

Crawler Excavator

R 944 C SME

Litronic®

Operating Weight: 42,900 – 43,500 kg
Engine Output: 190 kW / 258 HP
Bucket Capacity: 2.00 – 2.50 m³



LIEBHERR

Technical Data



Engine

Rating per ISO 9249	190 kW (258 HP) at 1,800 rpm
Model	Liebherr D 936 L
Type	6 cylinder in-line
Bore/Stroke	122/150 mm
Displacement	10.5 l
Engine operation	4-stroke diesel unit pump system turbo-charged and after-cooled reduced emissions
Cooling	water-cooled, fuel cooled and integrated engine oil cooler
Air cleaner	dry-type air cleaner with pre-cleaner, primary and safety element, automatic dust ejection
Fuel tank	660 l
Standard	sensor controlled engine idling
Electrical system	
Voltage	24 V
Batteries	2 x 180 Ah/12 V
Starter	24 V/6.6 kW
Alternator	28 V/80 A



Hydraulic System

Hydraulic pump for attachment and travel drive	two Liebherr variable flow, swash plate pumps
Max. flow	2 x 303 l/min.
Max. pressure	350 bar
Pump regulation	electro-hydraulic with electronic engine speed sensing regulation, pressure com- pensation, flow compensation, automatic oil flow optimizer
Hydraulic pump for swing drive	reversible, variable flow, swash plate pump, closed-loop circuit
Max. flow	205 l/min.
Max. pressure	370 bar
Hydraulic tank	460 l
Hydraulic system	710 l
Hydraulic oil filter	2 full flow filters in return line with inte- grated fine filter area (5 µm)
Hydraulic oil cooler	Cooling unit, consisting of radiators for engine coolant, charge air, fuel and hydraulic oil with hydrostatically controlled fan drive
MODE selection	adjustment of machine performance and the hydraulics via a mode selector to match applications
ECO	for especially economical and environ- mentally friendly operation
POWER	for maximum digging power and heavy duty jobs
LIFT	for lifting
FINE	for precision work and lifting through very sensitive movements
RPM adjustment	stepless adjustment of engine output via the rpm at each selected mode
Tool Control	ten preadjustable pump flows and pres- sures for add-on tools (option)



Hydraulic Controls

Power distribution	via monoblock control valve with integrated safety valves
Flow summation	to boom and stick
Closed-loop circuit	for uppercarriage swing drive
Servo circuit	
Attachment and swing	proportional via joystick levers
Travel	proportional via foot pedals or removable hand levers and speed pre-selection
Additional functions	via foot pedals or joystick toggle switch



Swing Drive

Drive by	Liebherr swash plate motor
Transmission	Liebherr compact planetary reduction gear
Swing ring	Liebherr, sealed single race ball bearing swing ring, internal teeth
Swing speed	0 – 8 rpm stepless
Swing torque	125 kNm
Holding brake	wet multi-disc (spring applied, pressure released)



Operator's Cab

Cab	built from deep drawn components, resiliently mounted, sound insulated, tinted windows, front window stores overhead, door with sliding window
Operator's seat	shock absorbing suspension, adjustable to operator's weight, 4-way adjustable seat
Joysticks	integrated into adjustable seat consoles
Monitoring	menu driven query of current operating conditions via the color touch display. Automatic monitoring, display, warning (acoustical and optical signal) and saving machine malfunction data, for example, engine overheating, low engine oil pressure or low hydraulic oil level
Heating system	automatic air conditioning, combined cooler/heater, additional dust filter in fresh air/recirculated
Noise emission	
ISO 6396	L_{pA} (inside cab) = 75 dB(A)
2000/14/EC	L_{WA} (surround noise) = 105 dB(A)



