

R 998 SME Litronic

LIEBHERR

Crawler excavator



Generation
6.2

Engine
420 kW / 571 HP
Stage V

Operating weight
Backhoe: 97,700–101,400 kg
Shovel: 99,800–101,500 kg

Bucket capacity
Backhoe: 5.20–7.20 m³
Shovel: 5.10–6.50 m³

Experience progress: R 998 SME Super Mass Excavation

Equipment

- Wide choice of backhoe front boom and stick configurations
- Welded structure with cast steel components for improved stress-resistance and longer service life
- Safety check valves to prevent boom and stick cylinder pipes from bursting, with integrated regeneration system for lower fuel consumption

Buckets

- Different levels of protection to suit different areas of application:
 - Standard for loose, non-abrasive materials
 - HD for hard-to-break, moderately abrasive materials
 - HDV for highly abrasive materials
- Different blade designs:
 - straight (for earth-moving and grading)
 - semi-delta (for hard-to-break, hard-to-extract materials)
 - delta (for compacted or slightly cracked materials)



New functions / options

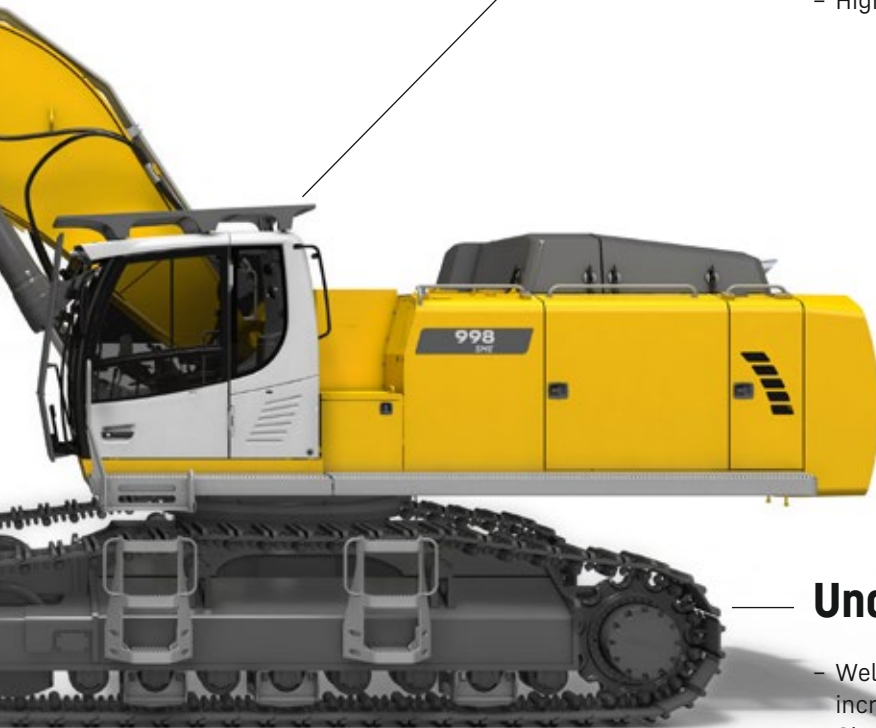
- **Liebherr Power Efficiency – Engine Control**
Up to 10% lower fuel consumption
- **Bucket Fill Assist**
Automatic bucket-filling cycle for increased productivity
- **Modetronic**
Customisable operating modes for optimum adjustment of work cycles to each type of application

Comfort

- Quiet, comfortable cab, the largest and most spacious in its category
- Seat with heater and pneumatic multi-directional shock absorption (air conditioning optional)
- High-resolution 9" color touchscreen

Undercarriage

- Welded undercarriage with rigid X profile for increased robustness
- Chamfered rack pads with double grouser for more manoeuvrability on difficult terrain
- Moulded two-tooth sprocket for longer service life
- Track rollers on double bearings for increased reliability and durability over time
- Stronger travel motor housing protection for improved resistance to wear and tear from hard, abrasive rocks



Experience progress: R 998 SME Super Mass Excavation Shovel

Cab

- Cab riser for the best possible view of the loading area
- The largest and quietest cab in its category to date
- Mounted on viscoelastic rivets to absorb vibration
- Impact-resistant windscreen and roof glass panel
- Seat with heater and pneumatic multi-directional shock absorption (air conditioning optional)
- Large high-resolution colour touchscreen

Safety

- Completely unobstructed panoramic view, plus rear-view and side-view monitoring cameras for increased safety
- Retractable console for safe and easy access to the cab
- Impact-resistant windscreen and roof glass panel
- Cab riser for the best possible view of the loading area (optional)

Equipment second to none

- Cast steel components
- Shovel attachment with parallel drivetrain for powerful, even penetration
- Bucket cylinders located under the equipment for better protection
- Safety check valves to prevent boom cylinder pipes from bursting
- Front shovel with semi-automatic flap closure, ideally shaped for optimum material penetration and high filling rate



ovel



Uppercarriage

- Left and right catwalks as standard; wide catwalks with hand rail optional
- Access platform for engine and hydraulic control block compartments to enable safe, ergonomic maintenance work
- Sleek design for a more extensive view
- New Stage V compliant engine
- Heavier counterweight for more stability and improved performance

