
R 998 SME Litronic

LIEBHERR

Crawler excavator



Generation

5.2

Engine

420 kW / 571 HP
Stage IIIA
(compliant)

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)

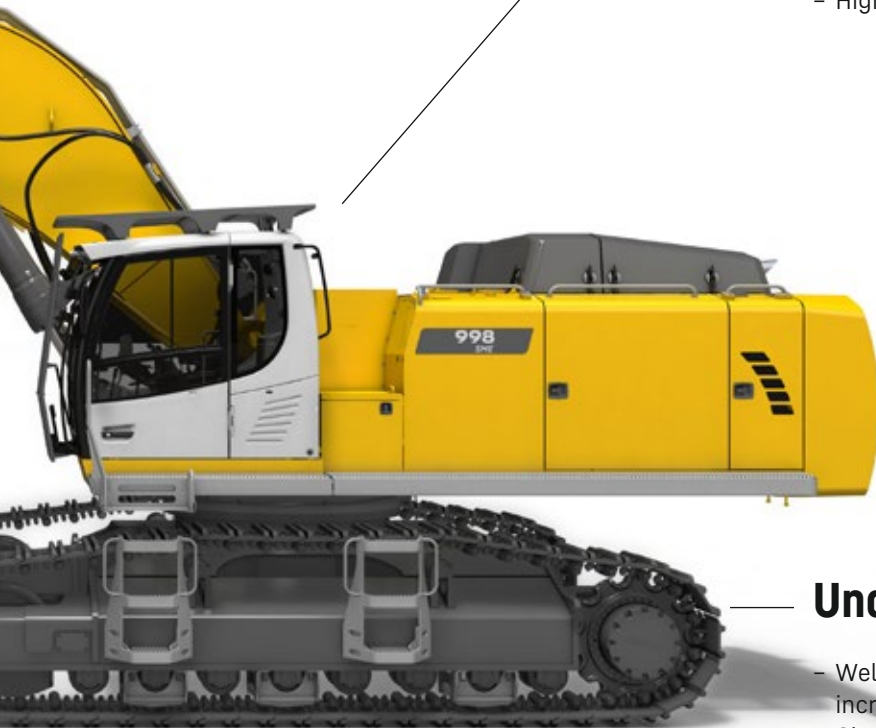


New functions / options

- **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 Sho

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



Level



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 |
| 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 | Engine Stage IIIA: with EGR |
| 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 |
| 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

| | |
|-------------------------------|---|
| 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 12V 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 |

