
R 980 Litronic

LIEBHERR

Demolition excavator

Engine

420 kW / 571 HP
Stage V

Operating weight

180,000–197,500 kg

Working height

60 m H/2: 53.5 m
55 m H/2: 49.0 m
49 m H/2: 43.0 m
48 m H/2: 41.5 m
44 m H/2: 38.5 m
42 m H/2: 36.0 m
41 m H/2: 35.0 m
27 m H/2: 23.0 m



Technical data



Engine

Rating per ISO 9249	420 kW (571 HP) at 1,800 RPM
Torque	2,989 Nm at 1,300 RPM
Model	Liebherr D9508 A7 SCR
Type	8 cylinder V engine
Bore	128 mm
Stroke	157 mm
Displacement	16.16 l
Engine operation	4-stroke diesel Common-Rail
Exhaust gas treatment	Stage V 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	1,498 l
Urea tank	180 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	Electro-hydraulic control
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	Two Liebherr variable displacement, swashplate pumps
Max. flow	2 x 498 l/min.
Max. pressure	350 bar
For swing drive	Reversible, variable displacement, swashplate pump, closed-loop circuit
Max. flow	315 l/min.
Max. pressure	350 bar
Pump regulation	Electro-hydraulic with electronic engine speed sensing regulation, pressure compensation, flow compensation, high flow
Hydraulic tank	850 l
Hydraulic system	1,500 l
Hydraulic oil filter	2 full flow filters in return line with integrated fine filter area (5 µm)
Cooling system	Cooler for transmission pump oil and 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



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	0-5.9 RPM stepless
Swing torque	333 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	Oscillating consoles with seat, tiltable console left
Operation and displays	Large high-resolution colour display with intuitive operation via touchscreen, video, additional colour display for front and side camera, versatile adjusting, control and monitoring facilities, e.g. climate control, implement and attachment parameters, specific demolition display
Air-conditioning	Standard automatic air-conditioning 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	1.80t
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	109 dB(A) = L _{WA} (surround noise)


Equipment

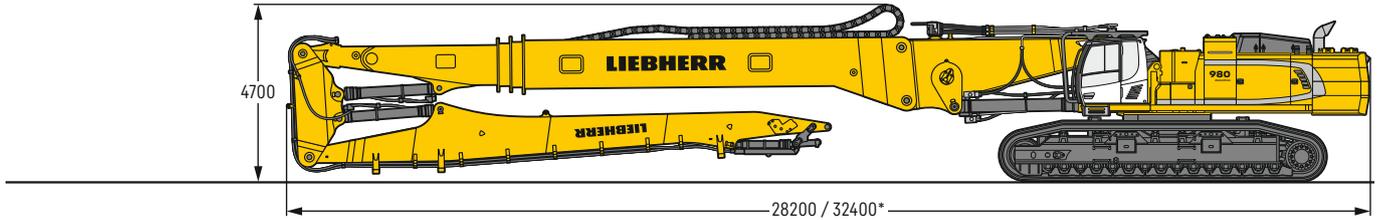
Type	Combination of resistant steel plates and cast steel components
Hydraulic cylinders	Liebherr cylinders with seal and guidance systems
Lubrication	Automatic central lubrication system (except link and tilt geometry)
Hydraulic connections	Pipes and hoses equipped with SAE split-flange connections

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

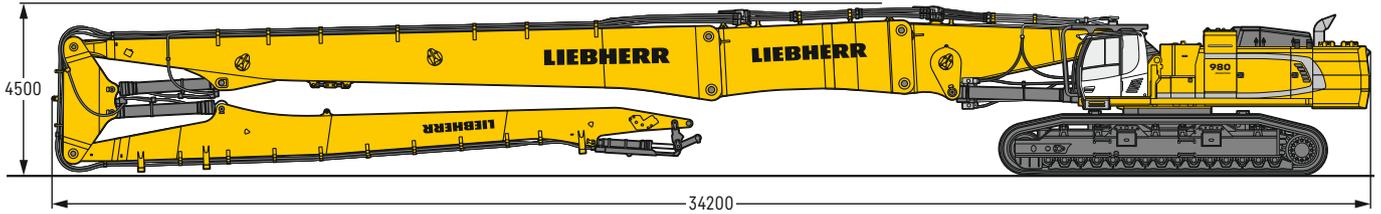
** For the risk assessment according to 2002/44/EC see ISO/TR 25398:2006

Dimensions

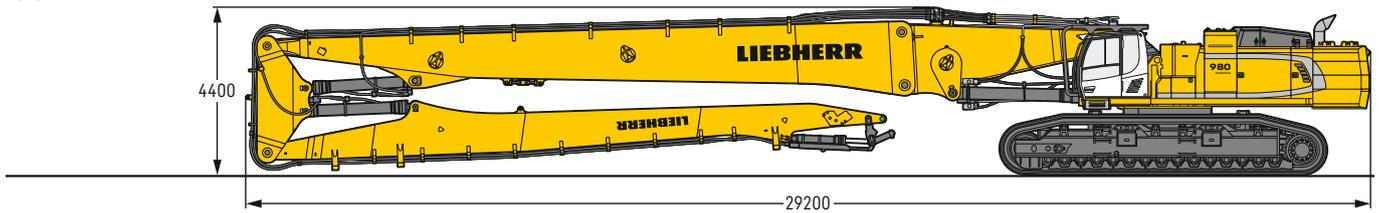
Equipment 55.00 m / 60.00 m* with telescopic demolition boom 15.00–27.00 m, intermediate boom 2.70 m and demolition stick 13.50 m