Maintenance

- Access platform for engine and hydraulic control block compartments to enable safe, ergonomic maintenance work
- Left and right catwalks as standard; wide catwalks with hand rail optional
- Automatic central lubrication system as standard
- Shut-off valve on hydraulic tank outlet as standard

Robust undercarriage

- Fitted with components from the next size up excavator
- Chamfered rack pads with double grouser for more manoeuvrability on difficult terrain
- Moulded two-tooth sprocket for longer service life
- Carrier rollers on double bearings for increased reliability and durability over time
- Stronger travel motor housing protection for improved resistance to wear and tear from hard, abrasive rocks

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 + SCR Filter 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	536 l
Hydraulic system	1,134 l
Filtration	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	295 kNm
Holding brake	Wet multi-disc (spring applied, pressure released)



Cab	LED work headlights integrated in the ceiling, 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
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 (adjustable in length, height and inclination), seat heating as standard
Arm consoles	Oscillating consoles with seat, tiltable console left
Operation and displays	Large high-resolution operating unit, intuitive, colour display with touchscreen, video-compatible, numerous setting, control and monitoring options, e.g. air conditioning control, fuel consumption, machine and attachment parameters
Air-conditioning	Automatic air-conditioning, recirculated air function, fast de-icing and demisting at the press of a button, air vents can be operated via a menu. Recirculated air and fresh air filters can be easily replaced and are accessible from the outside. Heating-cooling unit, designed for extreme outside temperatures, sensors for solar radiation, inside and outside temperatures The air conditioning system contains fluorinated greenhouse gases
Refrigerant	R134a
Global warming potential	1,430
Quantity at 25 °C*	1,260 g
CO 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

Undercarriage

S-HD	Gauge 3,900 mm
Drive	Liebherr swashplate motor with brake valves on both sides
Transmission	Liebherr compact planetary reduction gear
Maximum travel speed	3.7 km/h
Drawbar pull on crawler	645 kN
Track components	BMP280, maintenance-free
Track rollers / Carrier rollers	8 / 2
Tracks	Sealed and greased
Track pads	Double grouser
Holding brake	Wet multi-disc (spring applied, pressure released)
Brake valves	Outside the travel motor
Lashing eyes	Integrated



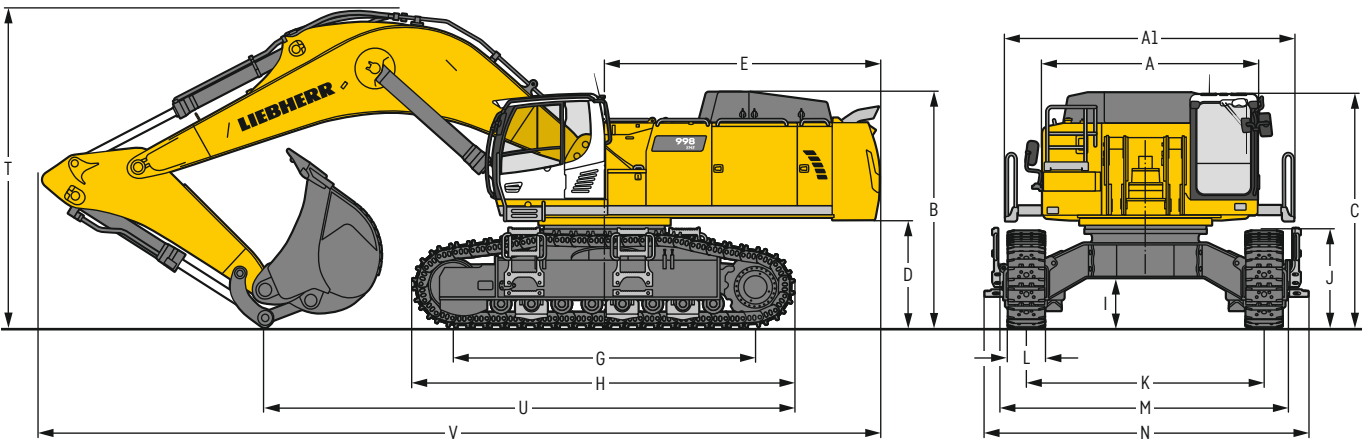
Equipment

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



		S-HD	mm
A	Uppercarriage width		3,565
A1	Uppercarriage width with catwalks		4,730
B	Uppercarriage height		3,870
C	Cab height		3,840
D	Counterweight ground clearance		1,765
E	Rear-end length		4,515
G	Wheelbase		4,960
H	Undercarriage length		6,250
I	Undercarriage ground clearance		820
J	Track height		1,595
K	Track gauge		3,900
L	Track pad width	500 600	750
M	Width over tracks	4,770 4,770	4,770
N	Width over steps	5,315 5,315	5,315

		Stick length m	Mono boom SME 7.20 m direct mounting mm
T	Boom height	2.90 SME 3.30 SME	5,250 5,400
U	Length on ground	2.90 SME 3.30 SME	8,700 8,500
V	Overall length	2.90 SME 3.30 SME	13,800 13,450
	Bucket		6.30 m³