Undercarriage

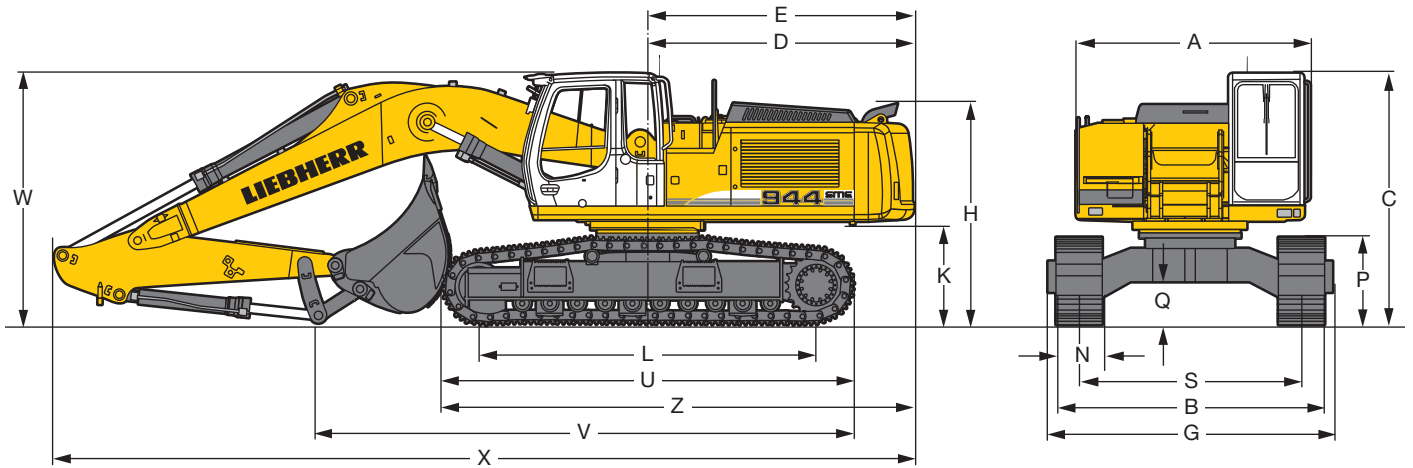
S-HD	super-HD-undercarriage for extreme and very tough applications, e.g. in quarries
Drive	Liebherr swash plate motors with inte- grated brake valves on both sides
Transmission	Liebherr planetary reduction gears
Travel speed	low range – 2.8 km/h high range – 4.1 km/h
Drawbar pull max.	326 kN
Track components	D 7 G, maintenance-free
Track rollers/ Carrier rollers	9/2
Tracks	sealed and greased
Track pads	double and triple grouser
Digging locks	wet multi-discs (spring applied, pressure released)
Brake valves	integrated into travel motor



Attachment

Type	combination of resistant steel plates and cast steel components
Hydraulic cylinders	Liebherr cylinders with special seal-system and shock absorbers
Pivots	sealed, low maintenance
Lubrication	easy accessible centralized lubrication points for boom and stick
Hydraulic connections	pipes and hoses equipped with SAE split- flange connections
Bucket	fitted as standard with Liebherr tooth system

