

# Product Information: Crawler Excavator

## R 945

Litronic®

### Generation

8

### Engine

220 kW / 299 HP  
Stage V

### Operating Weight

41,400 – 47,250 kg

### Bucket Capacity

2.00 – 3.00 m<sup>3</sup>



# LIEBHERR

# Experience the Progress

## R 945

### Safety

- Panoramic visibility with no obstructions and camera on the rear and the right side for enhanced safety
- Tiltable console for easy and safe access to cab
- ROPS-certified cab structure
- Emergency exit via the rear cab window
- Right window and windshield in laminated and tinted glass

### Equipment

- Large choice of types and lengths of equipment
- Safety check valves for hoist and stick cylinders (option)
- Longer lifespan of components and higher productivity thanks to automatic centralised lubrication system

### Maintenance

- Innovative servicing concept, with service points accessible from ground level
- Engine oil, hydraulic oil, fuel and urea (diesel exhaust fluid) levels visible on the display
- New concept for lateral access to uppercarriage and large maintenance platform





### Comfort

- Spacious, air-conditioned work space
- Airsprung seat with vertical and longitudinal suspension
- Easy-to-use high resolution 7" colour touchscreen
- Completely retractable front cab window
- New LED lighting as standard

### Engine

- New engine that conforms with the Stage V European exhaust emissions standard
- Automatic engine idling / speed increase

### Undercarriage

- Choice of a robust x-shaped undercarriage and a variable track undercarriage with integrated eyes for secure transport
- Easy maintenance
- Maintenance-free track chains and track rollers with lifetime lubrication

# Technical Data



## Engine

<b>Rating per ISO 9249</b>	220 kW (299 HP) at 1,800 RPM
<b>Torque</b>	1,421 Nm at 1,350 RPM
<b>Model</b>	Liebherr D944 A7-25
<b>Type</b>	4 cylinder in-line
Bore	130 mm
Stroke	150 mm
Displacement	8.0 l
<b>Engine operation</b>	4-stroke diesel Common-Rail Turbo-charged and after-cooler
<b>Exhaust gas treatment</b>	Stage V DOC + SCR Filter Passive regeneration by thermo management
<b>Cooling system</b>	Water-cooled and oil cooler, after-cooled and fuel cooled
<b>Air cleaner</b>	Dry-type air cleaner with pre-cleaner
<b>Fuel tank</b>	729 l
<b>Urea tank</b>	90 l
<b>Electrical system</b>	
Voltage	24 V
Batteries	2 x 135 Ah/ 12 V
Alternator	Three-phase current 28 V/140 A
Engine idling	Sensor controlled



## Hydraulic Controls

<b>Power distribution</b>	Via control valves, simultaneous and independent actuation of undercarriage, swing drive and equipment
<b>Electric servo circuit</b>	Electro-hydraulic control
Equipment and swing	Proportional via joystick levers
Travel	– Proportional control via foot pedals or removable levers – Automatic or manual speed adjustment
<b>Additional functions</b>	Proportional regulation via foot pedals or mini-joystick



## Hydraulic System

<b>Hydraulic system</b>	Positive Control hydraulic system. Demand-based, double independent pump flows Features high system dynamics and sensitivity provided by integrated system controlling Independent circuit for rotation
<b>Hydraulic pumps</b>	
For equipment and travel drive	Liebherr, variable displacement, swashplate double pump
Max. flow	2 x 315 l/min.
Max. pressure	380 bar
For swing drive	Swashplate pump, closed-loop circuit
Max. flow	205 l/min.
Max. pressure	400 bar
<b>Pump management</b>	Electronic management synchronous to the control block
<b>Hydraulic tank</b>	239 l
<b>Hydraulic system</b>	max. 475 l
<b>Hydraulic oil filter</b>	1 main return filter with integrated partial micro filtration (10 µm)
<b>Cooling system</b>	Compact cooler, consisting of a water cooler, with hydraulic oil cooler, gearbox oil cooler, fuel cooler and after-cooler cores and hydrostatically driven fan
<b>MODE selection</b>	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
<b>Engine speed and performance setting</b>	Stepless adjustment of engine output and hydraulic power via engine speed



## Swing Drive

<b>Drive</b>	Liebherr swashplate motor with integrated brake valve and torque control
<b>Transmission</b>	Liebherr compact planetary reduction gears
<b>Swing ring</b>	Liebherr, sealed race ball bearing swing ring, internal teeth
<b>Swing speed</b>	0 – 8.6 RPM stepless
<b>Swing torque</b>	117 kNm
<b>Holding brake</b>	Wet multi-disc (spring applied, pressure released)



## Operator's Cab

<b>Cab</b>	ROPS safety cab structure (roll-over protection system according to ISO 12117-2:2008) with windscreen, totally or partially retractable (only upper part), under cab roof, 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, laminated right hand side and roof windows, all windows tinted, separate extensible window shades for the sun-roof window and windscreen, cigarette lighter and 24 V plug, 12 V plug, cup holder, mobile phone storage net
<b>Operator's seat</b>	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
<b>Arm consoles</b>	Tilttable console left, oscillating with seat
<b>Operation and displays</b>	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
<b>Air-conditioning</b>	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 <sub>2</sub> equivalent	1.80 t
<b>Vibration emission**</b>	
Hand/arm vibrations	< 2.5 m/s <sup>2</sup> , according with ISO 5349-1:2001
Whole-body vibrations	< 0.5 m/s <sup>2</sup>
Measuring inaccuracy	According with standard EN 12096:1997
<b>Noise emission</b>	
ISO 6396	L <sub>pA</sub> (inside cab) = 72 dB(A)
2000/14/EC	L <sub>WA</sub> (surround noise) = 106 dB(A)



## Undercarriage

<b>Versions</b>	
S-HD	Gauge 2,890 mm
LC-V	Gauge 2,390 mm/2,890 mm
<b>Drive</b>	Liebherr swashplate motor with brake valves on both sides
<b>Transmission</b>	Liebherr planetary reduction gear
<b>Maximum travel speed</b>	Low range 2.9 km/h High range 4.6 km/h
<b>Drawbar pull on crawler</b>	363 kN
<b>Track components</b>	D7G, maintenance-free
<b>Track rollers / Carrier rollers</b>	S-HD: 10/2 LC-V: 10/3
<b>Tracks</b>	Sealed and greased
<b>Track pads</b>	Triple grouser
<b>Holding brake</b>	Wet multi-disc (spring applied, pressure released)
<b>Brake valves</b>	Integrated into travel motor
<b>Lashing eyes</b>	Integrated