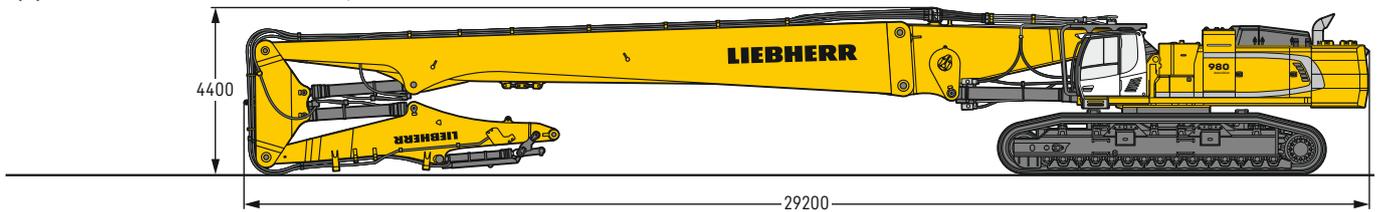
Equipment 49.00 m with demolition boom 16.50 m, demolition boom extension 5.00 m, intermediate boom 2.80 m and demolition stick 16.00 m



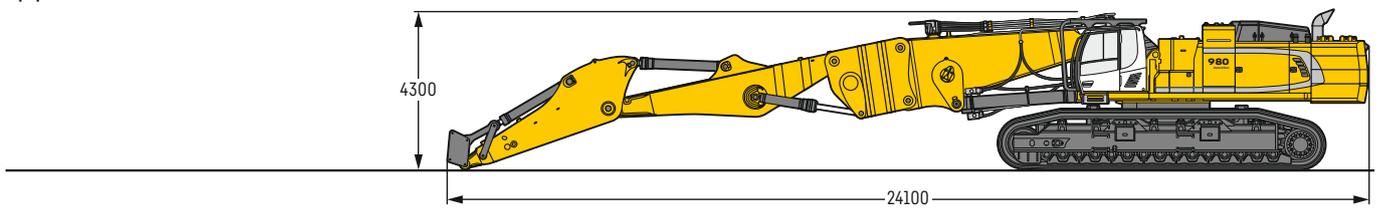
Equipment 44.00 m with demolition boom 16.50 m, intermediate boom 2.80 m and demolition stick 16.00 m



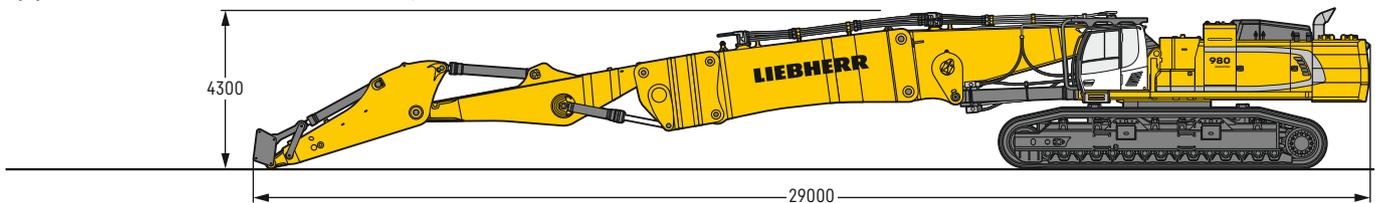
Equipment 36.00 m with demolition boom 16.50 m, intermediate boom 2.80 m and demolition stick 7.50 m

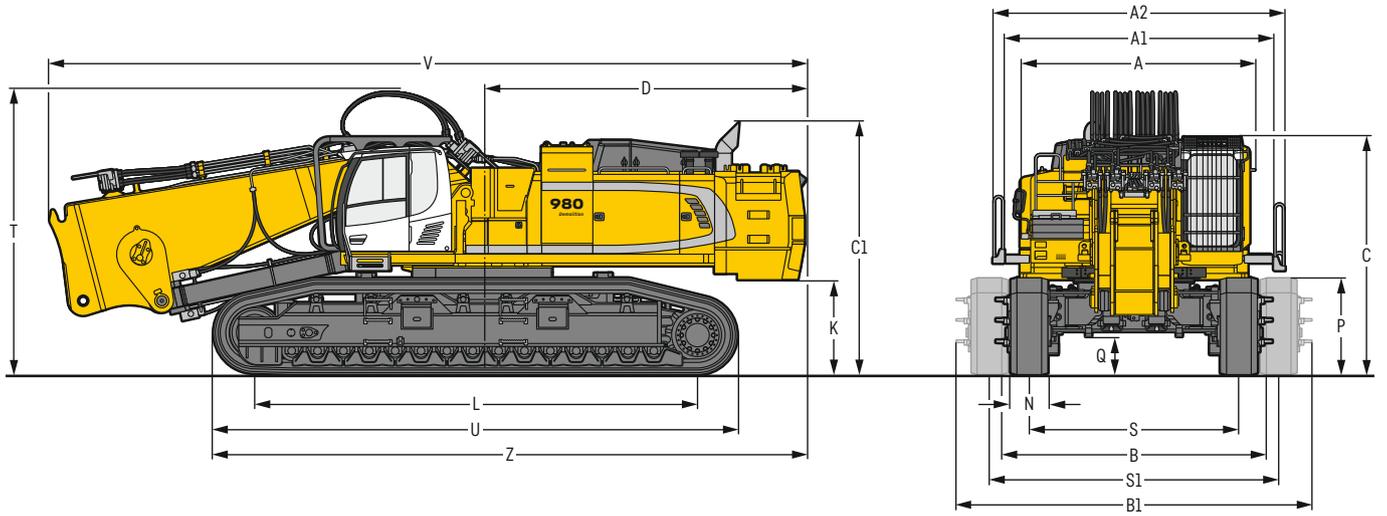


Equipment 21.00 m with boom 6.00 m and stick 4.00 m



Equipment 26.00 m with demolition boom extension 5.00 m, boom 6.00 m and stick 4.00 m