Dimensions

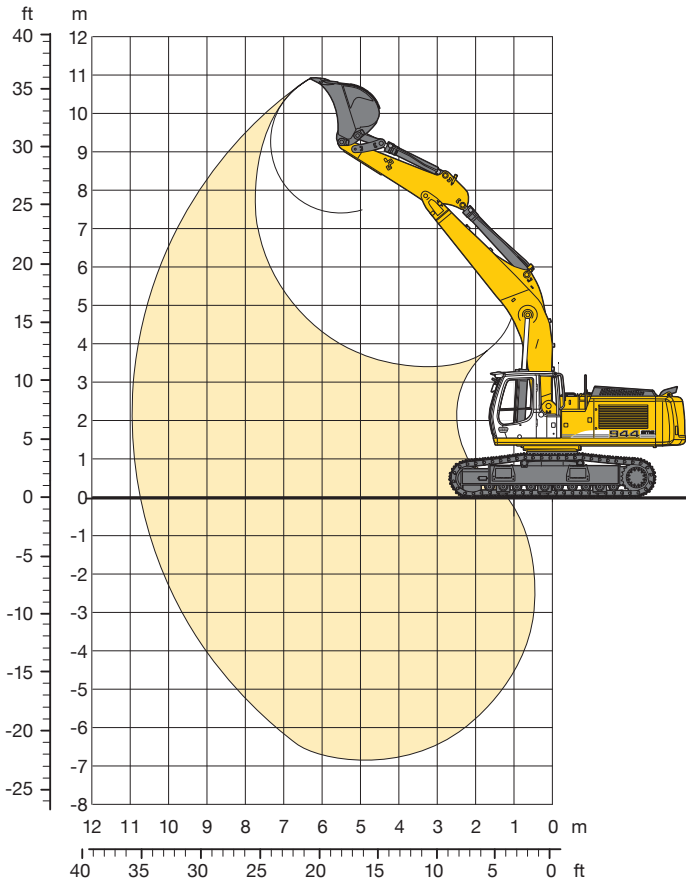


	mm
A	3,060
C	3,275
D	3,471
E	3,471
H	2,895
K	1,305
L	4,400
P	1,170
Q	550
S	2,900
U	5,370
Z	6,160
N	500 600
B	3,462 3,500
G	3,712 3,712

Mono Boom 6.45 m SME		mm
V		7,050
W		3,350
X		11,300

Backhoe Attachment

with Mono Boom 6.45 m SME



Digging Envelope

Stick length	m	2.60
		SME
Max. digging depth	m	6.85
Max. reach at ground level	m	10.75
Max. dump height	m	7.40
Max. teeth height	m	10.90

Digging Forces

Digging force ISO	kN	197
	t	20.1
Breakout force ISO	kN	234
	t	23.9

Max. breakout force with ripper bucket and without quick coupler 300 kN (30.6 t)

Operating Weight and Ground Pressure

Operating weight includes basic machine with mono boom 6.45 m SME, stick 2.60 m SME and HD bucket 2.50 m³.

Undercarriage	S-HD	
Pad width	mm	500 600
Weight	kg	42,900 43,500
Ground pressure	kg/cm ²	0.91 0.77

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

	Cutting width mm	Capacity ISO 7451 m ³	Weight kg	S-HD-Undercarriage	
				Stick length (m) 2.60	
HDV ¹⁾	1,650	2.00	2,600	□	
HD ²⁾	1,850	2.50	2,040	□	

* Indicated loads are based on ISO 10567 max. stick length, lifted 360° on firm and even ground

1) HDV bucket for direct fitting with teeth Z 25

2) HD bucket for direct fitting with teeth Z 20











Other buckets available on request

Max. material weight □ = ≤ 1.8 t/m³

Lift Capacities

with Mono Boom 6.45 m SME

Stick 2.60 m SME

m	Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		m		
														
9.0	S-HD											8.6*	8.6*	5.8
7.5	S-HD					9.8*	9.8*					7.6*	7.6*	7.3
6.0	S-HD					10.3*	10.3*	9.2*	9.2*			7.3*	7.3*	8.2
4.5	S-HD			15.1*	15.1*	11.4*	11.4*	9.6	9.6*			7.2*	7.2*	8.8
3.0	S-HD			17.8*	17.8*	12.6*	12.6*	9.2	10.2*	7.1	8.6*	7.0	7.4*	9.1
1.5	S-HD			13.1*	13.1*	12.1	13.4*	8.9	10.6*	7.0	8.7*	6.9	7.9*	9.1
0	S-HD			17.7*	17.7*	11.9	13.4*	8.8	10.5*			7.1	8.5*	8.8
-1.5	S-HD	13.6*	13.6*	16.1*	16.1*	11.8	12.6*	8.7	9.8*			7.7	8.3*	8.3
-3.0	S-HD	15.9*	15.9*	13.6*	13.6*	10.8*	10.8*					7.9*	7.9*	7.4
-4.5	S-HD			9.4*	9.4*	6.7*	6.7*					6.5*	6.5*	6.1

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

The load values are quoted in tons (t) at stick end (without bucket), and may be swung 360° on firm and even ground. Adjacent values are valid for the undercarriage when in the longitudinal position. Capacities are valid for 600 mm wide triple grouser 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 they increase by an additional 620 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 check valves on the hoist cylinders, when they are used for lifting operations which require the use of lifting accessories.