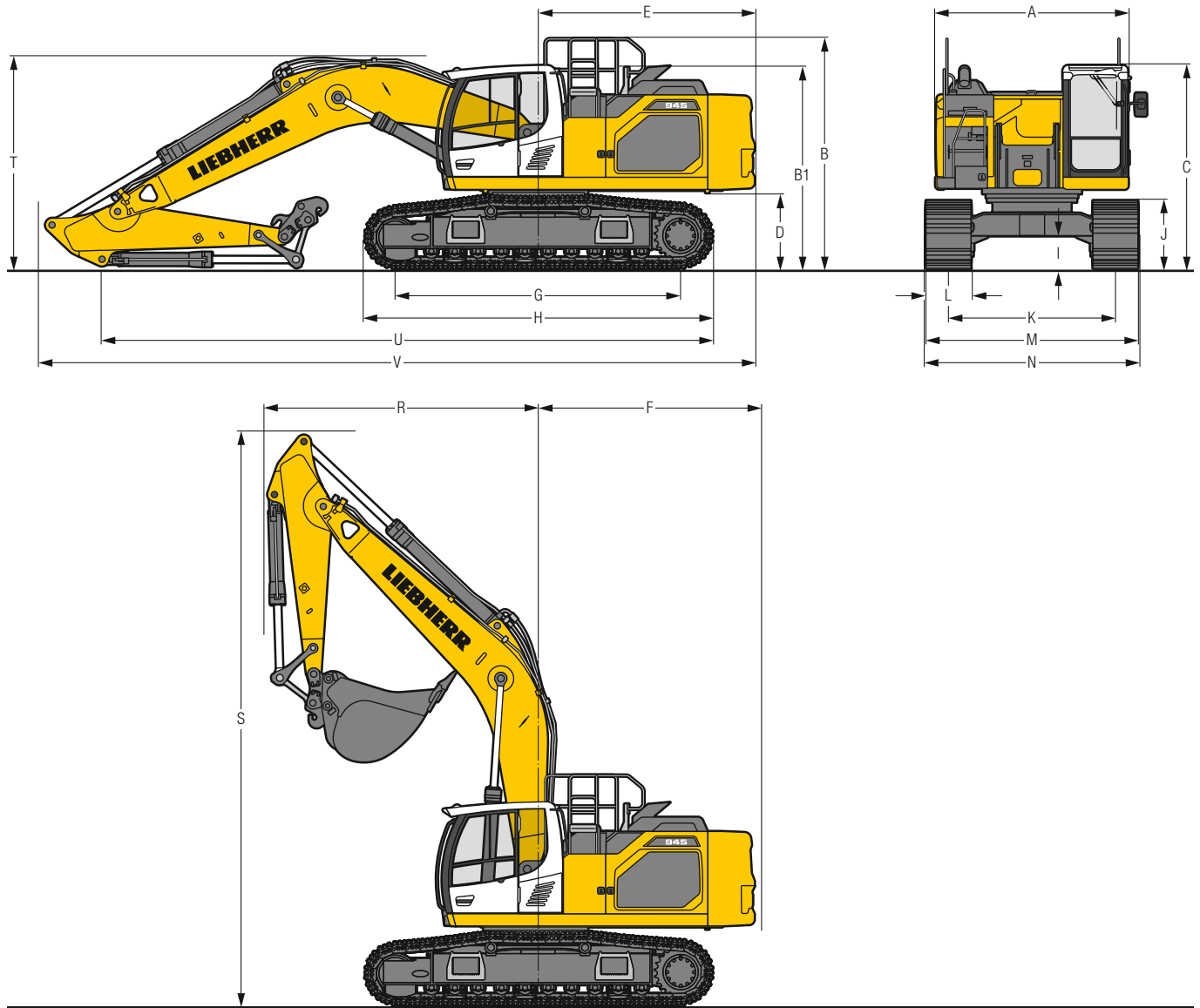
## Equipment

<b>Type</b>	Combination of resistant steel plates and cast steel components
<b>Hydraulic cylinders</b>	Liebherr cylinders with seal and guidance systems and shock protection
<b>Bearings</b>	Sealed, low maintenance
<b>Lubrication</b>	Liebherr central lubrication system
<b>Hydraulic connections</b>	Pipes and hoses equipped with SAE split-flange connections
<b>Buckets</b>	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	LC-V	mm
<b>A</b> Uppercarriage width		2,990**		2,990**
<b>B</b> Uppercarriage height		3,635		3,760
<b>B1</b> Uppercarriage height (handrails folded)		3,195		3,320
<b>C</b> Cab height		3,215		3,340
<b>D</b> Counterweight ground clearance		1,240		1,365
<b>E</b> Rear-end length		3,350		3,350
<b>F</b> Tail swing radius		3,450		3,450
<b>G</b> Wheelbase		4,400		4,400
<b>H</b> Undercarriage length		5,365		5,350
<b>I</b> Undercarriage ground clearance		550		740
<b>J</b> Track height		1,145		1,185
<b>K</b> Track gauge		2,890		2,390/2,890
<b>L</b> Track pad width	600 750 900		600 750 900	
<b>M</b> Width over tracks	3,490 3,640 3,790		2,990/3,490 3,140/3,640 3,290/3,790	
<b>N</b> Width over steps	3,695* 3,695* 3,845*		3,200/3,700* 3,200/3,700* 3,350/3,850*	