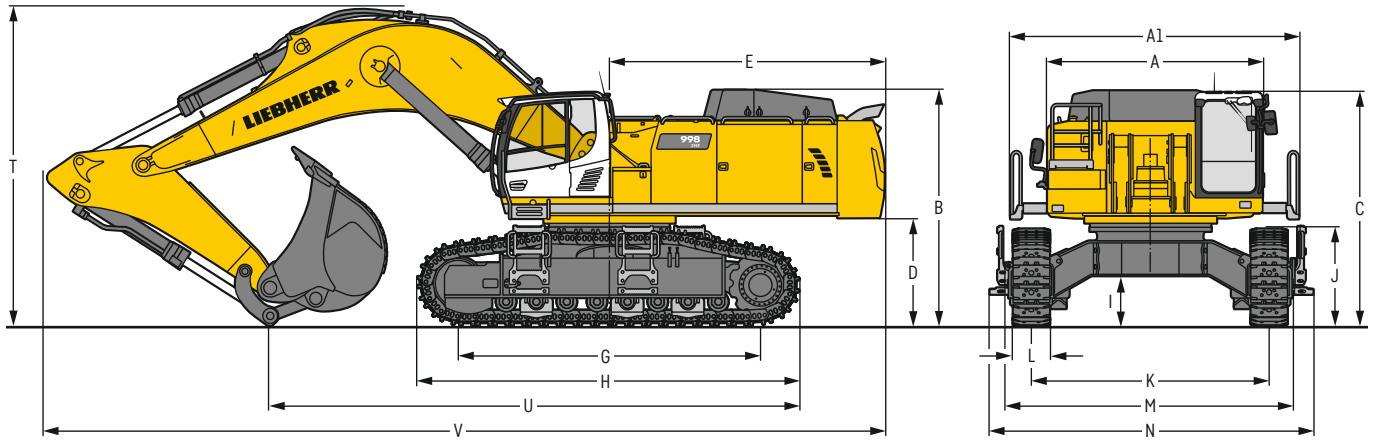

Undercarriage

| | |
|--|---|
| 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 |

Dimensions



| | | S-HD | mm |
|-----------|------------------------------------|-------------------|-----------|
| A | Upper-carriage width | | 3,565 |
| A1 | Upper-carriage width with catwalks | | 4,730 |
| B | Upper-carriage 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 | Under-carriage length | | 6,250 |
| I | Under-carriage 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 | Mono boom SME 7.20 m |
|----------|------------------|---------------------|-----------------------------|
| | | m | direct mounting |
| | | | mm |
| T | Boom height | 2.90 SME | 5,250 |
| | | 3.30 SME | 5,400 |
| U | Length on ground | 2.90 SME | 8,700 |
| | | 3.30 SME | 8,500 |
| V | Overall length | 2.90 SME | 13,800 |
| | | 3.30 SME | 13,450 |
| | Bucket | | 6.30 m ³ |

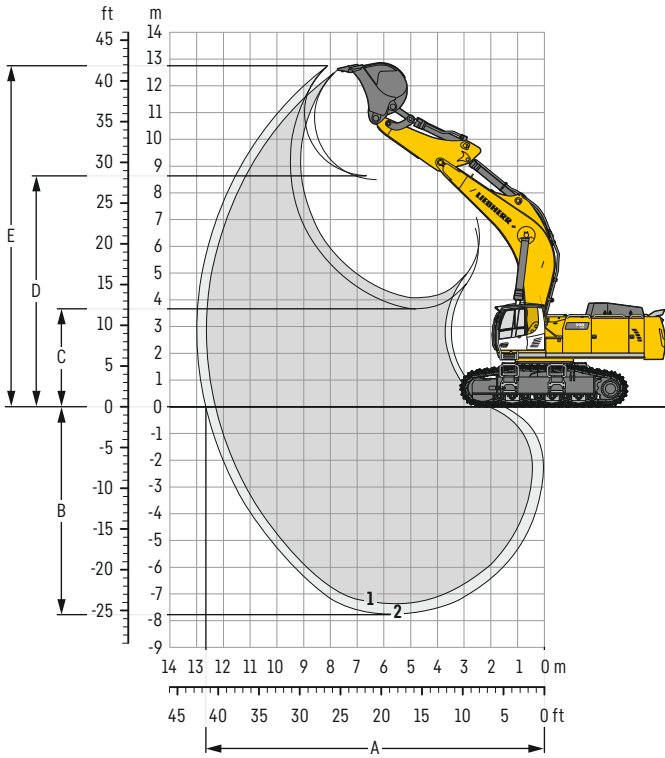
Transport dimensions

removable elements disassembled

| | | Mono boom SME 7.20 m |
|------------------|--------------|-----------------------------|
| | | mm |
| Transport width | | 5,315 |
| | Stick | mm |
| | m | |
| Transport length | 2.90 SME | 13,800 |
| | 3.30 SME | 13,450 |
| Transport height | 2.90 SME | 5,250 |
| | 3.30 SME | 5,400 |
| Bucket | | 6.30 m ³ |

