

Product Information: Crawler Excavator

R 960 SME

Litronic®



Generation

6

Engine

335 HP / 250 kW

Tier 4 Final

Operating Weight

61,650 kg / 135,920 lb

Bucket Capacity

3.00 m³ – 3.70 yd³

3.92 m³ – 4.84 yd³

LIEBHERR

Experience the Progress

R 960 SME – Super Mass Excavation

Safety

- Panoramic visibility with no obstructions, rear and side view monitoring cameras
- Retractable console for easy and safe access to the cab
- Emergency exit via the rear cab window, whatever the excavator's configuration
- Impact resistant windshield available as an option

Equipment

- Reinforced boom and sticks with protection on the inner face for a longer service life
- Larger diameter bucket and stick cylinders, with kinematic systems adapted to handle higher breakout and digging forces
- Different additional protection kits available as an option, for optimum adaptation to each specific application

Maintenance

- Maintenance points on the cool side of the engine
- Quick and easy cleaning and visual inspection
- Complementary radiators fitted on hinges
- Engine oil, hydraulic oil, fuel and urea (diesel exhaust fluid) levels visible on the display
- Shut-off valve to quickly and easily interrupt the circulation of oil between the tank and the hydraulic system





Comfort

- Spacious, air-conditioned work space
- Airsprung seat with vertical and longitudinal damping
- Userfriendly high resolution 7" colour touchscreen
- New LED lighting as standard
- 3" orange belt

Engine

- New engine that conforms with the US EPA Tier 4 Final exhaust emissions standard
- Automatic engine idling / speed increase, controlled via joystick sensors

Undercarriage

- Higher category excavator undercarriage
- Double grouser, chamfered track pads as standard for heavy duty applications
- Dual-pivot carrier rollers for increased reliability and long-term durability
- Two-tooth sprocket for a longer service life

Technical Data



Engine

Rating	per SAE J1349 335 HP (250 kW) at 1,800 rpm per ISO 9249 340 HP (250 kW) at 1,800 rpm
Torque	2,280 Nm at 1,000 rpm / 1,682 lbf ft at 1,000 rpm
Model	Liebherr D936 A7
Type	6 cylinder in-line
Bore	130 mm / 5.1 in
Stroke	150 mm / 5.9 in
Displacement	10.5 l / 641 in³
Engine operation	4-stroke diesel Common-Rail, monoturbo
Exhaust gas treatment	Tier 4 Final 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	734 l / 194 gal
Urea tank	90 l / 24 gal
Electrical system	
Voltage	24 V
Batteries	2 x 180 Ah/ 12 V
Starter	24 V/7.8 kW
Alternator	Three-phase current 28 V/ 140 A
Engine idling	Sensor controlled
Motor management	Connection to the integrated excavator system controlling via CAN-BUS to the economical utilisation of the service that is available



Hydraulic Controls

The controlling is conducted via the integrated excavator system technology, input and output modules, communicated via the CAN-BUS with the electronic central unit

Power distribution	Via control valves in single block with integrated safety valves
Flow summation	To boom and stick
Closed-loop circuit	For uppercarriage swing drive
Servo circuit	
Equipment and swing	Proportional via joystick levers
Travel	- Proportional control via foot pedals or removable levers - Speed pre-selection
Additional functions	Proportional regulation via foot pedals or mini-joystick



Hydraulic System

Hydraulic pumps	
For equipment and travel drive	Liebherr, variable displacement, swashplate double pump
Max. flow	2 x 380 l/min. / 2 x 100 gpm
Max. pressure	350 bar / 5,076 psi
For swing drive	Reversible, variable displacement, swashplate pump, closed-loop circuit
Max. flow	201 l/min. / 53 gpm
Max. pressure	375 bar / 5,439 psi
Pump regulation	Electro-hydraulic with electronic engine speed sensing regulation, pressure compensation, flow compensation
Hydraulic tank	380 l / 100 gal
Hydraulic system	743 l / 196 gal
Hydraulic oil filter	2 full flow filters in return line with integrated fine filter area (5 µm / 2,500 mesh)
Cooling system	Compact cooler for water cooler, after-cooler, fuel cooler and transmission pump oil, sandwiched with cooler for oil and condenser of air-conditioning with hydrostatically controlled fan drives
MODE selection	Adjustment of engine and hydraulic performance via a mode pre-selector to match application, e.g. for especially economical and environmentally friendly operation or for maximum digging performance and heavy-duty jobs
RPM adjustment	Stepless adjustment of engine output via RPM at each selected mode
Tool Control	20 pre-adjustable pump flows and pressures for add-on attachments