\* width with removable steps

\*\* without door stop device and spacer

	Stick length m	Mono boom 6.45 m with quick coupler			Mono boom straight 7.00 m with quick coupler			Two-piece boom 6.70 m with quick coupler			Mono boom SME 6.15 m direct mounting		
		S-HD	mm		LC-V	S-HD	mm		LC-V	S-HD	mm		LC-V
<b>R</b> Front swing radius	2.60		4,250			3,650			2,900			-	
	2.90		4,250			3,650			3,000			-	
	3.25		4,250			3,650			3,100			-	
	3.95		4,250			3,500			3,100			-	
	2.15 SME		-			-			-			4,050	
	2.60 SME		-			-			-			4,050	
<b>S</b> Height with boom up		8,950		9,050	10,050		10,150	10,000		10,100	8,750		8,850
<b>T</b> Boom height	2.60	3,350		3,400	3,200		3,250	3,050		3,050	-		-
	2.90	3,350		3,450	3,250		3,300	3,150		3,150	-		-
	3.25	3,350		3,450	3,350		3,400	3,300		3,300	-		-
	3.95	3,400		3,450	3,450		3,500	3,200		3,200	-		-
	2.15 SME	-		-	-		-	-		-	3,550/3,350*		3,600/3,400*
	2.60 SME	-		-	-		-	-		-	3,900/3,350*		3,950/3,450*
<b>U</b> Length on ground	2.60	9,450		9,400	7,350		7,350	7,050		7,000	-		-
	2.90	9,150		9,100	7,100		7,100	6,800		6,750	-		-
	3.25	8,850		8,800	6,850		6,850	6,800		6,850	-		-
	3.95	8,050		8,000	6,150		6,100	8,300		8,250	-		-
	2.15 SME	-		-	-		-	-		-	7,050/9,550*		6,850/9,500*
	2.60 SME	-		-	-		-	-		-	6,850/9,100*		6,850/9,100*
<b>V</b> Overall length	2.60		11,000			11,800			11,450			-	
	2.90		11,000			11,800			11,450			-	
	3.25		11,000			11,800			11,200			-	
	3.95		11,000			11,800			11,200			-	
	2.15 SME		-			-			-			10,900/10,800*	
	2.60 SME		-			-			-			10,900/10,800*	
Bucket			2.00 m <sup>3</sup>			1.50 m <sup>3</sup>			1.75 m <sup>3</sup>			2.50 m <sup>3</sup>	

\* without bucket

## Transport Dimensions removable elements disassembled

	Undercarriage / Stick m	Mono boom 6.45 m			Mono boom straight 7.00 m			Two-piece boom 6.70 m			Mono boom SME 6.15 m		
		mm			mm			mm			mm		
Pad width		600	750	900	600	750	900	600	750	900	600	750	900
Transport width	S-HD	3,695	3,695	3,790	3,695	3,695	3,790	3,695	3,695	3,790	3,695	3,695	3,790
	LC-V	3,200	3,200	3,290	3,200	3,200	3,290	3,200	3,200	3,290	3,200	3,200	3,290
Transport length	S-HD	11,000			11,800			11,200 <sup>1)</sup> /11,450 <sup>2)</sup>			10,900/10,800*		
	LC-V	11,000			11,800			11,200 <sup>1)</sup> /11,450 <sup>2)</sup>			10,900/10,800*		
Transport height	2.60	3,350 <sup>3)</sup> /3,400 <sup>4)</sup>			3,340			3,340			-		
	2.90	3,350 <sup>3)</sup> /3,450 <sup>4)</sup>			3,340			3,340			-		
	3.25	3,350 <sup>3)</sup> /3,450 <sup>4)</sup>			3,350 <sup>3)</sup> /3,400 <sup>4)</sup>			3,340			-		
	3.95	3,400 <sup>3)</sup> /3,450 <sup>4)</sup>			3,450 <sup>3)</sup> /3,500 <sup>4)</sup>			3,340			-		
	2.15 SME	-			-			-			3,550 <sup>3)</sup> /3,350 <sup>3)</sup>		
	2.60 SME	-			-			-			3,600 <sup>4)</sup> /3,400 <sup>4)</sup>		
		-			-			-			3,900 <sup>3)</sup> /3,350 <sup>3)</sup>		
		-			-			-			3,950 <sup>4)</sup> /3,450 <sup>4)</sup>		

\* without bucket

<sup>1)</sup> with sticks 2.60 m and 2.90 m

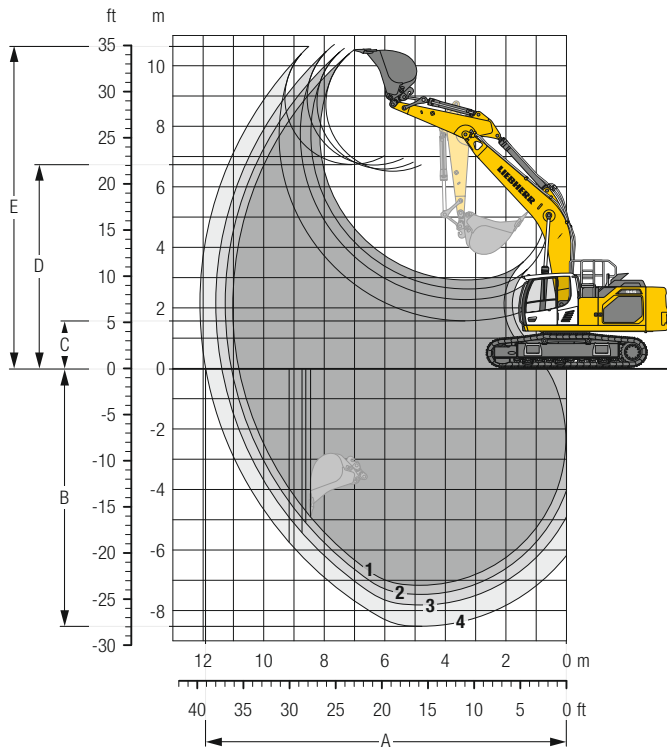
<sup>2)</sup> with sticks 3.25 m and 3.95 m

<sup>3)</sup> with S-HD-Undercarriage

<sup>4)</sup> with LC-V-Undercarriage

# Backhoe Bucket

with Mono Boom 6.45 m and Counterweight 8.4 t



## Digging Envelope

with quick coupler	1	2	3	4	
Stick length	m	2.60	2.90	3.25	3.95
A Max. reach at ground level	m	10.82	11.07	11.39	11.92
B Max. digging depth	m	7.17	7.47	7.82	8.52
C Min. dumping height	m	2.92	2.62	2.27	1.57
D Max. dumping height	m	6.51	6.59	6.72	6.73
E Max. cutting height	m	10.51	10.57	10.70	10.63

## Forces

without quick coupler	1	2	3	4	
Stick digging force (ISO 6015)	kN	212	198	183	159
Bucket digging force (ISO 6015)	kN	238	238	238	238
Stick digging force (SAE J1179)	kN	202	189	176	154
Bucket digging force (SAE J1179)	kN	210	210	210	210

## Operating Weight and Ground Pressure

The operating weight includes the basic machine with counterweight 8.4 t, mono boom 6.45 m, stick 3.25 m, quick coupler SWA 66 and bucket 2.00 m<sup>3</sup> (1,690 kg).