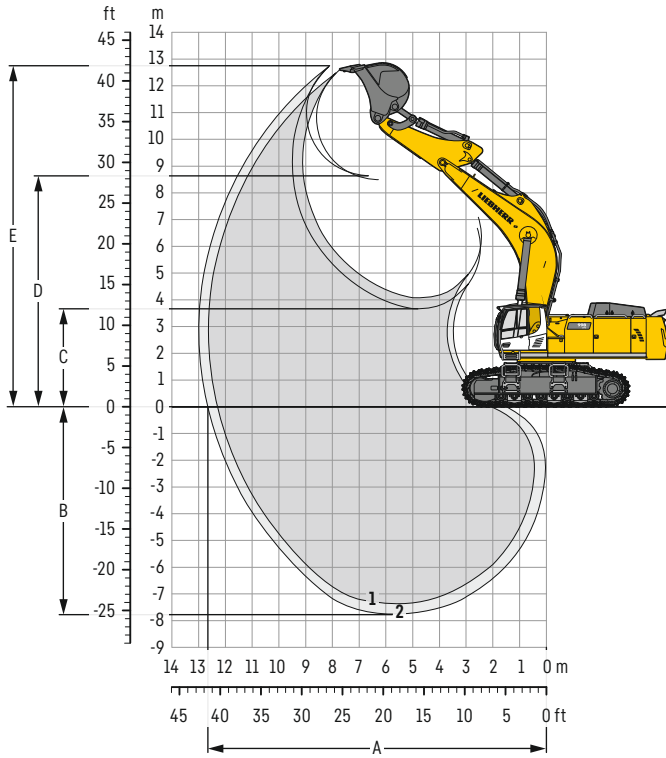
Transport dimensions

removable elements disassembled

		Mono boom SME 7.20 m mm
Transport width		5,315
	Stick m	mm
Transport length	2.90 SME 3.30 SME	13,800 13,450
Transport height	2.90 SME 3.30 SME	5,250 5,400
Bucket		6.30 m³

Backhoe bucket

with mono boom SME 7.20 m



Digging envelope

without quick coupler		1	2
Stick length	m	2.90	3.30
		SME	SME
A Max. reach at ground level	m	12.30	12.65
B Max. digging depth	m	7.35	7.75
C Min. dumping height	m	4.05	3.65
D Max. dumping height	m	8.50	8.65
E Max. cutting height	m	12.60	12.75

Forces

without quick coupler		1	2
Stick digging force (ISO 6015)	kN	426	394
Bucket digging force (ISO 6015)	kN	506	506
Stick digging force (SAE J1179)	kN	406	377
Bucket digging force (SAE J1179)	kN	454	454

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 16.0 t, mono boom SME 7.20 m, stick SME 2.90 m and HDV bucket with semi-delta cutting edge 6.30 m³ (7,600 kg).

Undercarriage		S-HD		
Pad width	mm	500	600	750
Weight	kg	97,700	98,400	99,400
Ground pressure	kg/cm ²	1.81	1.52	1.23

The operating weight includes the basic machine with counterweight 18.0 t, mono boom SME 7.20 m, stick SME 2.90 m and HDV bucket with semi-delta cutting edge 6.30 m³ (7,600 kg).

Undercarriage		S-HD		
Pad width	mm	500	600	750
Weight	kg	99,700	100,400	101,400
Ground pressure	kg/cm ²	1.84	1.55	1.25

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

				S-HD undercarriage SME equipment (with track pads 600 mm)	
				Stick length (m)	
	Cutting width	Capacity	Weight	2.90	3.30
	mm	m ³	kg		
HD ¹⁾	2,350	6.20	6,500	▲	■
	2,500	6.80	6,800	■	▲
HD ²⁾	2,500	6.80	6,500	■	▲
	2,550	7.20	7,000	▲	■
HDV ³⁾	2,200	5.20	7,200	▲	▲
	2,350	5.70	7,300	▲	■
	2,350	6.30	7,600	■	▲

* Indicated loads are based on ISO 10567, at maximum reach, and may be swung 360° on firm and even ground

¹⁾ HD bucket with semi-delta cutting edge and teeth Z 100 (appropriate for materials above classification 6, according to VOB, Section C, DIN 18300)

²⁾ HD bucket with semi-delta cutting edge and teeth Z 90 (appropriate for materials above classification 6, according to VOB, Section C, DIN 18300)

³⁾ HDV bucket with semi-delta cutting edge and teeth Z 100 (appropriate for materials above classification 6, according to VOB, Section C, DIN 18300)















Other buckets available upon request

Max. material weight ▲ = ≤ 2.0 t/m³, ■ = ≤ 1.8 t/m³, ▲ = ≤ 1.65 t/m³, ■ = ≤ 1.5 t/m³












Lift capacities

with mono boom SME 7.20 m, counterweight 16.0 t and track pads 600 mm

Stick SME 2.90 m

Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m				m
															
10.5													23.2*	23.2*	6.7
9.0													21.2*	21.2*	8.2
7.5													20.3*	20.3*	9.1
6.0													19.1	20.0*	9.8
4.5													17.5	19.8*	10.2
3.0													16.8	19.9*	10.3
1.5													16.7	19.9*	10.2
0													17.3	20.0*	9.9
-1.5													18.8	19.9*	9.3
-3.0	43.9*	43.9*	37.1*	37.1*	29.9*	29.9*	23.6*	23.6*					19.3*	19.3*	8.4
-4.5			28.2*	28.2*	22.7*	22.7*							17.4*	17.4*	7.1