Standard Equipment



Undercarriage

- 4-piece track guide at each track frame
- Idler protection
- Lifetime lubricated track rollers
- Track pads D 7 G 600 mm triple grouser
- Tracks sealed and greased
- Two-stage travel motors



Uppercarriage

- Easy accessible lubrication points
- Engine hood with lift help and mechanical lock
- Extended tool kit
- Handrails, non slip surfaces
- Lockable tool box
- Main switch for electric circuit
- Maintenance-free HD-batteries
- Maintenance-free swing brake lock
- Sound insulation



Hydraulics

- Electronic pump regulation
- Filter with integrated fine filter area (5 µm)
- Flow compensation
- Hydraulic tank shut-off valve
- Pressure compensation
- Pressure storage for controlled lowering of attachments with engine turned off
- Pressure test ports
- Stepless work mode selector



Engine

- After-cooled
- Conform with stage IIIA/Tier 3 emission standard
- Dry-type air cleaner, main and safety element
- Sensor controlled engine idling
- Turbo charger
- Unit pump system with direct injection



Operator's Cab

- All tinted windows
- Automatic air conditioning with defroster
- Cigarette lighter and ashtray
- Closed storage space
- Cloth hook
- Displays for engine operating condition
- Dome light
- Door with sliding window
- Emergency exit through rear window
- Inside rear mirror
- Load bearing sectional profile structure, covered with deep-drawn panels
- Mechanical hour meters, readable from outside the cab
- MP3 radio with USB and SD-Card support
- Rain hood over front window opening
- Removable floor mat
- Right window made of one piece (without post)
- Roof window, right window and windshield armored
- Seat and consoles independently adjustable (4-way adjustable seat)
- Seat belt
- Storage tray
- Sun roller blind
- Wiper/washer



Attachment

- 20 t lifting hook on bucket
- Additional bottom protection for stick
- Cylinders with shock absorbers
- Easy accessible centralized lubrication points for boom and stick
- Pipe fracture safety valves for hoist cylinders
- ReGeneration plus
- SAE split flanges on all high pressure lines
- Sealed pivots/O-ring sealant between bucket and stick
- Work light on boom

Individual Options



Undercarriage

Reinforced cover plate and reinforced base plate for center section
Track pads D 7 G 500 mm double grouser
Track pads D 7 G 600 mm double grouser
Track pads D 7 G 500 mm triple grouser
Travel drive protection



Uppercarriage

Arctic kit*
Rear mirror on counterweight and right side
Rear view monitoring system with camera
Tank re-fueling pump
Tropic kit*
Winter kit*



Hydraulics

Additional high pressure hydraulic circuits for hammer and/or shear
Return filter for hammer
Tool Control



Engine

Air pre-filter
External engine cold starting aid
Fuel pre-heating system



Operator's Cab

2 additional halogen flood lights (front)
2 additional halogen flood lights (rear)
Air suspension operator seat with heating and head-rest
Extinguisher
FGPS Protection
FOPS Protection
GPS system
Seat heating for standard seat
Warning beacon



Attachment

Additional bottom protection for boom
Additional work light on boom
Fully-automatic central lubrication system
(except link and tilt geometry)
Hydraulic lines for additional tools
Liebherr line of buckets
Mechanical quick coupler
Overload warning device
Piston rod protection for bucket cylinder

* = for more details please contact your local dealer

Options and/or special attachments, supplied by vendors other than Liebherr, are only to be installed with the knowledge and approval of Liebherr in order to retain warranty.

The Liebherr Group of Companies



Wide Product Range

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

Exceptional Customer Benefit

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

State-of-the-art Technology

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

Worldwide and Independent

Hans Liebherr founded the Liebherr family company in 1949. Since that time, the enterprise has steadily grown to a group of more than 120 companies with over 35,000 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.

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