Undercarriage		S-HD		
Pad width	mm	600	750	900
Weight	kg	41 600	42 850	43 700
Ground pressure	kg/cm <sup>2</sup>	0.73	0.60	0.51

Undercarriage		LC-V		
Pad width	mm	600	750	900
Weight	kg	44,000	45,250	46,100
Ground pressure	kg/cm <sup>2</sup>	0.77	0.64	0.54

Optional: counterweight 9.4 t

(counterweight 9.4 t increases the operating weight by 1,000 kg and ground pressure by 0.02 kg/cm<sup>2</sup>) see load tables on page 17



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

	Cutting width mm	Capacity ISO 7451 m <sup>3</sup>	Weight <sup>3)</sup> kg	Weight <sup>4)</sup> kg	S-HD-Undercarriage (with track pads 600 mm)								LC-V-Undercarriage (with track pads 600 mm)							
					Stick length (m)								Stick length (m)							
					without quick coupler				with quick coupler				without quick coupler				with quick coupler			
					2.60	2.90	3.25	3.95	2.60	2.90	3.25	3.95	2.60	2.90	3.25	3.95	2.60	2.90	3.25	3.95
<b>with counterweight 8.4 t</b>																				
STD <sup>1)</sup>	1,650	2.00	1,730	1,690	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
	1,600	2.15	1,770	1,730	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
	1,650	2.25	1,810	1,770	▲	▲	▲	■	▲	▲	▲	▲	■	▲	▲	▲	▲	▲	▲	▲
	1,800	2.50	1,900	1,860	▲	▲	■	▲	▲	▲	■	▲	▲	▲	■	▲	▲	▲	▲	■
	1,800	2.75	1,970	1,930	▲	■	▲	■	▲	■	▲	■	▲	▲	■	▲	▲	■	▲	▲
	1,850	3.00	2,020	1,980	■	▲	■	△	■	▲	■	△	▲	■	▲	■	■	▲	■	
HD <sup>2)</sup>	1,650	2.00	1,830	1,790	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
	1,600	2.15	1,870	1,830	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
	1,650	2.25	1,910	1,870	▲	▲	▲	■	▲	▲	▲	■	▲	▲	▲	▲	▲	▲	▲	▲
	1,800	2.50	2,000	1,960	▲	▲	■	▲	▲	▲	■	▲	▲	▲	■	▲	▲	▲	▲	■
	1,800	2.75	2,080	2,040	▲	▲	▲	■	▲	■	▲	△	▲	▲	■	▲	▲	▲	■	■
	1,850	3.00	2,130	2,090	■	▲	■	△	■	▲	■	△	■	■	▲	■	■	▲	△	
<b>with counterweight 9.4 t</b>																				
STD <sup>1)</sup>	1,650	2.00	1,730	1,690	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
	1,600	2.15	1,770	1,730	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
	1,650	2.25	1,810	1,770	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
	1,800	2.50	1,900	1,860	▲	▲	▲	■	▲	▲	▲	■	▲	▲	▲	■	▲	▲	▲	■
	1,800	2.75	1,970	1,930	▲	▲	■	▲	▲	▲	■	▲	▲	▲	■	▲	▲	▲	▲	■
	1,850	3.00	2,020	1,980	▲	■	▲	■	▲	■	▲	■	▲	▲	■	▲	▲	■	▲	
HD <sup>2)</sup>	1,650	2.00	1,830	1,790	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
	1,600	2.15	1,870	1,830	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
	1,650	2.25	1,910	1,870	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
	1,800	2.50	2,000	1,960	▲	▲	■	▲	▲	▲	■	▲	▲	▲	■	▲	▲	▲	▲	■
	1,800	2.75	2,080	2,040	▲	▲	▲	■	▲	■	▲	▲	▲	▲	■	▲	▲	▲	▲	■
	1,850	3.00	2,130	2,090	▲	■	▲	■	■	▲	■	▲	▲	■	▲	▲	■	▲	■	

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

<sup>1)</sup> Standard bucket with teeth Z 50

<sup>2)</sup> HD bucket with teeth Z 50

<sup>3)</sup> Bucket for direct mounting

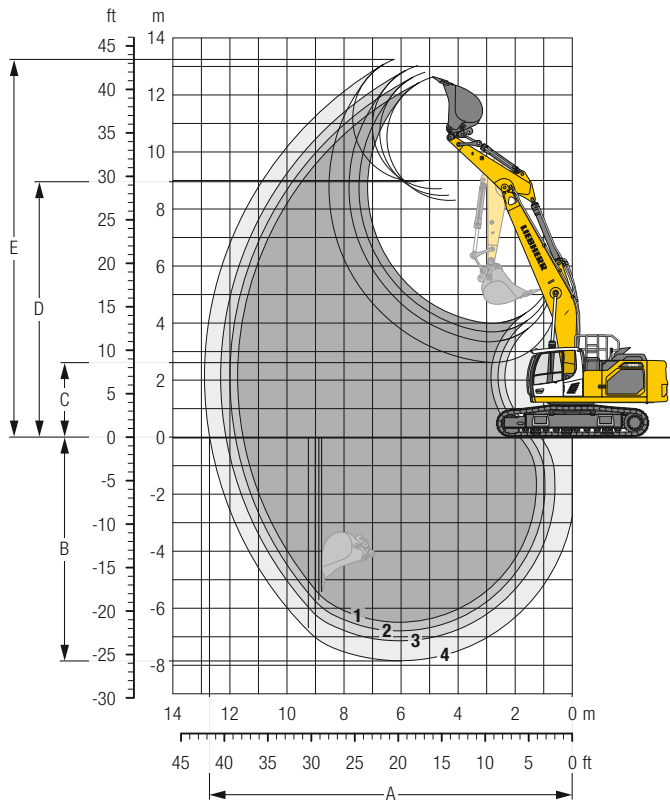
<sup>4)</sup> Bucket for mounting to quick coupler

Other buckets available upon request

Max. material weight ▲ = ≤ 2.0 t/m<sup>3</sup>, ■ = ≤ 1.8 t/m<sup>3</sup>, ▲ = ≤ 1.65 t/m<sup>3</sup>, ■ = ≤ 1.5 t/m<sup>3</sup>, △ = ≤ 1.2 t/m<sup>3</sup>, – = not authorised