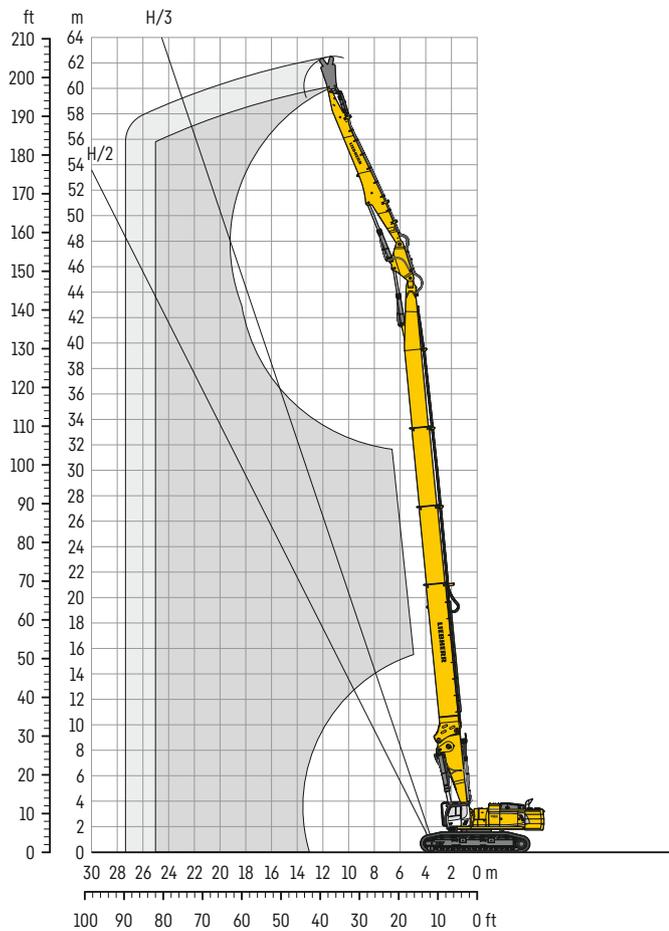




	VH-HD	mm
A		3,800
A1		4,390
A2		4,750
B		4,300
B1		5,800
C		3,900
C1		4,160
D		5,250
K		1,550
L		7,200
L1		3,735

	VH-HD	mm
P		1,600
Q		600
S		3,400
S1		4,700
T		4,100
U		8,500
V		12,350
Z		9,000

Demolition equipment 60.00 m



Reach limitation

		24 m	25 m
Telescopic demolition boom 19.50–35.70 m		Attachment weight* t	
+ Intermediate boom 2.80 m			
+ Demolition stick 13.50 m			
VH-HD undercarriage	lengthwise transverse	2.50 -	2.50 -

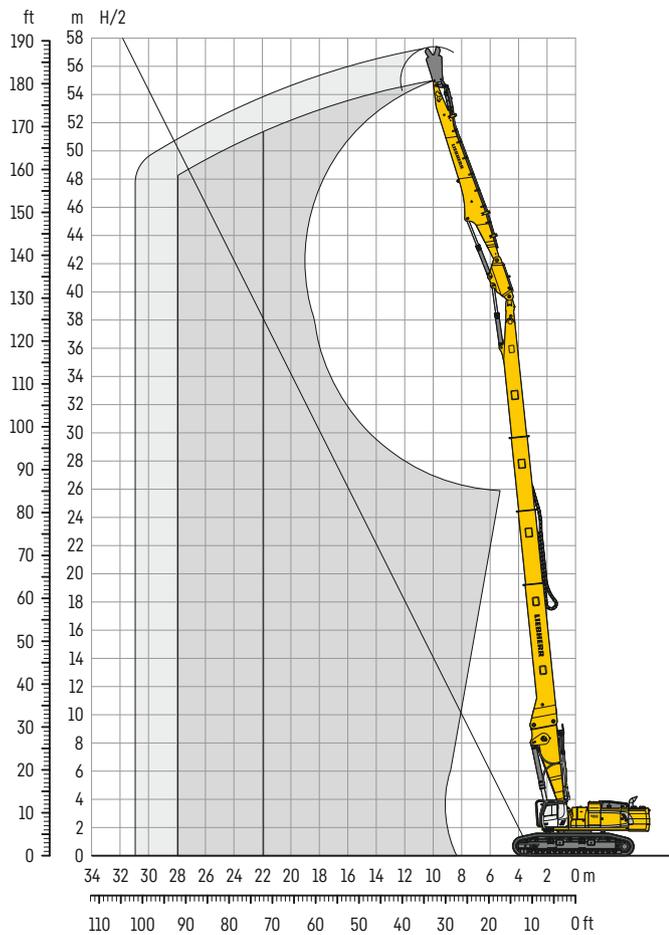
* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 37.0t, telescopic demolition boom 19.50–35.70 m, intermediate boom 2.80 m, demolition stick 13.50 m and attachment 2.5t.

Undercarriage	VH-HD	
Pad width	mm	600 750
Weight	kg	194,500 197,500
Ground pressure	kg/cm ²	2.12 1.72

Demolition equipment 55.00 m



Reach limitation

		22 m	28 m
Telescopic demolition boom 15.00–27.00 m		Attachment weight* t	
+ Intermediate boom 2.70 m			
+ Demolition stick 13.50 m			
VH-HD undercarriage	lengthwise transverse	3.00 3.00	3.00 -

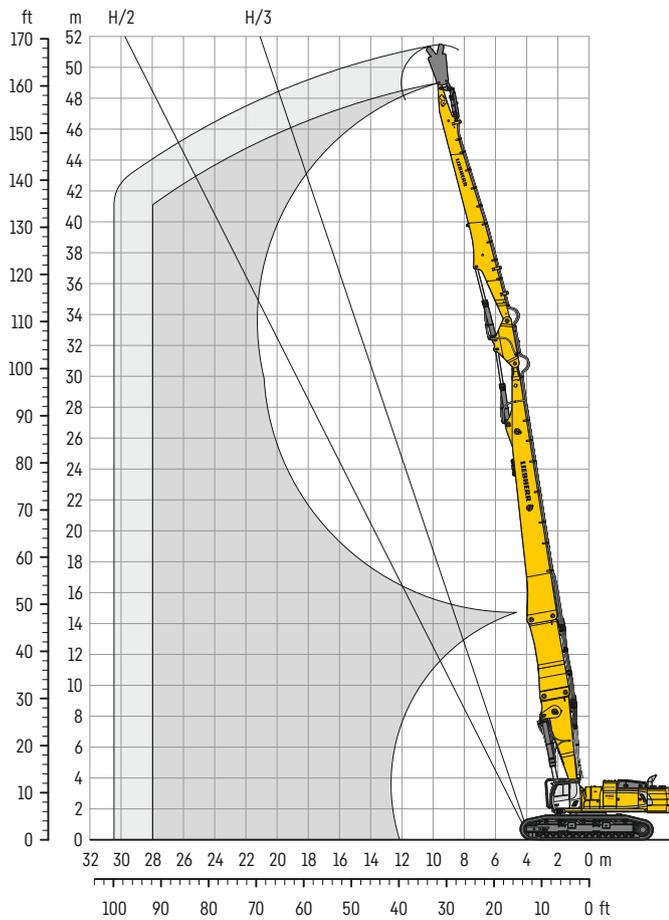
* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 37.0 t, telescopic demolition boom 15.00–27.00 m, intermediate boom 2.70 m, demolition stick 13.50 m and attachment 3.0 t.