Backhoe bucket

with mono boom SME 7.20 m



Digging envelope

| without quick coupler | 1 | 2 |
|------------------------------|---|-------------|
| Stick length | m | 2.90 3.30 |
| 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)

| | Cutting width | Capacity | Weight | S-HD undercarriage | |
|-------------------|---------------|----------------|--------|--------------------|------|
| | | | | 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 ▲ = ≤ 2.0t/m³, ■ = ≤ 1.8t/m³, ▲ = ≤ 1.65t/m³, ■ = ≤ 1.5t/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 m | 3.0 m | | 4.5 m | | 6.0 m | | 7.5 m | | 9.0 m | | 10.5 m | | Max. reach | | 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 | | | | | | | | | | | | | | 17.4* | 17.4* | 7.1 |

Stick SME 3.30 m

| Under-carriage m | 3.0 m | | 4.5 m | | 6.0 m | | 7.5 m | | 9.0 m | | 10.5 m | | Max. reach | | 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 | | | | | | | | | | | | | | 15.9 | 18.8* | 10.7 |
| 1.5 | | | | | | | | | | | | | | 15.8 | 19.0* | 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 | | | | | | | | | | | | | | 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 m | 3.0 m | | 4.5 m | | 6.0 m | | 7.5 m | | 9.0 m | | 10.5 m | | Max. reach | | 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 | | | | | | | | | | | | | | 17.9 | 19.9* | 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 | | | | | | | | | | | | | | 17.4* | 17.4* | 7.1 |

Stick SME 3.30 m

| Under-carriage m | 3.0 m | | 4.5 m | | 6.0 m | | 7.5 m | | 9.0 m | | 10.5 m | | Max. reach | | 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 | | | | | | | | | | | | | | 16.8 | 19.0* | 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 | | | | | | | | | | | | | | 17.6* | 17.6* | 7.6 |

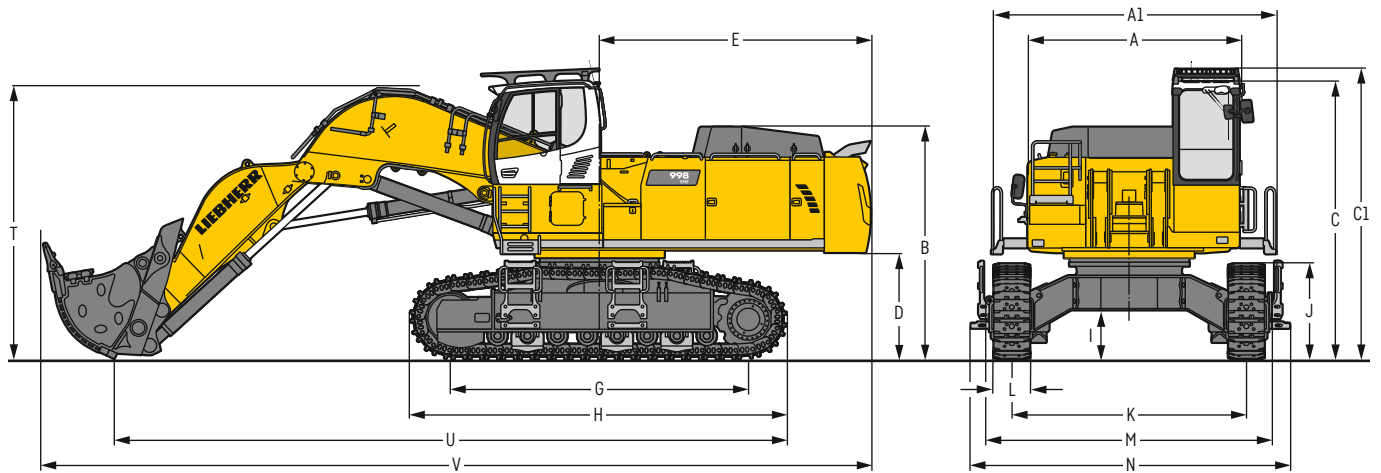
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Dimensions front shovel