# Backhoe Bucket

with Mono Boom Straight 7.00 m and Counterweight 8.4 t



## Digging Envelope

with quick coupler		1	2	3	4
Stick length	m	2.60	2.90	3.25	3.95
A Max. reach at ground level	m	11.54	11.81	12.14	12.72
B Max. digging depth	m	6.49	6.79	7.14	7.84
C Min. dumping height	m	4.00	3.69	3.34	2.63
D Max. dumping height	m	8.30	8.47	8.70	8.97
E Max. cutting height	m	12.63	12.79	13.02	13.25

## Forces

without quick coupler		1	2	3	4
Stick digging force (ISO 6015)	kN	212	198	183	159
Bucket digging force (ISO 6015)	kN	238	238	238	238
Stick digging force (SAE J1179)	kN	202	189	176	154
Bucket digging force (SAE J1179)	kN	210	210	210	210

## Operating Weight and Ground Pressure

The operating weight includes the basic machine with counterweight 8.4 t, mono boom straight 7.00 m, stick 3.25 m, quick coupler SWA 66 and bucket 1.50 m<sup>3</sup> (1,490 kg).

Undercarriage		S-HD		
Pad width	mm	600	750	900
Weight	kg	41,500	42,750	43,600
Ground pressure	kg/cm <sup>2</sup>	0.73	0.60	0.51

Undercarriage		LC-V		
Pad width	mm	600	750	900
Weight	kg	43,900	45,150	46,000
Ground pressure	kg/cm <sup>2</sup>	0.77	0.64	0.54

Optional: counterweight 9.4 t

(counterweight 9.4 t increases the operating weight by 1,000 kg and ground pressure by 0.02 kg/cm<sup>2</sup>) see load tables on page 19

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

	Cutting width mm	Capacity ISO 7451 m <sup>3</sup>	Weight <sup>2)</sup> kg	Weight <sup>4)</sup> kg	S-HD-Undercarriage (with track pads 600 mm)								LC-V-Undercarriage (with track pads 600 mm)							
					Stick length (m)								Stick length (m)							
					without quick coupler				with quick coupler				without quick coupler				with quick coupler			
					2.60	2.90	3.25	3.95	2.60	2.90	3.25	3.95	2.60	2.90	3.25	3.95	2.60	2.90	3.25	3.95
<b>with counterweight 8.4 t</b>																				
STD <sup>1)</sup>	1,650	2.00	1,730	1,690	▲	▲	▲	■	▲	▲	■	▲	▲	▲	■	▲	▲	▲	■	▲
	1,600	2.15	1,770	1,730	▲	▲	■	▲	▲	▲	■	■	▲	▲	▲	■	▲	▲	▲	▲
	1,650	2.25	1,810	1,770	▲	■	■	■	▲	■	▲	■	▲	▲	■	▲	▲	■	■	▲
	1,800	2.50	1,900	1,860	■	▲	■	△	■	▲	■	△	▲	■	■	■	■	▲	▲	△
	1,800	2.75	1,970	1,930	▲	■	△	△	■	■	△	-	■	▲	■	△	▲	▲	■	△
1,850	3.00	2,020	1,980	■	△	△	-	△	△	△	-	▲	■	△	△	■	■	△	-	
HD <sup>2)</sup>	1,650	2.00	1,830	1,790	▲	▲	▲	▲	▲	▲	■	▲	▲	▲	▲	▲	▲	▲	▲	■
	1,600	2.15	1,870	1,830	▲	▲	■	■	▲	▲	■	■	▲	▲	▲	▲	▲	▲	■	▲
	1,650	2.25	1,910	1,870	▲	■	■	■	▲	■	▲	△	▲	▲	■	▲	▲	▲	■	■
	1,800	2.50	2,000	1,960	■	▲	■	△	▲	▲	■	△	▲	■	■	■	■	■	▲	△
	1,800	2.75	2,080	2,040	▲	■	△	△	■	■	△	-	▲	▲	■	△	▲	■	△	△
1,850	3.00	2,130	2,090	■	△	△	-	△	△	△	-	■	■	△	△	■	△	△	-	
<b>with counterweight 9.4 t</b>																				
STD <sup>1)</sup>	1,650	2.00	1,730	1,690	▲	▲	▲	▲	▲	▲	▲	■	▲	▲	▲	▲	▲	▲	▲	▲
	1,600	2.15	1,770	1,730	▲	▲	▲	■	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	■
	1,650	2.25	1,810	1,770	▲	■	▲	▲	▲	▲	■	▲	▲	▲	■	▲	▲	▲	▲	■
	1,800	2.50	1,900	1,860	▲	■	▲	■	▲	■	▲	△	▲	▲	■	▲	▲	■	■	▲
	1,800	2.75	1,970	1,930	■	▲	■	△	▲	▲	■	△	■	■	▲	■	■	■	▲	△
1,850	3.00	2,020	1,980	▲	■	△	△	■	■	△	△	■	▲	■	△	▲	▲	■	△	
HD <sup>2)</sup>	1,650	2.00	1,830	1,790	▲	▲	▲	■	▲	▲	▲	■	▲	▲	▲	▲	▲	▲	▲	▲
	1,600	2.15	1,870	1,830	▲	▲	▲	■	▲	▲	▲	▲	▲	▲	▲	■	▲	▲	▲	■
	1,650	2.25	1,910	1,870	▲	▲	■	▲	▲	▲	■	■	▲	▲	▲	■	▲	▲	▲	▲
	1,800	2.50	2,000	1,960	▲	■	▲	■	■	■	▲	△	▲	▲	■	▲	▲	■	■	■
	1,800	2.75	2,080	2,040	■	▲	■	△	▲	▲	■	△	■	■	▲	▲	■	■	■	△
1,850	3.00	2,130	2,090	▲	■	△	△	■	■	△	-	▲	▲	■	△	▲	■	△	△	