Undercarriage		VH-HD	
Pad width	mm	600	750
Weight	kg	186,000	189,000
Ground pressure	kg/cm ²	2.03	1.65

Demolition equipment 49.00 m



Reach limitation

		24 m	26 m	28 m
Demolition boom 16.50 m + Demolition boom extension 5.00 m + Intermediate boom 2.80 m + Demolition stick 16.00 m		Attachment weight*		
VH-HD undercarriage	lengthwise	3.50	3.50	3.00
	transverse	-	-	-

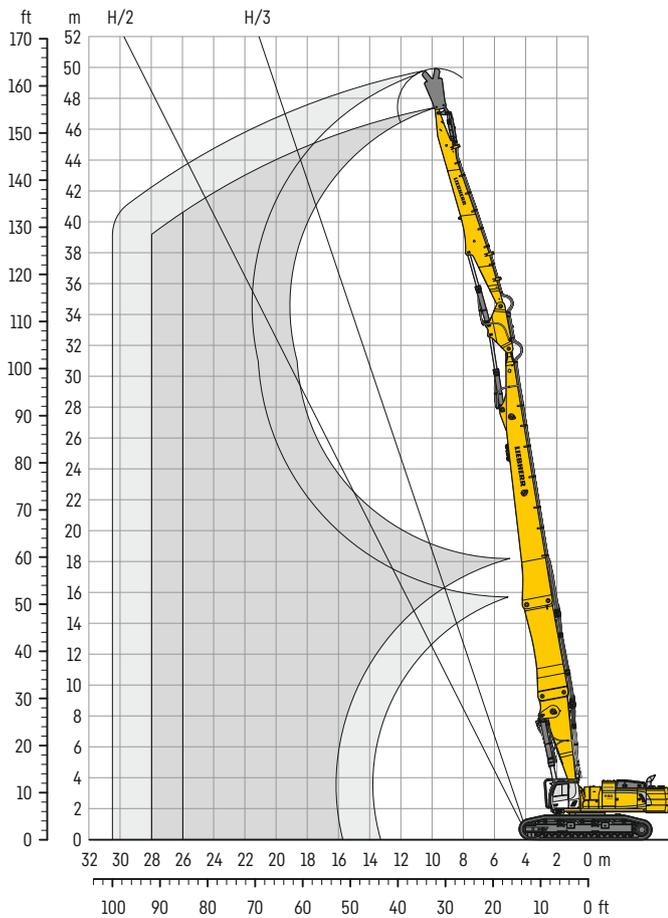
* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 37.0 t, demolition boom 16.50 m, demolition boom extension 5.00 m, intermediate boom 2.80 m, demolition stick 16.00 m and attachment 3.5 t.

Undercarriage		VH-HD	
Pad width	mm	600	750
Weight	kg	186,000	189,000
Ground pressure	kg/cm ²	2.03	1.65

Demolition equipment 48.00 m



Reach limitation

		24 m	28 m
Demolition boom 16.50 m			
+ Demolition boom extension 6.00 m			
+ Intermediate boom 2.80 m			
+ Demolition stick 13.50 m			
VH-HD undercarriage	lengthwise	3.50	3.50
	transverse	-	-
		Attachment weight* t	

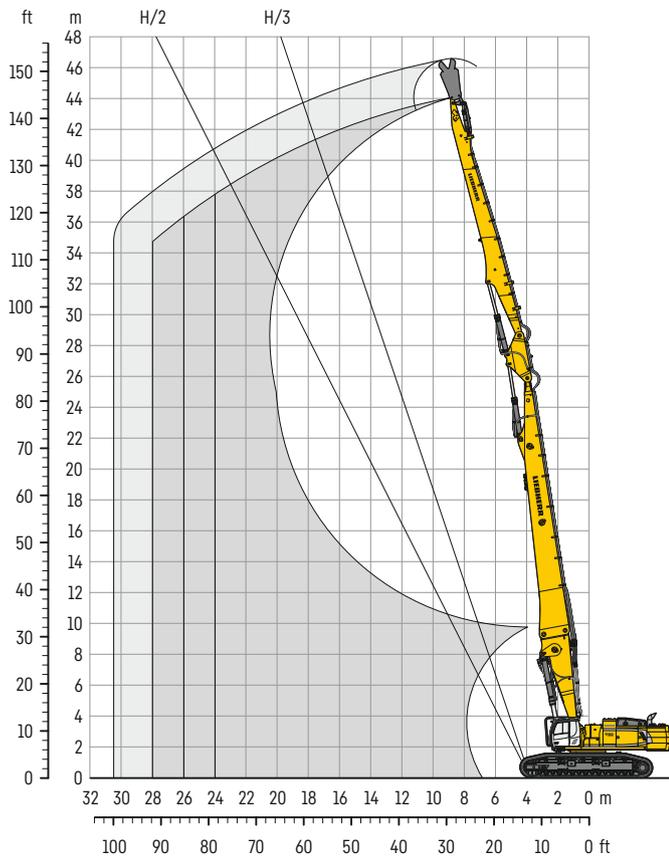
* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 37.0 t, demolition boom 16.50 m, demolition boom extension 6.00 m, intermediate boom 2.80 m, demolition stick 13.50 m and attachment 3.5 t.