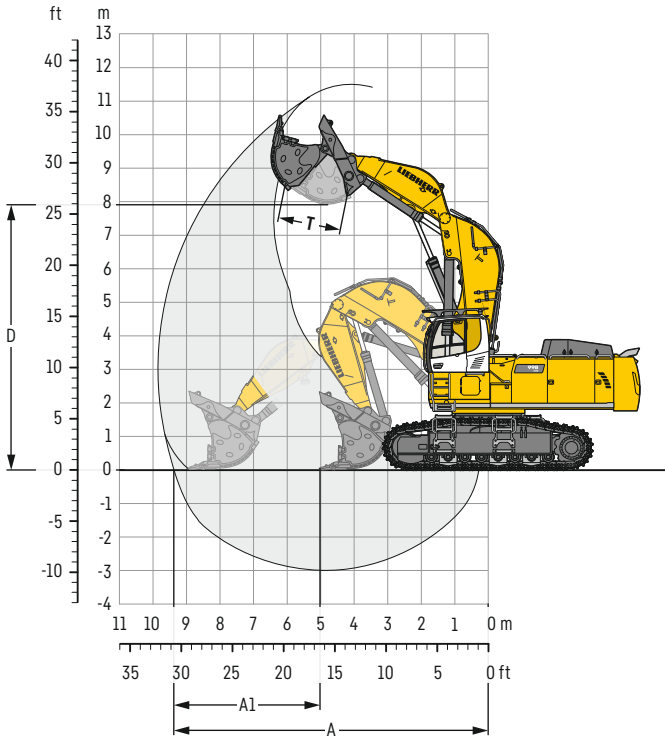
| | S-HD | mm | | S-HD | mm |
|----|-----------------------------------|-------|---|--------------------------------|-------------------|
| A | Uppercarriage width | 3,565 | I | Undercarriage ground clearance | 820 |
| A1 | Uppercarriage width with catwalks | 4,730 | J | Track height | 1,595 |
| B | 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 |
|------------------|---------------------|
| Transport width | 5,315 |
| Transport length | 13,800 |
| Transport height | 4,845 |
| Shovel | 6.00 m ³ |

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.

| | | S-HD | | | |
|---------------|-----------------|--------------------|--------|---------|---------|
| | | 500 | 600 | 750 | |
| Undercarriage | 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 | Capacity ISO 7451 | Weight | Wear kit level |
|---------------|-------------------|--------|----------------|
| mm | m ³ | kg | |
| 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 |

S-HD undercarriage

Shovel equipment

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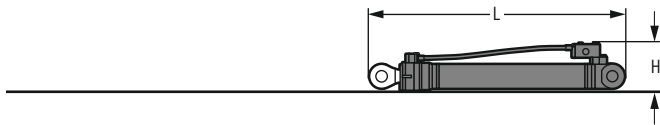
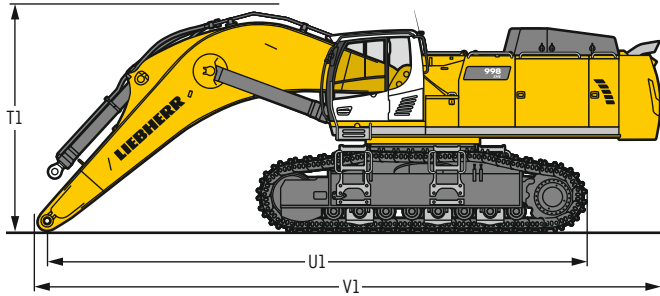
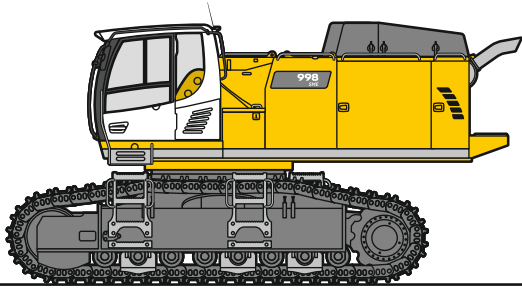
Level I: For non-abrasive materials, such as limestone without flint inclusion, shot material or easily breakable rock, i.e., deteriorated rock, soft limestone, shale, etc.