Stick SME 3.30 m

Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m				m
															
10.5													21.2*	21.2*	7.2
9.0													19.8*	19.8*	8.6
7.5													19.1*	19.1*	9.5
6.0													17.9	18.8*	10.2
4.5													16.6	18.8*	10.5
3.0													16.3	19.1*	10.7
1.5													16.0	19.2*	10.6
0													16.2	19.1*	10.3
-1.5													17.5	19.1*	9.7
-3.0	41.1*	41.1*	39.2*	39.2*	31.0*	31.0*	24.5*	24.5*					18.8*	18.8*	8.9
-4.5			31.2*	31.2*	24.9*	24.9*	18.2*	18.2*					17.6*	17.6*	7.6

 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) 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 1,450 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.

with mono boom SME 7.20 m, counterweight 18.0 t and track pads 600 mm

Stick SME 2.90 m

Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m				m
															
10.5													23.2*	23.2*	6.7
9.0													21.2*	21.2*	8.2
7.5													20.3*	20.3*	9.1
6.0													20.0*	20.0*	9.8
4.5													18.7	19.8*	10.2
3.0													17.9	19.9*	10.3
1.5													17.8	19.9*	10.2
0													18.5	20.0*	9.9
-1.5													19.9*	19.9*	9.3
-3.0	43.9*	43.9*	37.1*	37.1*	29.9*	29.9*	23.6*	23.6*					19.3*	19.3*	8.4
-4.5			28.2*	28.2*	22.7*	22.7*							17.4*	17.4*	7.1

Stick SME 3.30 m

Under-carriage	3.0 m		4.5 m		6.0 m		7.5 m		9.0 m		10.5 m				m
															
10.5													21.2*	21.2*	7.2
9.0													19.8*	19.8*	8.6
7.5													19.1*	19.1*	9.5
6.0													18.8*	18.8*	10.2
4.5													17.7	18.8*	10.5
3.0													17.4	19.1*	10.7
1.5													17.1	19.2*	10.6
0													17.4	19.1*	10.3
-1.5													18.7	19.1*	9.7
-3.0	41.1*	41.1*	39.2*	39.2*	31.0*	31.0*	24.5*	24.5*					18.8*	18.8*	8.9
-4.5			31.2*	31.2*	24.9*	24.9*	18.2*	18.2*					17.6*	17.6*	7.6

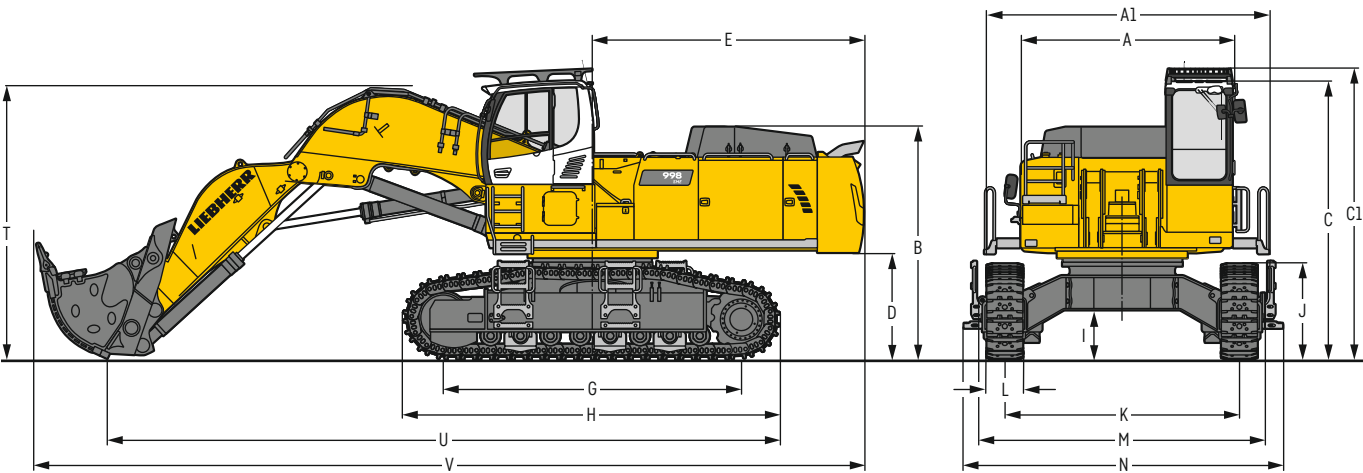
 Height  Can be slewed through 360°  In longitudinal position of undercarriage  Max. reach * Limited by hydr. capacity

The load values are quoted in tons (t) 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 1,450 kg. Lifting capacity of the excavator is limited by machine stability and hydraulic capacity.

According to European Standard, EN 474-5: In the European Union excavators have to be equipped with an overload warning device, a load diagram and automatic safety check valves on hoist cylinders and stick cylinder(s), when they are used for lifting operations which require the use of lifting accessories.

Determine maximum load lift from load lift chart displayed in the operator's cab or from load lift chart detailed in the operator's manual supplied with the machine.