Undercarriage		VH-HD	
Pad width	mm	600	750
Weight	kg	186,500	189,500
Ground pressure	kg/cm ²	2.03	1.65

Demolition equipment 44.00 m



Reach limitation

		24 m	26 m	28 m
Demolition boom 16.50 m + Intermediate boom 2.80 m + Demolition stick 16.00 m VH-HD undercarriage		Attachment weight*		
	lengthwise	3.50	3.50	3.50
	transverse	3.50	3.50	3.00

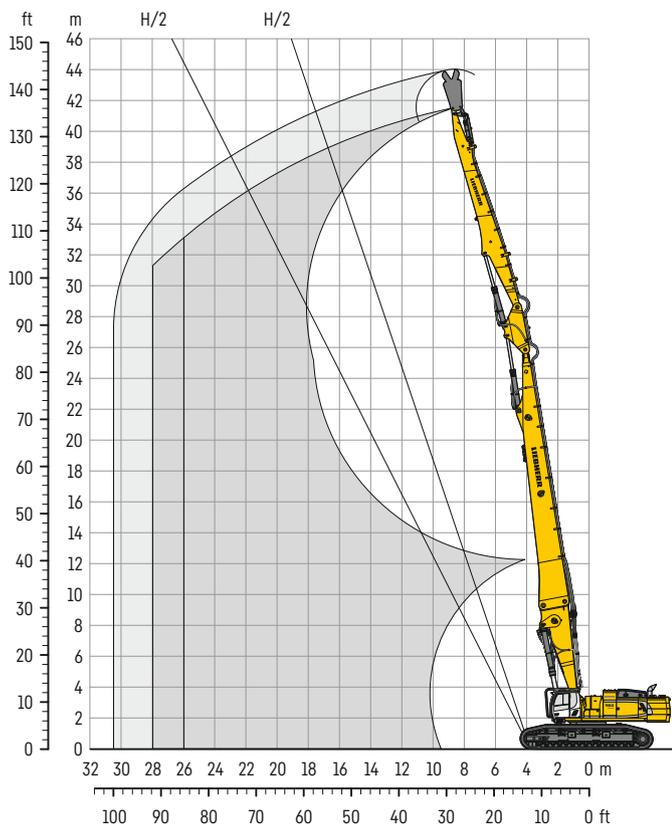
* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 37.0 t, demolition boom 16.50 m, intermediate boom 2.80 m, demolition stick 16.00 m and attachment 3.5 t.

Undercarriage		VH-HD	
Pad width	mm	600	750
Weight	kg	177,500	180,500
Ground pressure	kg/cm ²	1.93	1.57

Demolition equipment 42.00 m



Reach limitation

	24 m	26 m	28 m
Demolition boom 16.50 m + Intermediate boom 2.80 m + Demolition stick 13.50 m VH-HD undercarriage	Attachment weight*		
	t		
	lengthwise	3.50	3.50
	transverse	3.50	3.00

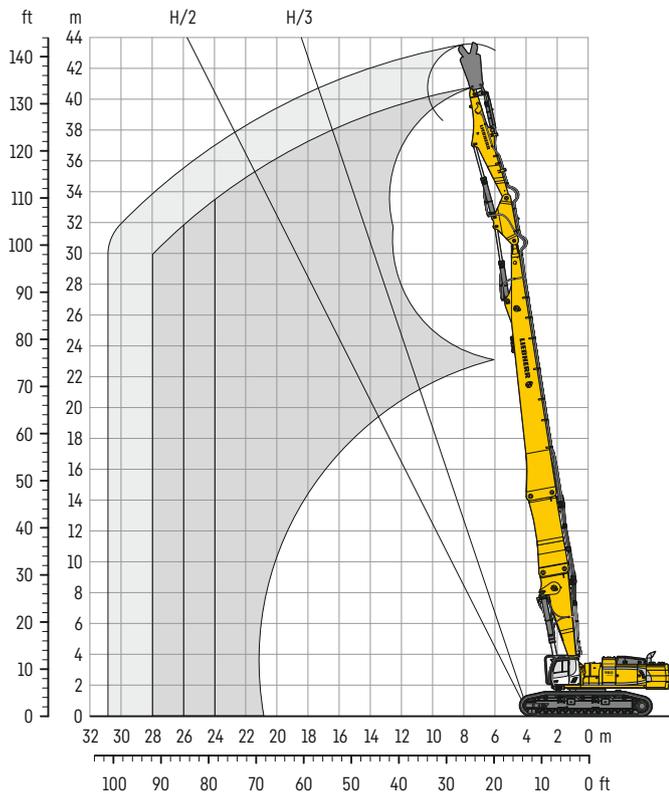
* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 37.0t, demolition boom 16.50 m, intermediate boom 2.80 m, demolition stick 13.50 m and attachment 3.5 t.

Undercarriage	VH-HD	
Pad width	mm	600 750
Weight	kg	177,000 180,000
Ground pressure	kg/cm ²	1.93 1.57

Demolition equipment 41.00 m



Reach limitation

	16 m	26 m
Demolition boom 16.50 m + Demolition boom extension 5.00 m + Intermediate boom 2.80 m + Demolition stick 7.50 m	Attachment weight*	
VH-HD undercarriage	lengthwise	4.00
	transverse	4.00