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

<sup>1)</sup> Standard bucket with teeth Z 50

<sup>2)</sup> HD bucket with teeth Z 50

<sup>3)</sup> Bucket for direct mounting

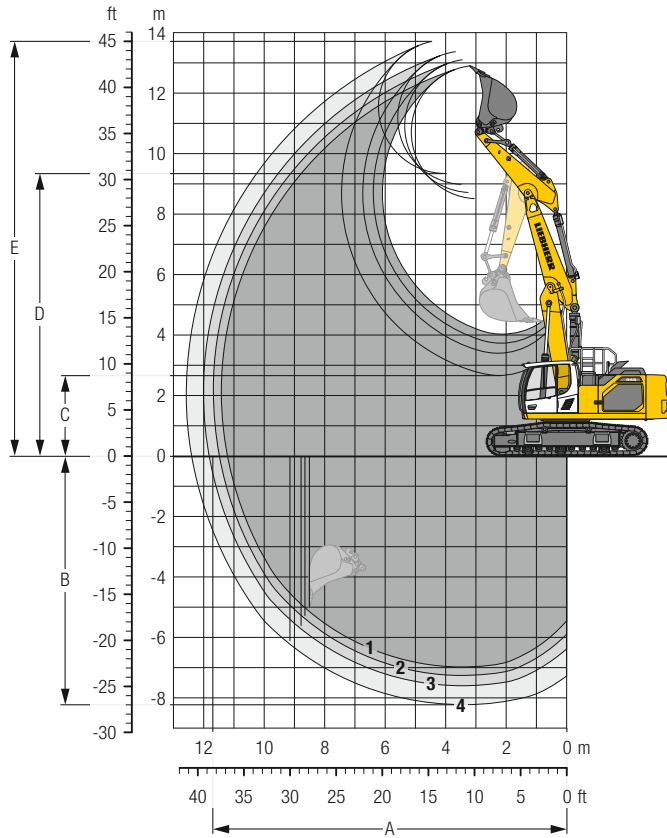
<sup>4)</sup> Bucket for mounting to quick coupler

Other buckets available upon request

Max. material weight ▲ = ≤ 2.0 t/m<sup>3</sup>, ■ = ≤ 1.8 t/m<sup>3</sup>, ▲ = ≤ 1.65 t/m<sup>3</sup>, ■ = ≤ 1.5 t/m<sup>3</sup>, △ = ≤ 1.2 t/m<sup>3</sup>, - = not authorised

# Backhoe Bucket

## with Two-Piece Boom 6.70 m and Counterweight 8.4 t



### Digging Envelope

with quick coupler		1	2	3	4
Stick length	m	2.60	2.90	3.25	3.95
A Max. reach at ground level	m	11.22	11.49	11.82	12.40
B Max. digging depth	m	6.98	7.26	7.60	8.23
C Min. dumping height	m	4.03	3.73	3.40	2.66
D Max. dumping height	m	8.51	8.71	8.98	9.34
E Max. cutting height	m	12.90	13.10	13.37	13.71

### Forces

without quick coupler		1	2	3	4
Stick digging force (ISO 6015)	kN	212	198	183	159
Bucket digging force (ISO 6015)	kN	238	238	238	238
Stick digging force (SAE J1179)	kN	202	189	176	154
Bucket digging force (SAE J1179)	kN	210	210	210	210

### Operating Weight and Ground Pressure

The operating weight includes the basic machine with counterweight 8.4 t, two-piece boom 6.70 m, stick 3.25 m, quick coupler SWA 66 and bucket 1.75 m<sup>3</sup> (1,590 kg).

Undercarriage		S-HD		
Pad width	mm	600	750	900
Weight	kg	42,750	44,000	44,850
Ground pressure	kg/cm <sup>2</sup>	0.75	0.62	0.53

Undercarriage		LC-V		
Pad width	mm	600	750	900
Weight	kg	45,150	46,400	47,250
Ground pressure	kg/cm <sup>2</sup>	0.79	0.65	0.55

Optional: counterweight 9.4 t

(counterweight 9.4 t increases the operating weight by 1,000 kg and ground pressure by 0.02 kg/cm<sup>2</sup>) see load tables on page 21

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

	Cutting width mm	Capacity ISO 7451 m <sup>3</sup>	Weight <sup>2)</sup> kg	Weight <sup>4)</sup> kg	S-HD-Undercarriage (with track pads 600 mm)								LC-V-Undercarriage (with track pads 600 mm)							
					Stick length (m)								Stick length (m)							
					without quick coupler				with quick coupler				without quick coupler				with quick coupler			
					2.60	2.90	3.25	3.95	2.60	2.90	3.25	3.95	2.60	2.90	3.25	3.95	2.60	2.90	3.25	3.95
<b>with counterweight 8.4 t</b>																				
STD <sup>1)</sup>	1,650	2.00	1,730	1,690	▲	▲	▲	■	▲	▲	■	▲	▲	▲	■	▲	▲	▲	■	▲
	1,600	2.15	1,770	1,730	▲	▲	■	▲	▲	▲	■	■	▲	▲	▲	■	▲	▲	▲	▲
	1,650	2.25	1,810	1,770	▲	■	■	■	▲	■	▲	■	▲	▲	■	▲	▲	■	■	▲
	1,800	2.50	1,900	1,860	■	▲	■	△	■	▲	■	△	▲	■	■	■	■	▲	▲	△
	1,800	2.75	1,970	1,930	▲	■	△	△	■	■	△	-	■	▲	■	△	▲	▲	■	△
1,850	3.00	2,020	1,980	■	△	△	-	△	△	△	-	▲	■	△	△	■	■	△	-	
HD <sup>2)</sup>	1,650	2.00	1,830	1,790	▲	▲	▲	▲	▲	▲	■	▲	▲	▲	▲	▲	▲	▲	▲	■
	1,600	2.15	1,870	1,830	▲	▲	■	■	▲	■	■	■	▲	▲	▲	▲	▲	▲	■	▲
	1,650	2.25	1,910	1,870	▲	■	■	■	▲	■	▲	△	▲	▲	■	▲	▲	▲	■	■
	1,800	2.50	2,000	1,960	■	▲	■	△	▲	▲	■	△	▲	■	■	■	■	■	▲	△
	1,800	2.75	2,080	2,040	▲	■	△	△	■	■	△	-	▲	▲	■	△	▲	■	△	△
1,850	3.00	2,130	2,090	■	△	△	-	△	△	△	-	■	■	△	△	■	△	△	-	
<b>with counterweight 9.4 t</b>																				
STD <sup>1)</sup>	1,650	2.00	1,730	1,690	▲	▲	▲	▲	▲	▲	▲	■	▲	▲	▲	▲	▲	▲	▲	▲
	1,600	2.15	1,770	1,730	▲	▲	▲	■	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	■
	1,650	2.25	1,810	1,770	▲	■	▲	▲	▲	▲	■	▲	▲	▲	■	▲	▲	▲	▲	■
	1,800	2.50	1,900	1,860	▲	■	▲	■	▲	■	▲	△	▲	▲	■	▲	▲	■	■	▲
	1,800	2.75	1,970	1,930	■	▲	■	△	▲	▲	■	△	■	■	▲	■	■	■	▲	△
1,850	3.00	2,020	1,980	▲	■	△	△	■	■	△	△	■	▲	■	△	▲	▲	■	△	
HD <sup>2)</sup>	1,650	2.00	1,830	1,790	▲	▲	▲	■	▲	▲	▲	■	▲	▲	▲	▲	▲	▲	▲	▲
	1,600	2.15	1,870	1,830	▲	▲	▲	■	▲	▲	▲	▲	▲	▲	▲	■	▲	▲	▲	■
	1,650	2.25	1,910	1,870	▲	▲	■	▲	▲	▲	■	■	▲	▲	▲	■	▲	▲	▲	▲
	1,800	2.50	2,000	1,960	▲	■	▲	■	■	■	▲	△	▲	▲	■	▲	▲	■	■	■
	1,800	2.75	2,080	2,040	■	▲	■	△	▲	▲	■	△	■	■	▲	▲	■	■	■	△
1,850	3.00	2,130	2,090	▲	■	△	△	■	■	△	-	▲	▲	■	△	▲	■	△	△	