Swing Drive

Drive	Liebherr swashplate motor, shockless and antireaction
Transmission	Liebherr compact planetary reduction gears
Swing ring	Liebherr, sealed race ball bearing swing ring, internal teeth
Swing speed	0 – 5.8 rpm stepless
Swing torque	160 kNm / 118,010 lbf ft
Holding brake	Wet multi-disc (spring applied, pressure released)



Operator's Cab

Cab	Windscreen, totally or partially retractable (only upper part), under cab roof, 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, 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 width, 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, color 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
Noise emission	
ISO 6396	L_{pA} (inside cab) = 72 dB(A)
2000/14/EC	L_{WA} (surround noise) = 106 dB(A)



Undercarriage

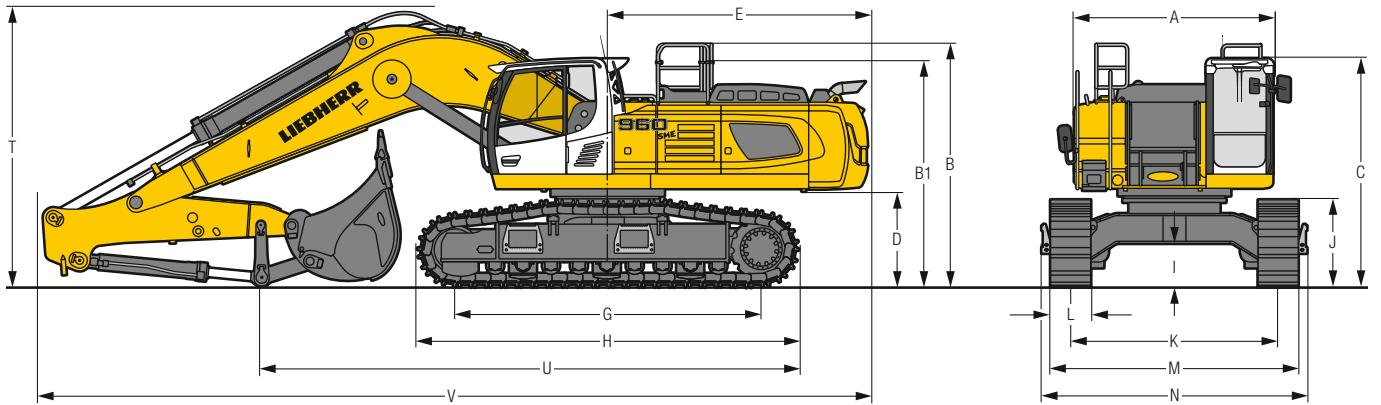
S-HD	Gauge 3,100 mm / 10'2"
Drive	Liebherr swashplate motor with integrated brake valve
Transmission	Liebherr compact planetary reduction gear
Maximum travel speed	Low range 3.0 km/h / 1.9 mph High range 3.6 km/h / 2.2 mph
Drawbar pull on crawler	478 kN / 107,459 lbf
Track components	D8K, maintenance-free
Track rollers/Carrier rollers	9/2
Tracks	Sealed and greased
Track pads	Double grouser
Holding brake	Wet multi-disc (spring applied, pressure released)
Brake valves	Integrated into 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



		mm/ft in		
A	Uppercarriage width	2,970/ 9' 9"		
B	Uppercarriage height	3,640/ 11'11"		
B1	Uppercarriage height (handrails folded)	3,390/ 11' 1"		
C	Cab height	3,420/3,615**/ 11' 3"/11'10" *		
D	Counterweight ground clearance	1,440/ 4' 9"		
E	Rear-end length	3,900/ 12'10"		
G	Wheelbase	4,575/ 15'		
H	Undercarriage length	5,695/ 18' 9"		
I	Undercarriage ground clearance	655/ 2' 2"		
J	Track height	1,315/ 4' 4"		
K	Track gauge	3,100/ 10' 2"		
L	Track pad width	500/ 20"	600/ 24"	750/ 30"
M	Width over tracks	3,710/ 12' 2"	3,710/ 12' 2"	3,850/ 12' 8"
N	Width over steps	3,970/ 13'	3,970/ 13'	3,970/ 13'