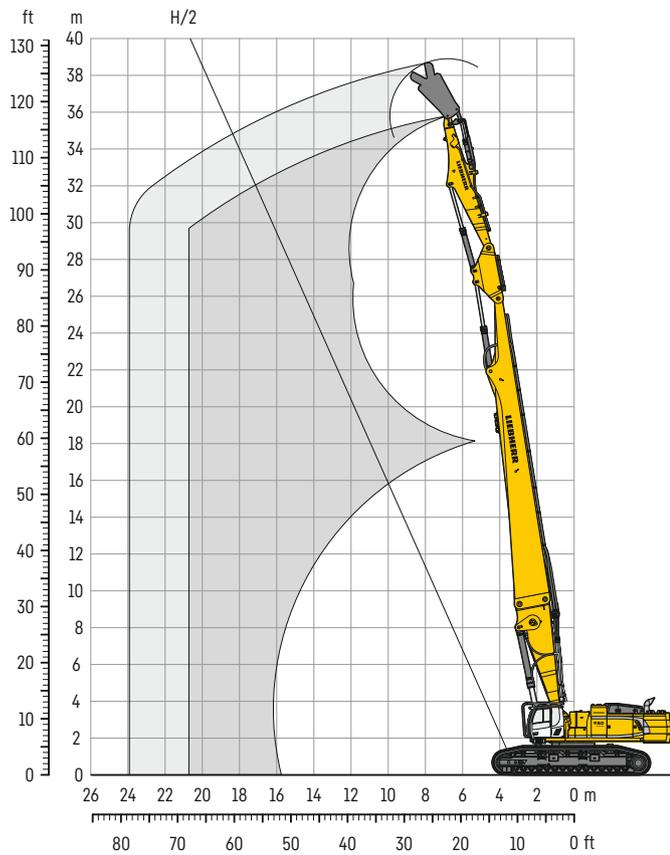
* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 37.0t, demolition boom 16.50 m, demolition boom extension 5.00 m, intermediate boom 2.80 m, demolition stick 7.50 m and attachment 4.0t.

Undercarriage	VH-HD	
Pad width	mm	600 750
Weight	kg	185,500 188,500
Ground pressure	kg/cm ²	2.02 1.64

Demolition equipment 36.00 m



Reach limitation

		19 m	21 m
Demolition boom 16.50 m			Attachment weight*
+ Intermediate boom 2.80 m			t
+ Demolition stick 7.50 m			
VH-HD undercarriage	lengthwise	7.00	7.00
	transverse	7.00	5.50

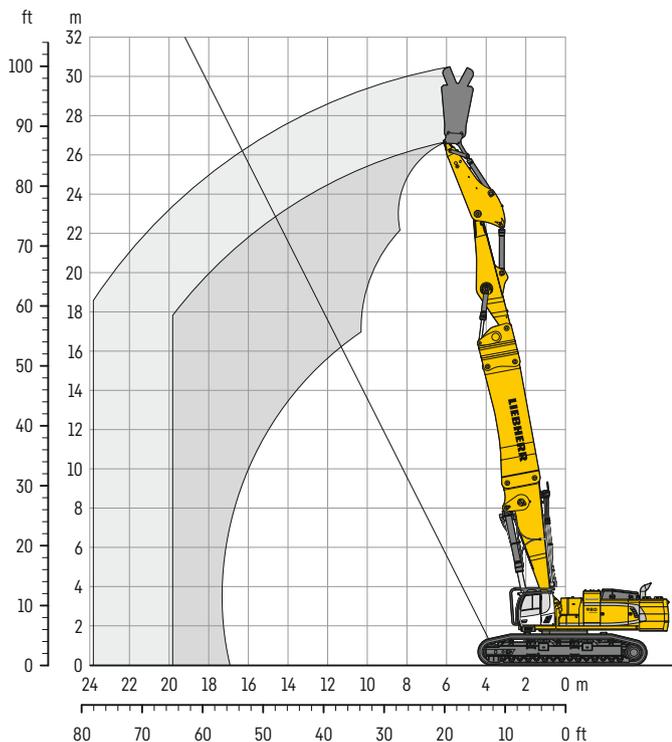
* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 37.0 t, demolition boom 16.50 m, intermediate boom 2.80 m, demolition stick 7.50 m and attachment 7.0 t.

Undercarriage		VH-HD	
Pad width	mm	600	750
Weight	kg	188,000	183,000
Ground pressure	kg/cm ²	1.96	1.59

Demolition equipment 27.00 m



Reach limitation

		20 m
Boom 6.00 m + Adapter with two-piece boom + Demolition boom extension 6.00 m + Stick 4.00 m		Attachment weight*
		t
VH-HD undercarriage	lengthwise	15.00
	transverse	-

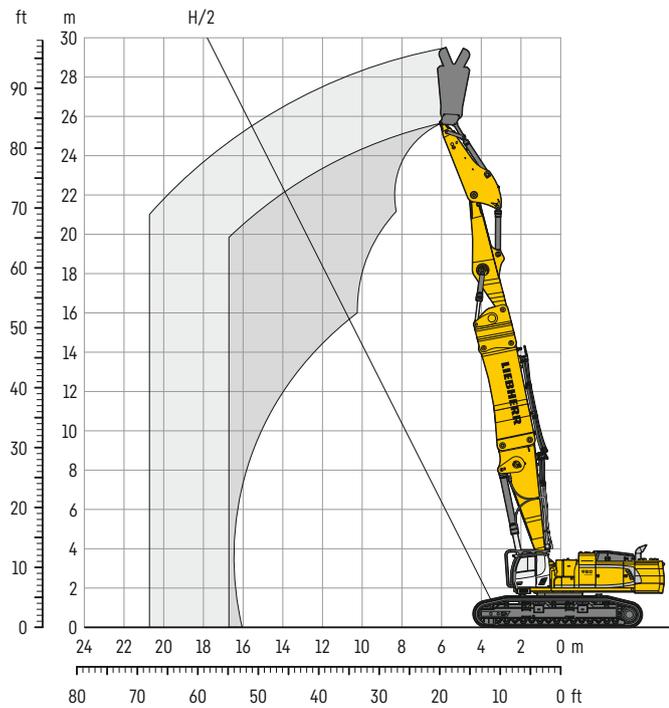
* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 37.0 t, boom 6.00 m, adapter with two-piece boom, demolition boom extension 6.00 m, stick 4.00 m and attachment 15.0 t.

