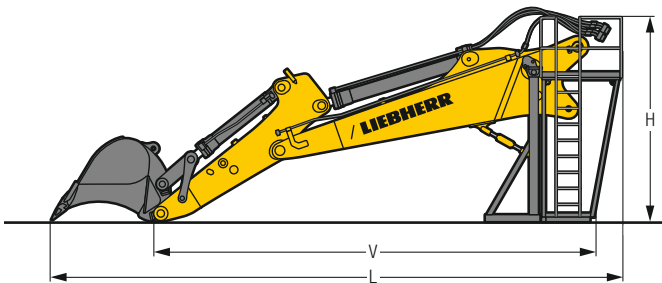
Demolition equipment with demolition boom extension with storage rack with catwalks

			29.50 m/96'9"
L Length	mm/ft in	16,000/52' 6"	6"
H Height	mm/ft in	3,600/11'10"	
V Width	mm/ft in	11,920/39' 1"	
Width	mm/ft in	2,500/ 8' 2"	
Weight without attachment	kg/lb	19,950/43,980	



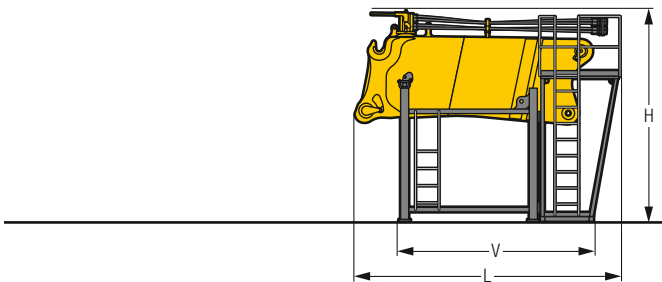
Backhoe equipment with storage rack

			5.50/18'1"
Main boom length	m/ft in		
Stick length	m/ft in	2.35/ 7' 9"	2.90/ 9' 6"
L Length	mm/ft in	9,960/32' 8"	10,540/34' 7"
H Height	mm/ft in	3,600/11'10"	3,600/11'10"
V Width	mm/ft in	7,700/25' 3"	8,270/27' 2"
Width	mm/ft in	2,250/ 7' 5"	2,250/ 7' 5"
Weight without bucket	kg/lb	8,810/19,420	9,100/20,060



Backhoe equipment with storage rack with catwalks

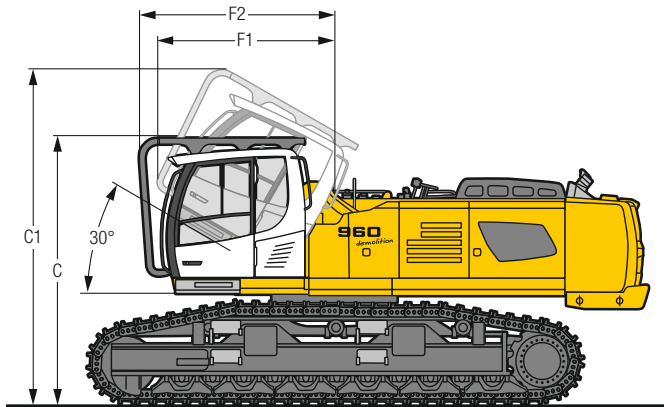
			5.50/18'1"
Main boom length	m/ft in		
Stick length	m/ft in	2.35/ 7' 9"	2.90/ 9' 6"
L Length	mm/ft in	9,480/31' 1"	10,060/33'
H Height	mm/ft in	3,600/11'10"	3,600/11'10"
V Width	mm/ft in	7,700/25' 3"	8,270/27' 2"
Width	mm/ft in	2,500/ 8' 2"	2,500/ 8' 2"
Weight without bucket	kg/lb	8,810/19,420	8,970/19,780



Demolition boom extension with storage rack with catwalks

L Length	mm/ft in	4,630/15'2"
H Height	mm/ft in	3,650/12'
V Width	mm/ft in	3,380/11'1"
Width	mm/ft in	2,490/ 8'2"
Weight	kg/lb	5,550/12,240

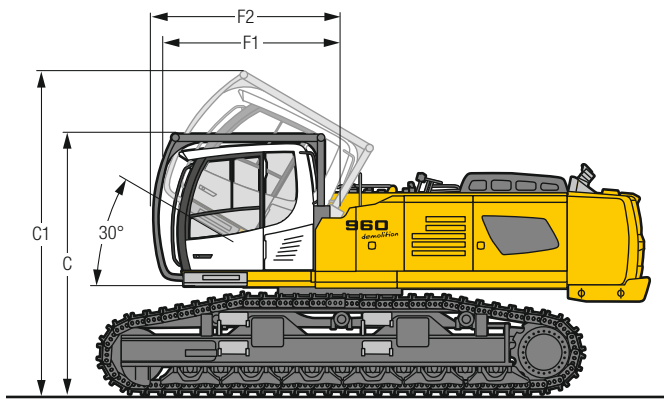
Choice of cab elevations



Version

with cab tiltable 30° and integral protection grid

		VH-HD	HD-EW
C	mm/ft in	3,600/11'10"	3,660/12'
C1	mm/ft in	4,520/14'10"	4,580/15'
F1	mm/ft in	2,415/7'11"	2,415/7'11"
F2	mm/ft in	2,650/8'8"	2,650/8'8"



Version

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

		VH-HD	HD-EW
C	mm/ft in	3,600/11'10"	3,660/12'
C1	mm/ft in	4,440/14'7"	4,580/15'
F1	mm/ft in	2,450/8'	2,415/7'11"
F2	mm/ft in	2,605/8'7"	2,650/8'8"

Serial equipment

Undercarriage

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

Uppercarriage

- Anti-skid surfaces
- Automatic swing brake lock
- Centralized 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 US EPA Tier 4 Final

Cab

- 7" multifunction color 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 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 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	+

Uppercarriage

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 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	+
Hydraulic for counterweight	+
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)	+

Cab

2" seat belt with retractor	•
3" seat belt with retractor, orange color	+
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 immobilizer	+
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	+
Bucket cylinder rod protection for backhoe equipment	+
Camera for equipment	+
Centralized 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 quick change coupling	+
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 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 of Companies



Diverse Product Range

The Liebherr Group is one of the largest construction equipment manufacturers in the world. Liebherr's quality products and services hold a high reputation in many industries. 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 superior quality, Liebherr products offer customers the highest benefits in practical applications.

State-of-the-art Technology

Liebherr attributes great importance to the product areas of core technology and components, in order to achieve its consistent, top-quality products. Important modules and components are developed and manufactured in-house, for instance, the entire drive and control technology for the construction equipment and mining trucks.

Worldwide and Family-Owned

Hans Liebherr founded the Liebherr family company in 1949. Since that time, the enterprise has steadily grown to a group of more than 140 companies with nearly 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.us

WARNING

This product can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm.
For more information go to www.P65warnings.ca.gov.

WARNING

Breathing diesel engine exhaust exposes you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

- ▶ Always start and operate the engine in a well-ventilated area.
- ▶ If in an enclosed area, vent the exhaust to the outside.
- ▶ Do not modify or tamper with exhaust system.
- ▶ Do not idle the engine except as necessary.

For more information go to www.P65warnings.ca.gov/diesel.