* with FOPS top guard

	Stick length m/ft in	Mono boom SME 6.70 m/22' direct mounting mm/ft in
T	Boom height	2.35/ 7'9" SME 2.80/ 9'2" SME 4,200/ 13'9" 4,200/ 13'9"
U	Length on ground	2.35/ 7'9" SME 2.80/ 9'2" SME 8,050/ 26'5" 7,500/ 24'7"
V	Overall length	2.35/ 7'9" SME 2.80/ 9'2" SME 12,400/ 40'8" 12,400/ 40'8"
	Bucket	3.25 m ³ / 4.25 yd³

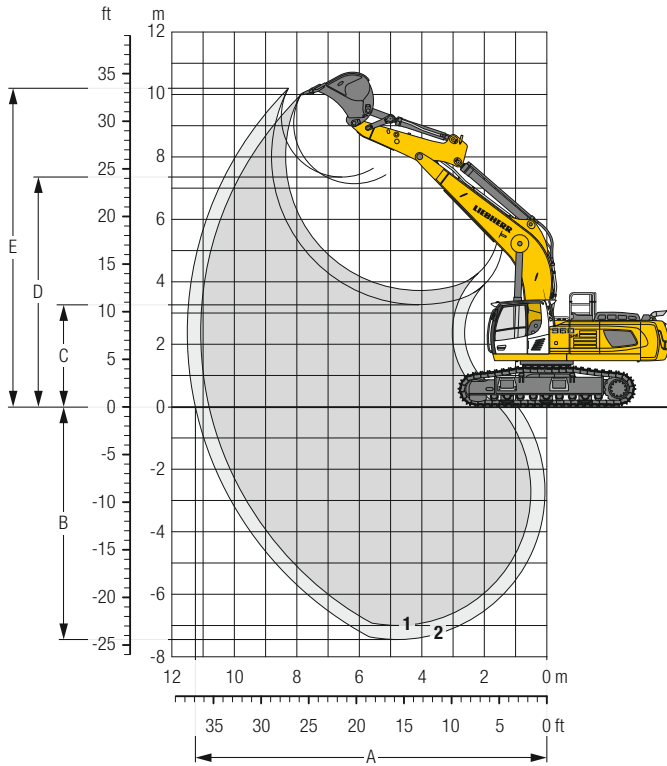
Transport Dimensions

removable elements disassembled

	Stick m	Mono boom SME 6.70 m/22' mm		
Pad width		500/ 20"	600/ 24"	750/ 30"
Transport width		3,970/ 13'	3,970/ 13'	3,970/ 13'
Transport length		12,400/ 40'8"		
Transport height	2.35/ 7'9" SME 2.80/ 9'2" SME	4,200/ 13'9" 4,200/ 13'9"		
Bucket		3.25 m ³ / 4.25 yd³		

Backhoe Bucket

with Mono Boom SME 6.70 m/22' and Counterweight 11.0 t/24,250 lb



Digging Envelope

without quick coupler		1	2
Stick length	m/ft in	2.35/ 7' 9"	2.80/ 9' 2"
		SME	SME
A Max. reach at ground level	m/ft in	10.80/ 35' 5"	11.25/ 36' 11"
B Max. digging depth	m/ft in	7.00/ 23'	7.45/ 24' 5"
C Min. dumping height	m/ft in	3.70/ 12' 2"	3.25/ 10' 8"
D Max. dumping height	m/ft in	7.15/ 23' 5"	7.35/ 24' 1"
E Max. cutting height	m/ft in	10.00/ 32' 10"	10.20/ 33' 6"

Forces

without quick coupler		1	2
Stick digging force (ISO 6015)	kN/ lbf	321/ 72,160	288/ 64,750
Bucket digging force (ISO 6015)	kN/ lbf	350/ 78,680	350/ 78,680
Stick digging force (SAE J1179)	kN/ lbf	302/ 67,890	273/ 61,370
Bucket digging force (SAE J1179)	kN/ lbf	304/ 68,340	304/ 68,340

Operating Weight and Ground Pressure

The operating weight includes the basic machine with counterweight 11.0 t/24,250 lb, mono boom SME 6.70 m/22', stick SME 2.80 m/9'2" and bucket HD 3.25 m³/4.25 yd³ (3,400 kg/7,500 lb).