Undercarriage	VH-HD	
	Pad width	mm
Weight	kg	194,500 197,500
Ground pressure	kg/cm ²	2.12 1.72

Demolition equipment 26.00 m



Reach limitation

		17 m
Boom 6.00 m + Adapter with two-piece boom + Demolition boom extension 5.00 m + Stick 4.00 m		Attachment weight*
		t
VH-HD undercarriage	lengthwise	15.00
	transverse	-

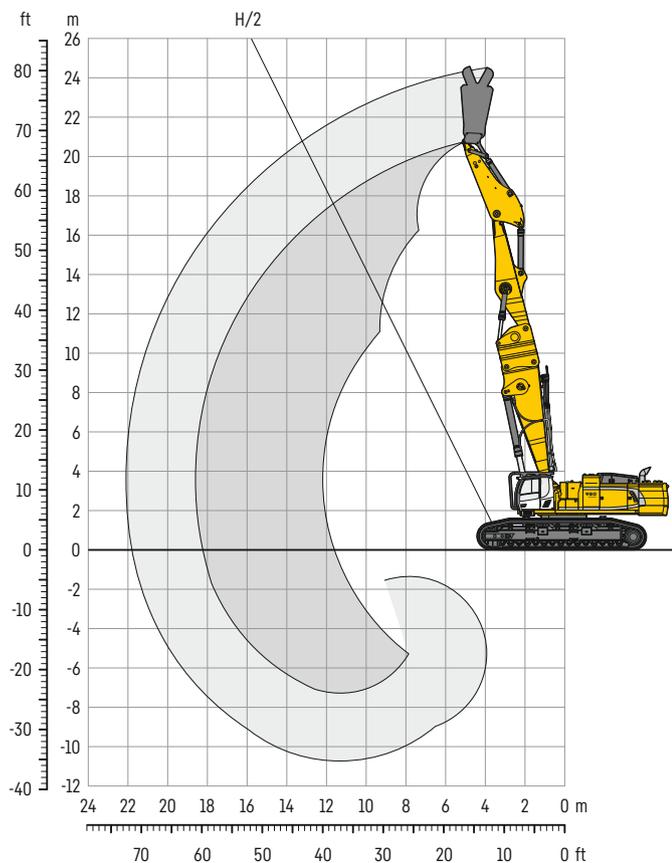
* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 37.0 t, boom 6.00 m, adapter with two-piece boom, demolition boom extension 5.00 m, stick 4.00 m and attachment 15.0 t.

Undercarriage	VH-HD	
	Pad width	mm
Weight	kg	193,500 196,500
Ground pressure	kg/cm ²	2.11 1.71

Demolition equipment 21.00 m



Reach limitation

Boom 6.00 m	lengthwise	Attachment weight*
+ Adapter with two-piece boom		
+ Stick 4.00 m	transverse	15,00
VH-HD undercarriage		

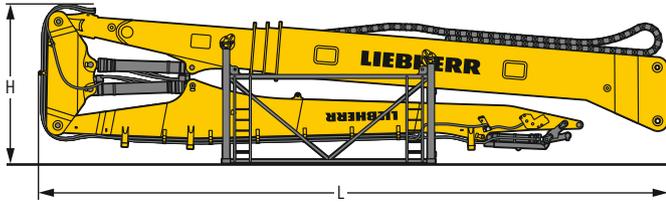
* included quick coupler, adapter plate and attachment

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 37.0 t, boom 6.00 m, adapter with two-piece boom, stick 4.00 m and attachment 15.0 t.

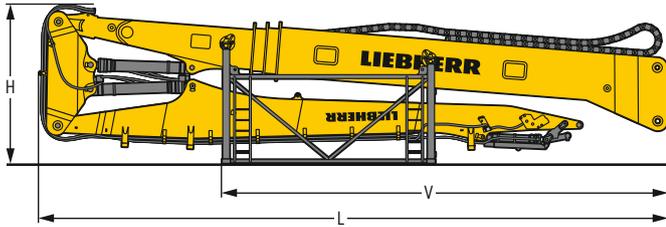
Undercarriage	VH-HD	
Pad width	mm	600 750
Weight	kg	185,000 188,000
Ground pressure	kg/cm ²	2.02 1.64

Dimensions and weights



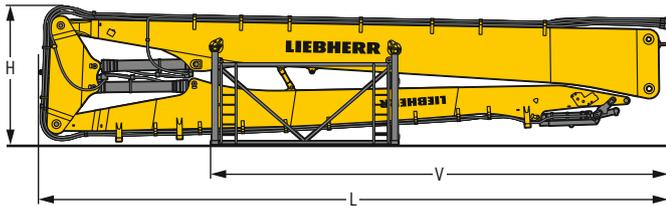
Demolition equipment with storage rack

L Length	mm	19,300
H Height	mm	3,900
Width	mm	2,408
Weight without attachment	kg	40,300



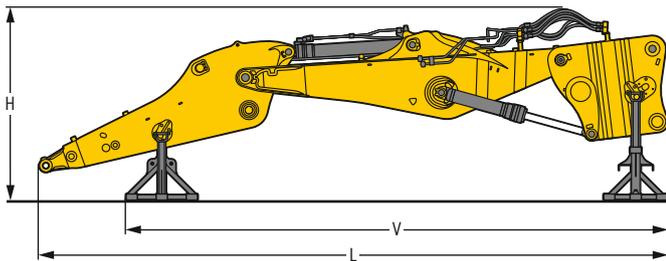
Demolition equipment with storage rack

L Length	mm	16,286
H Height	mm	4,148
V Width	mm	11,550
Weight without attachment	kg	36,800



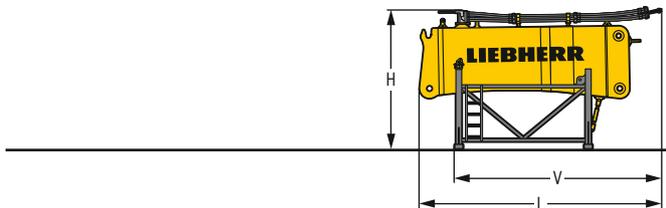
Demolition equipment with storage rack

L Length	mm	36m	42m	44m
H Height	mm	3,845	3,896	3,850
V Width	mm	12,839	12,860	12,839
Weight without attachment	kg	25,150	26,557	26,000