Dimensions front shovel



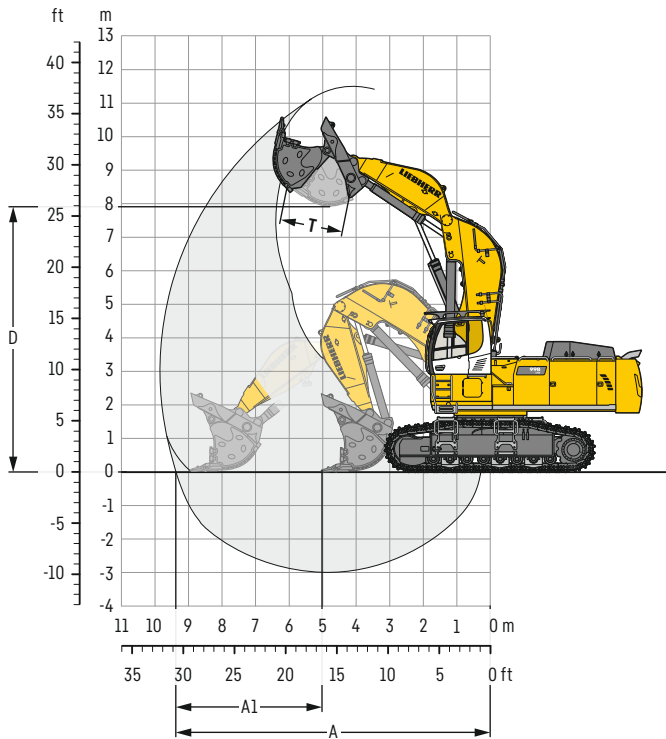
		S-HD	mm			S-HD	mm
A	Uppercarriage width		3,565	I	Undercarriage ground clearance		820
A1	Uppercarriage width with catwalks		4,730	J	Track height		1,595
B	Uppercarriage height		3,870	K	Track gauge		3,900
C	Cab height		4,650	L	Track pad width	500 600 750	
C1	Cab height with FOPS top guard		4,845	M	Width over tracks	4,770 4,770 4,770	
D	Counterweight ground clearance		1,765	N	Width over steps	5,315 5,315 5,315	
E	Rear-end length		4,515	T	Boom height		4,550
G	Wheelbase		4,960	U	Length on ground		11,200
H	Undercarriage length		6,250	V	Overall length		13,800

Transport dimensions

removable elements disassembled

	Shovel equipment
	mm
Transport width	5,315
Transport length	13,800
Transport height	4,845
Shovel	6.00 m³

Front shovel



Digging envelope

A	Max. reach at ground level	m	9.35
A1	Max. crowd length	m	3.90
D	Max. dumping height	m	8.00
T	Bucket opening width	mm	1,825

Forces

Max. crowd force	kN	690
Max. crowd force at ground level	kN	490
Max. breakout force	kN	500

Operating weight and ground pressure

The operating weight includes the basic machine with counterweight 16.0 t, cab elevation 800 mm, operator's cab protective guard, shovel equipment SME and front shovel 6.00 m³ (10,000 kg), level II.

Undercarriage		S-HD		
Pad width	mm	500	600	750
Weight	kg	99,800	100,500	101,500
Ground pressure	kg/cm ²	1.84	1.55	1.25

Front shovels

Cutting width mm	Capacity ISO 7451 m ³	Weight kg	Wear kit level	S-HD undercarriage	Shovel equipment
2,700	5.10	8,450	I		▲
2,700	5.10	9,100	II		▲
2,700	5.10	10,150	III		▲
2,700	5.60	8,750	I		▲
2,700	5.60	9,500	II		▲
2,700	5.60	11,000	III		▲
2,700	6.00	9,000	I		▲
2,700	6.00	10,000	II		■
2,700	6.00	11,300	III		■
3,150	6.50	10,300	I		■
3,150	6.50	11,000	II		▲
3,150	6.50	12,900	III		■

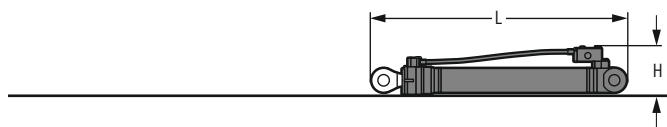
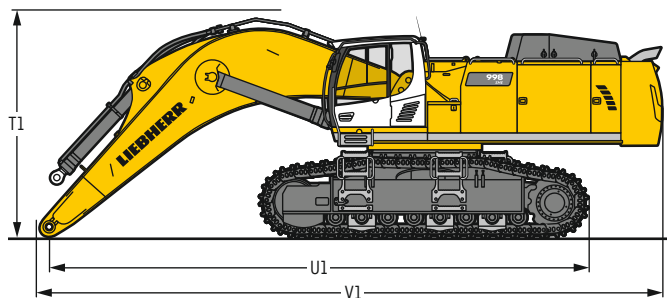
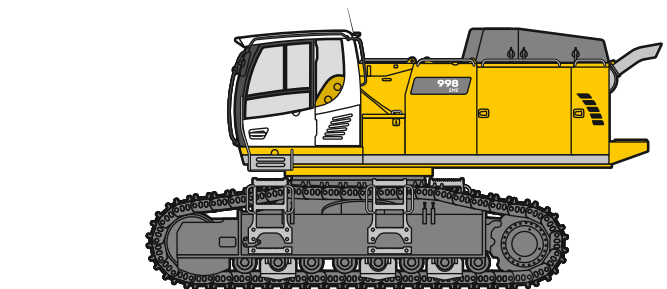
Level I: For non-abrasive materials, such as limestone without flint inclusion, shot material or easily breakable rock, i.e., deteriorated rock, soft limestone, shale, etc.