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

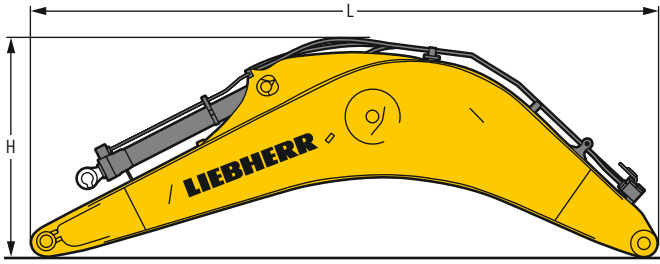
| | | | |
|----------|----|--------|--------|
| L Length | mm | 775 | 775 |
| H Height | mm | 1,595 | 1,595 |
| Width | mm | 3,360 | 3,360 |
| Weight | kg | 16,000 | 18,000 |

Upper protection screen

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

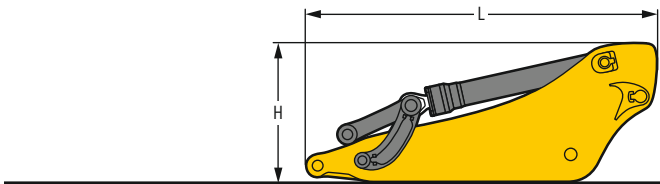
Hoist cylinders (two)

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



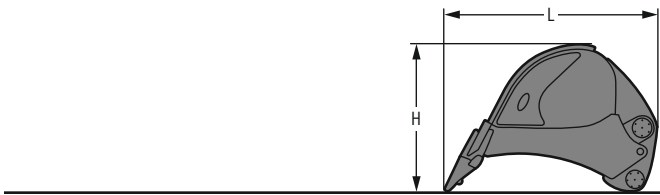
Mono boom with stick cylinder

| | | |
|-------------|----|--------|
| 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

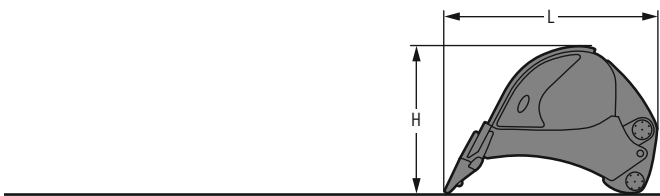
| | | | |
|--------------|----|-------|-------|
| Stick length | m | 2.90 | 3.30 |
| L Length | mm | 4,050 | 4,450 |
| H Height | mm | 1,700 | 1,650 |
| Width | mm | 900 | 900 |
| Weight | kg | 5,050 | 5,350 |



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

HD

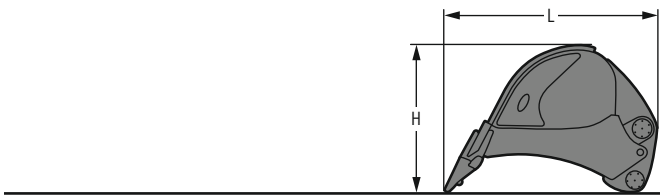
| | | | |
|---------------|----------------|-------|-------|
| Cutting width | mm | 2,350 | 2,500 |
| Capacity | m ³ | 6.20 | 6.80 |
| L Length | mm | 3,050 | 3,050 |
| H Height | mm | 2,150 | 2,150 |
| Width | mm | 2,400 | 2,550 |
| Weight | kg | 6,500 | 6,800 |



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

HD

| | | | |
|---------------|----------------|-------|-------|
| Cutting width | mm | 2,500 | 2,550 |
| Capacity | m ³ | 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 |

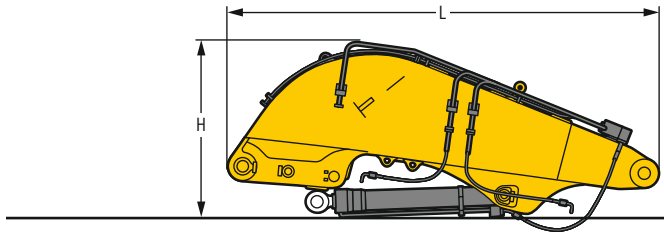


Backhoe buckets (semi-delta cutting edge, teeth Z 100)