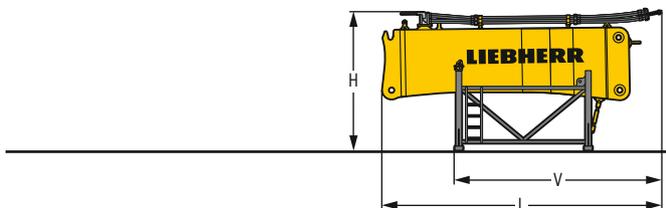
Demolition equipment with storage rack

L Length	mm	21m
H Height	mm	11,936
V Width	mm	3,677
Weight without attachment	kg	10,285



Demolition boom extension with storage rack

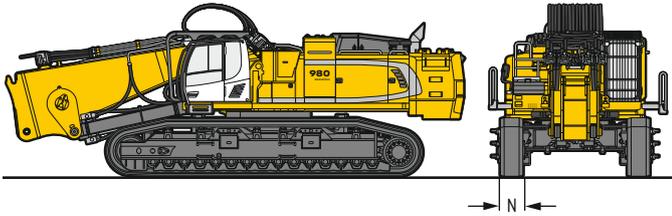
L Length	mm	5m
H Height	mm	6,370
V Width	mm	5,448
Weight	kg	2,408



Demolition boom extension with storage rack

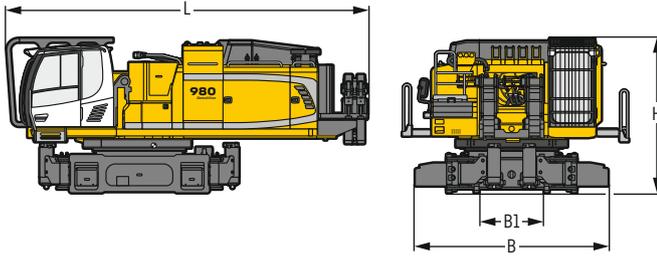
L Length	mm	6m
H Height	mm	7,349
V Width	mm	3,698
Weight	kg	5,448

Dimensions and weights



Basic machine

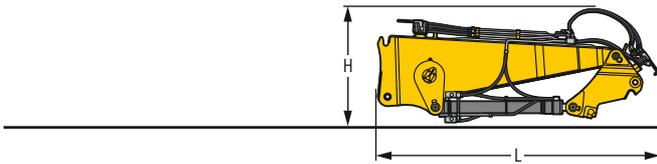
N	mm	600	750
Weight	kg	149,000	152,000



Basic machine

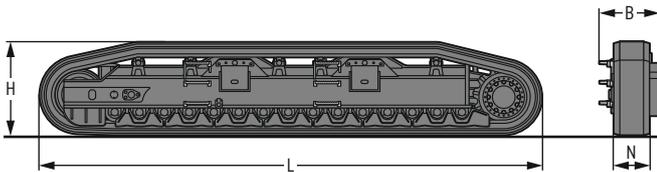
without side frames

B	mm	4,042
B1	mm	1,370
L Length	mm	7,600
H Height	mm	3,300
Weight	kg	58,000



Basic boom

L Length	mm	7,400
H Height	mm	3,150
Width	mm	2,050
Weight	kg	22,000



Side frame

L Length	mm	8,500	8,500
H Height	mm	1,600	1,600
N	mm	600	750
B	mm	1,020	1,020
Weight	kg	17,500	19,000



Counterweight

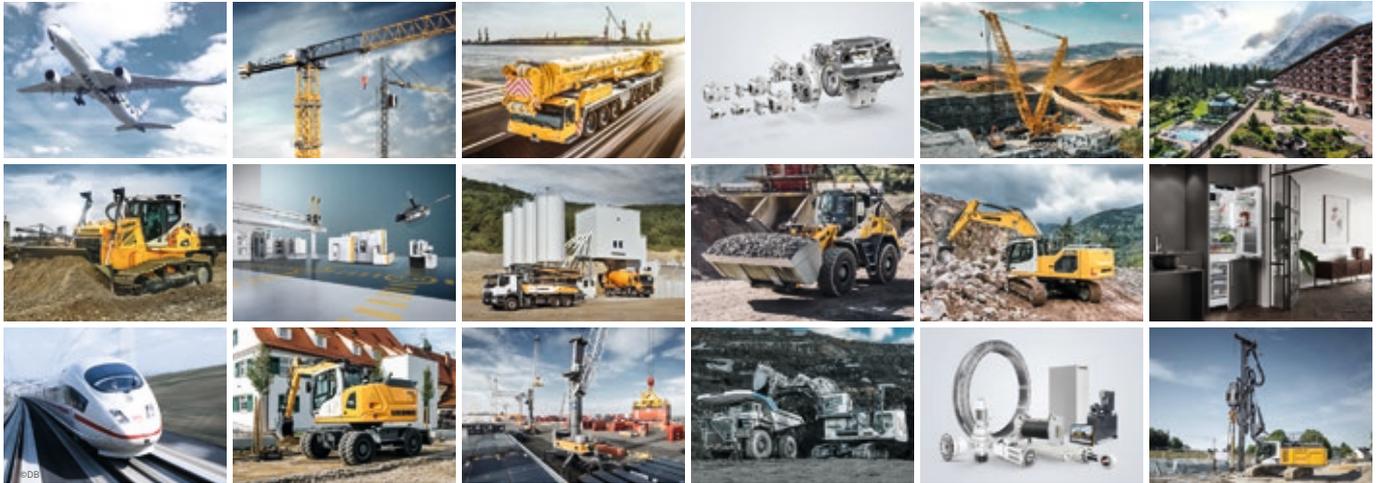
L Length	mm	1,800
H Height	mm	1,750
Width	mm	3,400
Weight	kg	37,000



Hydraulic removable counterweight

L Length	mm	1,500
H Height	mm	1,800
Width	mm	3,700
Weight	kg	34,000

The Liebherr Group



Global and independent: more than 70 years of success

Liebherr was founded in 1949 when, with the development of the world's first mobile tower crane, Hans Liebherr laid the foundations for a family business now employing nearly 50,000 people and comprising over 140 companies across every continent.

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

Leaders and pioneers

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

Diversified portfolio

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

Customised care

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

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