Level II: For pre-blasted heavy rock, or deteriorated, cracked material (classification 3 to 4, according to DIN 18300)

Level III: For highly-abrasive materials such as rock with a high silica content, sandstone etc.

Max. material weight ▲ = ≤ 2.0 t/m³, ■ = ≤ 1.8 t/m³, ▲ = ≤ 1.65 t/m³, ■ = ≤ 1.5 t/m³

Dimensions and weights



Basic machine

Track pads	mm	500	600	750
Weight with backhoe equipment and S-HD undercarriage without counterweight	kg	56,600	57,300	58,350
Weight with shovel equipment and S-HD undercarriage without counterweight	kg	56,700	57,400	58,450

Machine without stick

T1	mm	4,250
U1	mm	10,300
V1	mm	11,850

Cab elevation

800 mm

L Length	mm	1,890
H Height	mm	925
Width	mm	1,370
Weight	kg	600

Counterweight

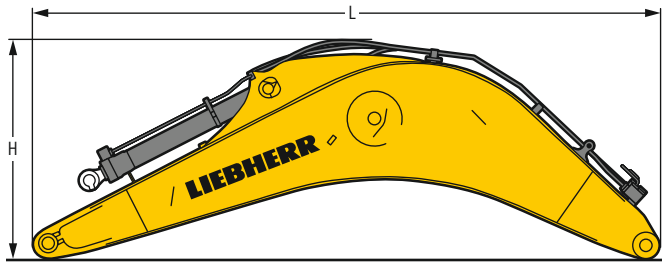
L Length	mm	775	775
H Height	mm	1,595	1,595
Width	mm	3,360	3,360
Weight	kg	16,000	18,000

Upper protection screen

L Length	mm	1,960
H Height	mm	190
Width	mm	1,110
Weight	kg	75

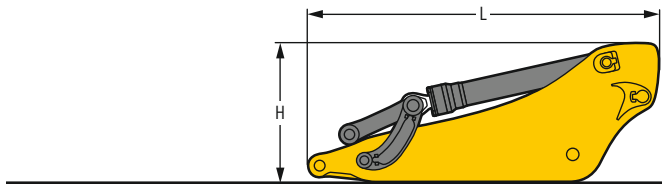
Hoist cylinders (two)

L Length	mm	2,920
H Height	mm	550
Width	mm	400
Weight	kg	2 x 1,050



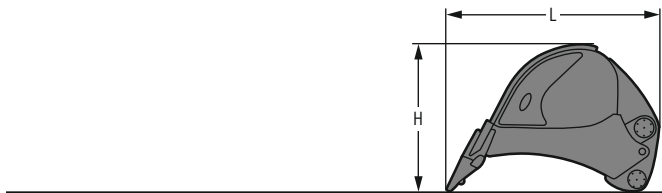
Mono boom with stick cylinder

Boom length	m	7.20
L Length	mm	7,550
H Height	mm	2,700
Width	mm	1,460
Weight	kg	10,300



Stick with bucket cylinder

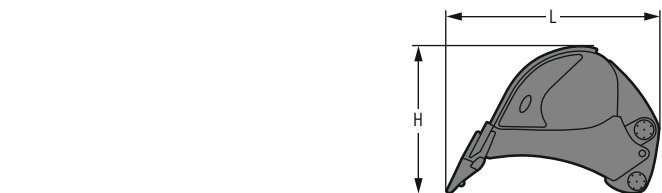
Stick length	m	2.90	3.30
L Length	mm	4,050	4,450
H Height	mm	1,700	1,650
Width	mm	900	900
Weight	kg	5,050	5,350



Backhoe buckets (semi-delta cutting edge, teeth Z 100)

HD

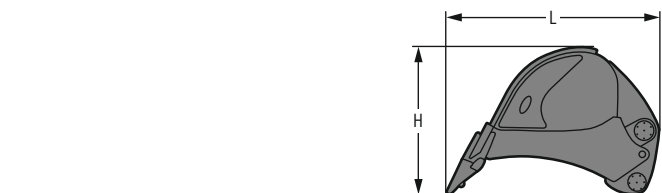
Cutting width	mm	2,350	2,500
Capacity	m³	6.20	6.80
L Length	mm	3,050	3,050
H Height	mm	2,150	2,150
Width	mm	2,400	2,550
Weight	kg	6,500	6,800



Backhoe buckets (semi-delta cutting edge, teeth Z 90)

HD

Cutting width	mm	2,500	2,550
Capacity	m³	6.80	7.20
L Length	mm	3,100	3,100
H Height	mm	2,200	2,200
Width	mm	2,600	2,600
Weight	kg	6,500	7,000