Undercarriage		S-HD	
Pad width	mm/in	500/ 20"	750/ 30"
Weight	kg/ lb	60,000/ 132,280	61,650/ 135,920
Ground pressure	kg/cm ² / psi	1.21/ 17.2	1.02/ 14.5

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

	Cutting width	Capacity ISO 7451	Weight	S-HD-Undercarriage SME-Equipment (with track pads 750 mm/30")	
				Stick length (m/ft in)	
	mm in	m ³ yd ³	kg lb	2.35 7'9"	2.80 9'2"
HD ¹⁾	2,100 83"	3.25 4.25	3,400 7,500	▲	▲
	2,250 87"	3.50 4.58	3,550 7,830	▲	■
	2,100 83"	3.70 4.84	3,500 7,720	■	■
HDV ²⁾	1,950 77"	3.00 3.92	3,800 8,380	▲	▲
	2,100 83"	3.25 4.25	4,000 8,820	▲	■
	2,100 83"	3.50 4.58	4,200 9,260	■	■

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

¹⁾ HD bucket with teeth Z 70 (appropriate for materials above classification 6, according to VOB, Section C, DIN 18300)

²⁾ HDV bucket with teeth Z 70 (appropriate for materials above classification 6, according to VOB, Section C, DIN 18300)

Other buckets available upon request

Max. material weight ▲ = ≤ 2.0 t/m³/3,400 lb/yd³, ■ = ≤ 1.8 t/m³/3,000 lb/yd³, ■ = ≤ 1.5 t/m³/2,500 lb/yd³

Lift Capacities

with Mono Boom SME 6.70 m/22', Counterweight 11.0 t/24,250 lb and Track Pads 750 mm/30"

Stick SME 2.35 m/7'9"

Under-carriage	Height	3.0 m 10 ft		4.5 m 15 ft		6.0 m 20 ft		7.5 m 25 ft		9.0 m 30 ft		Max. reach m ft in	
		t	lb	t	lb	t	lb	t	lb	t	lb		
S-HD	9.0 m 30 ft	t	lb									11.7* 11.7* 6.3	
	7.5 m 25 ft	t	lb					11.0*	11.0*			11.0* 11.0* 7.6	
	6.0 m 20 ft	t	lb			12.5*	12.5*	11.1*	11.1*			10.8* 10.8* 8.5	
	4.5 m 15 ft	t	lb		20.5*	14.4*	14.4*	11.9*	11.9*			10.4 10.8* 9.0	
	3.0 m 10 ft	t	lb			16.3*	16.3*	12.9*	12.9*	10.1	11.1*	9.7 11.0* 9.2	
	1.5 m 5 ft	t	lb			17.1	17.5*	12.6	13.6*	9.9	11.4*	9.6 11.2* 9.2	
	0 m 0 ft	t	lb			16.7	17.8*	12.3	13.9*			9.9 11.4* 8.9	
	-1.5 m -5 ft	t	lb	19.8*	19.8*	22.2*	22.2*	16.7	17.2*	12.3	13.5*		10.8 11.7* 8.4
	-3.0 m -10 ft	t	lb	45.3*	45.3*	48.3*	48.3*	36.1	37.2*	26.6	29.1*		23.8 25.7* 27.5**
	-4.5 m -15 ft	t	lb	52.9*	52.9*	42.6*	42.6*	33.2*	33.2*				11.0* 11.0* 6.0

Stick SME 2.80 m/9'2"