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

<sup>1)</sup> Standard bucket with teeth Z 50

<sup>2)</sup> HD bucket with teeth Z 50

<sup>3)</sup> Bucket for direct mounting

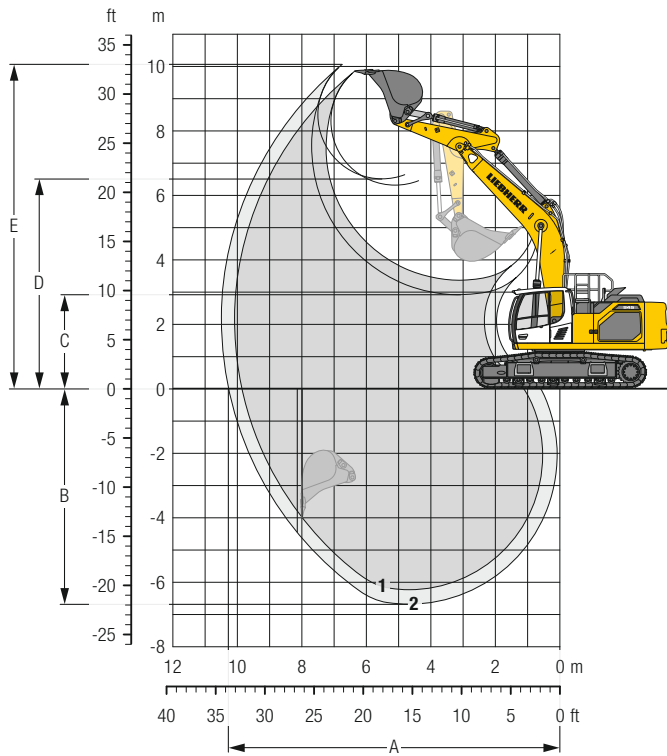
<sup>4)</sup> Bucket for mounting to quick coupler

Other buckets available upon request

Max. material weight ▲ = ≤ 2.0 t/m<sup>3</sup>, ■ = ≤ 1.8 t/m<sup>3</sup>, ▲ = ≤ 1.65 t/m<sup>3</sup>, ■ = ≤ 1.5 t/m<sup>3</sup>, △ = ≤ 1.2 t/m<sup>3</sup>, - = not authorised

# Backhoe Bucket

with Mono Boom SME 6.15 m and Counterweight 8.4 t



## Digging Envelope

without quick coupler		1	2
Stick length	m	2.15 SME	2.60 SME
A Max. reach at ground level	m	9.86	10.28
B Max. digging depth	m	6.23	6.68
C Min. dumping height	m	3.37	2.92
D Max. dumping height	m	6.32	6.61
E Max. cutting height	m	9.86	10.06

## Forces

without quick coupler		1	2
Stick digging force (ISO 6015)	kN	238	212
Bucket digging force (ISO 6015)	kN	264	264
Stick digging force (SAE J1179)	kN	226	202
Bucket digging force (SAE J1179)	kN	233	233

## Operating Weight and Ground Pressure

The operating weight includes the basic machine with counterweight 8.4 t, mono boom SME 6.15 m, stick SME 2.15 m and HD bucket 2.50 m<sup>3</sup> (2,000 kg).

Undercarriage		S-HD		
Pad width	mm	600	750	900
Weight	kg	41,400	42,650	43,500
Ground pressure	kg/cm <sup>2</sup>	0.73	0.60	0.51

Undercarriage		LC-V		
Pad width	mm	600	750	900
Weight	kg	43,800	45,050	45,900
Ground pressure	kg/cm <sup>2</sup>	0.77	0.64	0.54

Optional: counterweight 9.4 t  
(counterweight 9.4 t increases the operating weight by 1,000 kg and ground pressure by 0.02 kg/cm<sup>2</sup>)  
see load tables on page 23