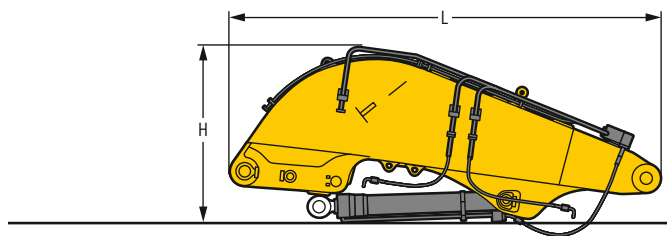


Backhoe buckets (semi-delta cutting edge, teeth Z 100)

HDV

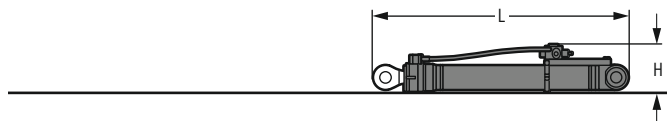
Cutting width	mm	2,200	2,350	2,350
Capacity	m³	5.20	5.70	6.30
L Length	mm	2,950	2,950	3,050
H Height	mm	2,150	2,150	2,200
Width	mm	2,250	2,400	2,400
Weight	kg	7,200	7,300	7,600

Dimensions and weights



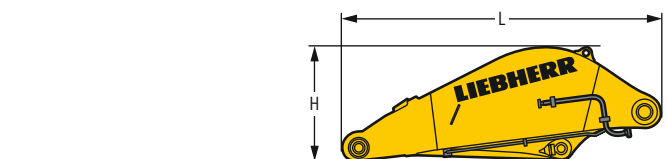
Shovel boom

L	Length	mm	4,950
H	Height	mm	2,050
	Width	mm	1,650
	Weight without crowd cylinder	kg	7,300
	Weight crowd cylinder	kg	2 x 450



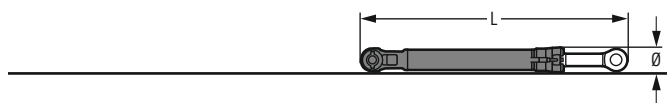
Shovel hoist cylinders (two)

L	Length	mm	2,920
H	Height	mm	550
	Width	mm	450
	Weight	kg	2 x 1,100



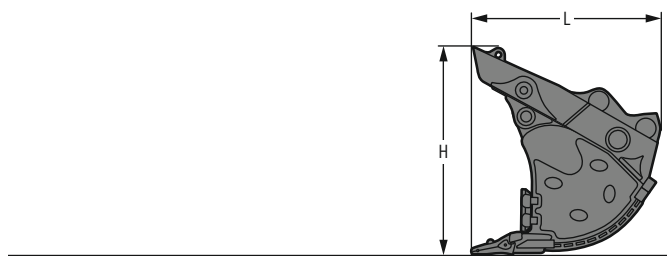
Shovel stick

L	Length	mm	3,660
H	Height	mm	1,300
	Width	mm	1,800
	Weight	kg	4,650



Shovel bucket cylinders (two)

L	Length	mm	3,050
Ø	Height	mm	450
	Width	mm	450
	Weight	kg	2 x 625



Front shovels

Cutting width		mm	2,700	2,700	2,700	3,150
Capacity		m³	5.10	5.60	6.00	6.50
L	Length	mm	2,600	2,800	2,800	2,800
H	Height	mm	2,700	2,700	2,700	2,700
	Width	mm	2,700	2,700	2,700	3,150
Weight						
	Level I	kg	8,450	8,750	9,000	10,300
	Level II	kg	9,100	9,500	10,000	11,000
	Level III	kg	10,150	11,000	11,300	12,900

Serial equipment

Undercarriage

Lashing eyes
Sprocket with dirt ejector
Track and carrier rollers, sealed and lifetime-lubricated
Travel motor housing protection
Undercarriage S-HD

Uppercarriage

Access platforms without protruding parts
Anti-skid surfaces
Automatic swing brake lock
Centralised lubrication system (automatic)
DEF tank lockable access hatch
Engine hood with gas spring opening
Extended tool set including tool box
Handrails
Liebherr Power Efficiency – Engine Control
Lockable fuel tank cap with padlock
Lockable service doors
Lockable storage box
Main switch, accessible from ground level
Pre-heating system for fuel
Protection grid on radiator fan
Sound insulation
Swing-out radiators
Windshield washer fluid tank

Hydraulic system

Dedicated swing circuit
Filter with integrated fine filters
Hydraulic pressure measuring ports
Hydraulic tank shut-off valve
Magnetic rod
Pressure accumulator for controlled lowering of equipment with engine turned off

Engine

Air filter with automatic dust ejector
Automatic engine idling / speed increase, controlled via joystick sensors
Common-Rail injection system
Exhaust gas after-treatment system – DOC + SCR
Fixed geometry turbocharger
Fuel fine filter
Fuel pre-filter and water separator
Fuel priming pump
Intercooler
Power Pack EU Stage V
Stepless adjustable engine speed