Under-carriage	Height	3.0 m 10 ft		4.5 m 15 ft		6.0 m 20 ft		7.5 m 25 ft		9.0 m 30 ft		Max. reach m ft in	
		t	lb	t	lb	t	lb	t	lb	t	lb		
S-HD	9.0 m 30 ft	t	lb									10.1* 10.1* 6.9	
	7.5 m 25 ft	t	lb					10.1*	10.1*			9.2* 9.2* 8.1	
	6.0 m 20 ft	t	lb					10.5*	10.5*			10.5* 10.5* 8.9	
	4.5 m 15 ft	t	lb		18.6*	18.6*	13.6*	13.6*	11.3*	11.3*	10.2*	10.2*	8.9* 8.9* 9.4
	3.0 m 10 ft	t	lb			15.6*	15.6*	12.4*	12.4*	10.1	10.7*	9.1 9.2* 9.7	
	1.5 m 5 ft	t	lb			13.9*	13.9*	17.1*	17.1*	12.6	13.3*	8.9 9.8* 9.6	
	0 m 0 ft	t	lb			23.3*	23.3*	16.7	17.7*	12.3	13.8*	9.1 10.8* 9.4	
	-1.5 m -5 ft	t	lb	20.2*	20.2*	23.0*	23.0*	16.6	17.4*	12.2	13.6*		9.9 11.0* 8.8
	-3.0 m -10 ft	t	lb	45.7*	45.7*	50.0*	50.0*	35.8	37.6*	26.3	29.4*		21.9 24.3* 28'11"
	-4.5 m -15 ft	t	lb	59.4*	59.4*	45.0*	45.0*	34.5*	34.5*	26.4*	26.4*		11.2* 11.2* 7.9

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

The load values are quoted in tons (t) / lb x 1,000 at stick end (without bucket), and may be swung 360° on firm and even ground. Adjacent values are valid for the undercarriage when in the longitudinal position. Capacities are valid for 750 mm/30" wide track pads. Indicated loads are based on ISO 10567 standard and do not exceed 75% of tipping or 87% of hydraulic capacity (indicated via *). Without bucket cylinder, link and lever the lift capacities will increase by 950 kg/2,090 lb. Lifting capacity of the excavator is limited by machine stability and hydraulic capacity.

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
- Centralized lubrication system (automatic)
- Counterweight heavy 11.0 t / **24,250 lb**
- DEF tank filling indicator
- DEF tank lockable access hatch
- Engine hood with gas spring opening
- Extended tool set including tool box
- Handrails
- Lockable fuel tank cap with padlock
- Lockable service doors
- Lockable storage box
- Main switch, manual, lockable
- Protection grid on radiator fan
- Sound insulation
- Swing-out radiators

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 – SCR
- Fixed geometry turbocharger
- Fuel fine filter
- Fuel pre-filter and water separator
- Fuel priming pump
- Intercooler
- Power Pack US EPA Tier 4 Final
- Stepless adjustable engine speed

Operator's Cab

- 7" multifunction color touchscreen
- Air conditioning, automatic, tri-zone, controlled via display
- Armrests adjustable in width, height and inclination
- Bottle holder
- Cab air filters housing, accessible from ground level
- 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
- Interior lighting
- Laminated right hand side window
- LIDAT Plus (Liebherr data transfer system)*
- Mechanical hour meters, visible from ground level
- Movement priority between swing and boom, adjustable via touchscreen
- Rain hood over front window opening
- Rearview mirror
- Rear view monitoring camera
- 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 4 pieces	+
Chain guide full length	+
Reinforced cover and base plate for undercarriage center section	+
Special painting	+
Steps	•
Track pads double grouser 500 mm/ 20" , chamfered	+
Track pads double grouser 600 mm/ 24" , chamfered	•
Track pads double grouser 750 mm/ 30" , chamfered	+

Uppercarriage

Air pre-filter with cyclonical dust trap	+
Boxing ring	+
Catwalk tiltable front left	+
Catwalks tiltable left and right	+
Centralized lubrication system (automatic)	•
Centralized lubrication system (manual)	+
Electric socket on uppercarriage (24 V)	+
Headlight on uppercarriage, lateral left, LED+, 1 piece	+ ¹⁾
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⁾	+
Pre-heating system for fuel	+
Radiator fine mesh protection grid	+
Reversible fan drive	+
Skyview 360°	+
Special painting	+
Swing ring and lubrication hoses protection	+
Tank refilling pump fuel	+
Uppercarriage bottom and side protection	+
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⁾	+