HDV

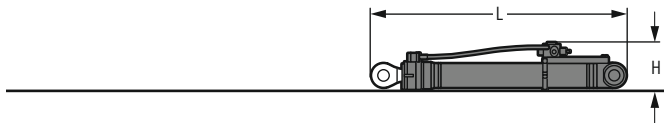
| | | | | |
|---------------|----------------|-------|-------|-------|
| Cutting width | mm | 2,200 | 2,350 | 2,350 |
| Capacity | m ³ | 5.20 | 5.70 | 6.30 |
| L Length | mm | 2,950 | 2,950 | 3,050 |
| H Height | mm | 2,150 | 2,150 | 2,200 |
| Width | mm | 2,250 | 2,400 | 2,400 |
| Weight | kg | 7,200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

Dimensions and weights



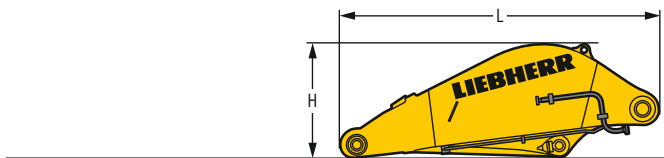
Shovel boom

| | | |
|-------------------------------|----|---------|
| 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 |



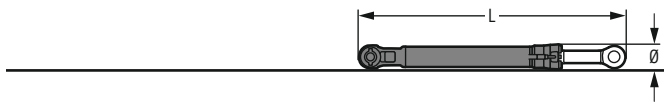
Shovel hoist cylinders (two)

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



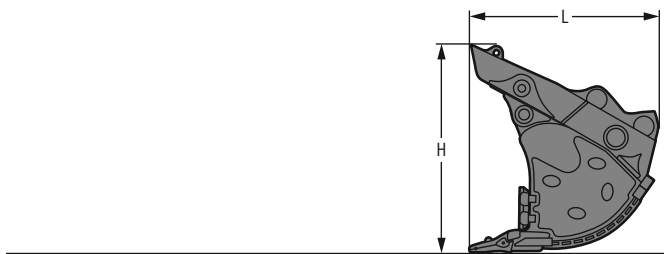
Shovel stick

| | | |
|----------|----|-------|
| 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 | m ³ | 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)
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 - EGR
Fixed geometry turbocharger
Fuel fine filter
Fuel pre-filter and water separator
Fuel priming pump
Intercooler
Power Pack EU Stage IIIA (for select markets)
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
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
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 | + |
| 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 | + |

Upper-carriage

| | |
|--|-----------------|
| 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 | + |
| Filter for hydraulic hammer return flow | + |
| Fixed cab riser 800 mm | + |
| Front right rearview mirror | ● |
| 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

| | |
|---------------------------------|-----------------|
| Engine shut-down with overrun | + |
| Lighting for engine compartment | + ¹⁾ |

Cab

| | |
|--|-----------------|
| 2" seat belt with retractor | ● |
| 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 | + |
| Emergency stop in cab | + |
| FGPS front guard tiltable | + |
| Fire extinguisher | + |
| 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 | + |
| Operator seat Comfort | ● |
| Operator seat Premium | + |
| Overload warning system | + |
| Radio Comfort | + |
| Radio pre-installation | ● |
| Right hand side view monitoring camera | + |
| Roof sun shield | + |
| Roof window wiper | + |
| Rotating beacon on cabin, LED, 1 piece | + |
| Shortcut button on joystick configurable | ● |
| Sun visor | + |

Equipment

| | |
|--|-----------------|
| Boom cylinder rods protection | + |
| Bucket cylinder rod protection | + |
| Bucket Fill Assist | + |
| 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.

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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