Cab

9" multifunction colour touchscreen
Air conditioning, automatic, tri-zone, controlled via display
Armrests adjustable in length, height and inclination
Bottle holder
Cab door sliding windows
Cigarette lighter
Coat hook
DEF consumption on touchscreen
DEF level on touchscreen
Electric socket in cabin (12 V)
Electric socket in cabin (24 V)
Emergency hammer
Engine oil level on touchscreen
Footrest
Fuel consumption on touchscreen
Fuel level on touchscreen
Impact resistant roof window
Impact resistant two-piece windscreen
Interior lighting
Laminated right hand side window
LiDAT Plus (Liebherr data transfer system)*
Mobile phone storage net
Modetronic
Movement priority between swing and boom, adjustable via touchscreen
Rain hood over front window opening
Rearview mirror
Rear view monitoring camera
Rear view monitoring camera distance gauge
Rear window emergency exit
Right hand side view monitoring camera
Roll-down sun blinds for windscreen and roof window
Rubber floor mat, fixed on floor and removable
Storage box
Storage nets
Storage spaces
Tilttable console left
Tinted windows
Visco-elastic damping
Windscreen wiper and washer
Work mode selector

Equipment

Anti-drift system boom cylinders
Anti-drift system stick cylinder
Boom bottom protection
Boom cylinders regeneration
Pipe fracture safety valve for stick cylinder
Pipe fracture safety valves for boom cylinders
Pivot points made of cast steel
SAE split flanges on high pressure lines
Stick bottom protection
Stick cylinder regeneration

* optionally extendable after one year

Equipment standard / option

Undercarriage

Chain guide 3 pieces	●
Chain guide full length	+
Reinforced cover and base plate for undercarriage centre section	+
Special painting	+
Steps	●
Track pads double grouser 500 mm, chamfered	+
Track pads double grouser 600 mm, chamfered	●
Track pads double grouser 750 mm, chamfered	+
Travel drive gearbox protection	+
Undercarriage protection plate for drop-ball application	+

Uppercarriage

Air pre-filter with cyclonical dust trap	+
Boxing ring	+
Catwalks left and right	●
Catwalk wide with railing	+
Counterweight heavy 16.0t	●
Counterweight super heavy 18.0t	+
Electric socket on uppercarriage (24 V)	+
Filter for hydraulic hammer return flow	+
Fixed cab riser 800 mm	+
Headlight on uppercarriage, lateral right, LED+, 1 piece	+ ¹⁾
Headlights on uppercarriage, front, LED, 2 pieces, protections included	● ¹⁾
Headlights on uppercarriage, front, LED+, 2 pieces, protections included	+ 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	+
Skyview 360°	+
Special painting	+
Swing ring and lubrication hoses protection	+
Tank refilling pump fuel	+
Wiggins coupling for fuel	+

Hydraulic system

Bypass filter for hydraulic oil	+
Liebherr hydraulic oil	●
Liebherr hydraulic oil, adapted for extreme climate conditions	+
Liebherr hydraulic oil, biodegradable	+

Engine

Automatic engine shutdown after idling	+
Engine shut-down with overrun	+
Lighting for engine compartment	+ ¹⁾

Cab

2" seat belt with retractor	●
3" seat belt with retractor, orange colour	+
4-points seat belt	+
Acoustic travel alarm deactivatable	+
Auxiliary heater programmable	+
Bottom windscreen wiper	+
Coming / Leaving Home	+ ¹⁾
Cool box (12 V)	+
Dark tinted windows	+
Electrically adjustable and heated outside rear-view mirrors	+
Electronic immobiliser	+
Emergency stop in cab	+
FGPS front guard tiltable	+
Fire extinguisher	+
First-aid box	+
FOPS top guard	+
Handrests elevated for joysticks	+
Headlights on cab, front, LED, 2 pieces	● ¹⁾
Headlights on cab, front, LED+, 2 pieces	+ ¹⁾
Headlights on cab roof, front, LED+, 2 pieces	+ ¹⁾
High pressure circuit switchable on pedals or mini-joystick	+
High pressure circuit with Tool Control (20 attachment adjustments on display)	+
Lighting for cabin access	+ ¹⁾
Luminosity control (LED+ headlights)	+ ¹⁾
Medium pressure circuit	+
Mini-joysticks proportional	+
Operator seat Comfort	●
Operator seat Premium	+
Overload warning system	+
Radio Comfort	+
Radio pre-installation	●
Roof sun shield	+
Roof window wiper	+
Rotating beacon on cabin, LED, 1 piece	+
Shortcut button on joystick configurable	●
Special painting	+
Sun visor	+

Equipment

Boom cylinder rods protection	+
Bucket cylinder rod protection	+
Bucket Fill Assist	+
Centralised lubrication extended for connecting link	+
Floating boom	+
Headlights on boom, LED, 2 pieces, protections included	● ¹⁾
Headlights on boom, LED+, 2 pieces, protections included	+ ¹⁾
Mono boom SME 7.20 m	+
Preparation for ripper tooth	+
Quick coupler SWA 105 hydraulic	+
Shovel boom 4.60 m	+
Shovel stick 3.30 m	+
Special painting	+
Stick SME 2.90 m	+
Stick SME 3.30 m	+

● = 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.

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ALL illustrations and data may differ from standard equipment. Subject to change without notice.
ALL indicated loads are based in accordance with ISO 9248. RG-BK · LFR/SP-12284049-web-11.22 enGB