Operator's Cab

3" seat belt with retractor, orange color	•
4-points seat belt	+
Acoustic travel alarm deactivatable	+
Auxiliary heater programmable	+
Bottom windscreen wiper	+
Cool box (12 V)	+
Dark tinted windows	+
Electrically adjustable and heated outside rear-view mirrors	+
Electronic immobilizer	+
Emergency stop in cab	+
FGPS front guard	+
FGPS front guard tiltable	+
Filter for hydraulic hammer return flow	+
Fire extinguisher	+
First-aid box	+
Follow me home	+
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)	+
Impact resistant one-piece windscreen	+
Impact resistant roof window	+
Integral protection guard	+
Laminated roof window	•
Lighting for cabin access ¹⁾	+
Luminosity control (LED+ headlights) ¹⁾	+
Medium pressure circuit	+
Mini-joysticks proportional	•
Movement restriction for boom	+
Movement restriction for stick	+
Operator seat Comfort	•
Operator seat Premium	+
Overload warning system	+
Radio Comfort	+
Radio pre-installation	•
Retractable laminated two-piece windscreen	•
Roof sun shield	+
Roof window wiper	+
Rotating beacon on cabin, LED, 1 piece	+
Seat belt reminder	+
Shortkey button on joystick configurable	•
Special painting	+
Sun visor	+
Windscreen bottom protection grid	+

Equipment

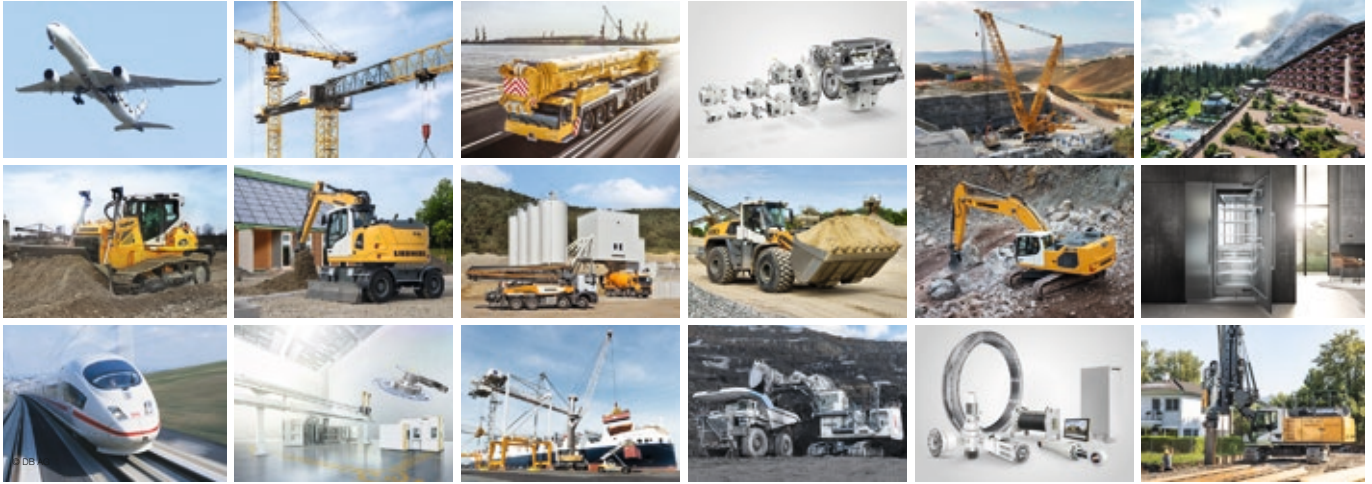
Boom cylinder rods protection	+
Bucket cylinder rod protection	+
Centralized lubrication extended for connecting link	+
Floating boom	+
Headlights on boom, LED, 2 pieces, protections included	• ¹⁾
Headlights on boom, LED+, 2 pieces, protections included	+ ¹⁾
Mono boom SME 6.70 m/ 22'	+
Preparation for ripper tooth	+
Quick coupler SWA 77 hydraulic	+
Special painting	+
Stick SME 2.35 m/ 7'9"	+
Stick SME 2.80 m/ 9'2"	+

• = Standard, + = Option

¹⁾ Equipment not individually available, but only as predefined lighting packages
Non-exhaustive list, please contact us for further information.

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

The Liebherr Group of Companies



Diverse Product Range

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

Exceptional Customer Benefit

Every product line provides a complete range of models in many different versions. With both their technical excellence and superior quality, Liebherr products offer customers the highest benefits in practical applications.

State-of-the-art Technology

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

Worldwide and Family-Owned

Hans Liebherr founded the Liebherr family company in 1949. Since that time, the enterprise has steadily grown to a group of more than 130 companies with more than 48,000 employees located on all continents. The corporate headquarters of the Group is Liebherr-International AG in Bulle, Switzerland. The Liebherr family is the sole owner of the company.

www.liebherr.us

WARNING

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

WARNING

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

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

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