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

	Cutting width mm	Capacity ISO 7451 m <sup>3</sup>	Weight <sup>3)</sup> kg	Weight <sup>4)</sup> kg	S-HD-Undercarriage (with track pads 600 mm)				LC-V-Undercarriage (with track pads 600 mm)			
					Stick length (m)				Stick length (m)			
					without quick coupler		with quick coupler		without quick coupler		with quick coupler	
2.15	2.60	2.15	2.60	2.15	2.60	2.15	2.60					
<b>with counterweight 8.4 t</b>												
HD <sup>1)</sup>	1,600	2.15	1,870	1,830	▲	▲	▲	▲	▲	▲	▲	▲
	1,650	2.25	1,910	1,870	▲	▲	▲	▲	▲	▲	▲	▲
	1,800	2.50	2,000	1,960	▲	▲	▲	▲	▲	▲	▲	▲
	1,800	2.75	2,080	2,040	▲	▲	▲	▲	▲	▲	▲	▲
	1,850	3.00	2,130	2,090	▲	■	▲	■	▲	▲	▲	▲
HDR <sup>2)</sup>	1,650	2.00	2,490	2,530	▲	▲	▲	▲	▲	▲	▲	▲
	1,650	2.25	2,570	2,610	▲	▲	▲	▲	▲	▲	▲	▲
	1,650	2.50	2,660	2,700	▲	▲	▲	▲	▲	▲	▲	▲
<b>with counterweight 9.4 t</b>												
HD <sup>1)</sup>	1,600	2.15	1,870	1,830	▲	▲	▲	▲	▲	▲	▲	▲
	1,650	2.25	1,910	1,870	▲	▲	▲	▲	▲	▲	▲	▲
	1,800	2.50	2,000	1,960	▲	▲	▲	▲	▲	▲	▲	▲
	1,800	2.75	2,080	2,040	▲	▲	▲	▲	▲	▲	▲	▲
	1,850	3.00	2,130	2,090	▲	▲	▲	▲	▲	▲	▲	▲
HDR <sup>2)</sup>	1,650	2.00	2,490	2,530	▲	▲	▲	▲	▲	▲	▲	▲
	1,650	2.25	2,570	2,610	▲	▲	▲	▲	▲	▲	▲	▲
	1,650	2.50	2,660	2,700	▲	▲	▲	▲	▲	▲	▲	▲

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

<sup>1)</sup> HD bucket with teeth Z 50

<sup>2)</sup> HDR bucket with teeth Z 70

<sup>3)</sup> Bucket for direct mounting

<sup>4)</sup> Bucket for mounting to quick coupler

Other buckets available upon request

Max. material weight ▲ = ≤ 2.0 t/m<sup>3</sup>, ■ = ≤ 1.8 t/m<sup>3</sup>

# Lift Capacities

with Mono Boom 6.45 m, Counterweight 8.4 t and Track Pads 600 mm

## Stick 2.60 m

Under-carriage	m	3,0 m	4,5 m	6,0 m	7,5 m	9,0 m	10,5 m	m
S-HD	9,0							
	7,5							9.8* 9.8*
	6,0				10.0*	10.0*		8.2 9.6*
	4,5			15.4*	15.4*	11.9*	11.9*	8.7 10.2*
	3,0			17.3	18.5*	11.5	13.3*	8.4 10.9*
	1,5			16.6*	16.6*	11.0	14.3*	8.1 11.4*
	0			16.4	19.6*	10.8	14.7*	8.0 11.6*
	-1,5	15.4*	15.4*	16.5	18.3*	10.7	14.1*	8.0 11.1*
	-3,0	20.0*	20.0*	16.0*	16.0*	10.9	12.5*	
	-4,5			11.9*	11.9*			
LC-V	9,0							9.8* 9.8*
	7,5				10.0*	10.0*		8.5 9.6*
	6,0				10.7*	10.7*		7.5 9.6*
	4,5			15.7*	15.7*	12.0*	12.0*	8.7 10.2*
	3,0			18.2	18.7*	12.1	13.4*	8.8 10.9*
	1,5			16.7*	16.7*	11.6	14.4*	8.6 11.4*
	0			17.3	19.5*	11.4	14.6*	8.4 11.6*
	-1,5	16.4*	16.4*	17.4	18.2*	11.4	14.0*	8.4 11.0*
	-3,0	19.6*	19.6*	15.8*	15.8*	11.5	12.3*	
	-4,5			11.4*	11.4*			

## Stick 2.90 m

Under-carriage	m	3,0 m	4,5 m	6,0 m	7,5 m	9,0 m	10,5 m	m
S-HD	9,0							
	7,5							9.3* 9.3*
	6,0					10.2*	10.2*	7.8 9.1*
	4,5			14.6*	14.6*	11.5*	11.5*	8.7 9.9*
	3,0			17.5	17.8*	11.6	13.0*	8.4 10.6*
	1,5			16.6	19.6*	11.1	14.1*	8.1 11.2*
	0			16.3	19.7*	10.7	14.6*	7.9 11.5*
	-1,5	15.4*	15.4*	16.3	18.7*	10.7	14.2*	7.9 11.2*
	-3,0	21.5*	21.5*	16.5	16.6*	10.8	12.9*	
	-4,5	16.2*	16.2*	13.0*	13.0*	9.6*	9.6*	
LC-V	9,0							9.2* 9.2*
	7,5							8.1 9.1*
	6,0					10.3*	10.3*	7.2 9.2*
	4,5			14.9*	14.9*	11.6*	11.6*	9.2 9.9*
	3,0			18.1*	18.1*	12.1	13.1*	8.9 10.7*
	1,5			17.5	19.7*	11.6	14.2*	8.6 11.3*
	0			17.3	19.7*	11.4	14.6*	8.4 11.5*
	-1,5	16.1*	16.1*	17.3	18.6*	11.3	14.2*	8.4 11.1*
	-3,0	21.1*	21.1*	16.4*	16.4*	11.4	12.7*	
	-4,5			12.5*	12.5*			

## Stick 3.25 m

Under-carriage	m	3,0 m	4,5 m	6,0 m	7,5 m	9,0 m	10,5 m	m
S-HD	9,0							
	7,5							8.1* 8.1*
	6,0							8.9* 8.9*
	4,5			20.8*	20.8*	13.7*	13.7*	10.9*
	3,0			17.0*	17.0*	11.6	12.5*	8.4 10.3*
	1,5			16.7	19.2*	11.0	13.8*	8.1 11.0*
	0			7.5*	7.5*	16.2	19.7*	10.7 14.4*
	-1,5	14.8*	14.8*	16.2	18.9*	10.5	14.3*	8.2 11.2*
	-3,0	22.9*	22.9*	16.3	17.2*	10.6	13.2*	8.3 10.1*
	-4,5	18.0*	18.0*	13.9*	13.9*	10.6*	10.6*	
LC-V	9,0							8.6* 8.6*
	7,5							8.1* 8.1*
	6,0							8.9* 8.9*
	4,5			21.7*	21.7*	14.0*	14.0*	11.1*
	3,0			17.2*	17.2*	12.2	12.6*	8.8 10.3*
	1,5			17.6	19.3*	11.6	13.8*	8.5 11.0*
	0			8.2*	8.2*	17.2	19.6*	11.3 14.4*
	-1,5	15.5*	15.5*	17.1	18.8*	11.2	14.2*	8.2 11.2*
	-3,0	22.6*	22.6*	17.0*	17.0*	11.2	13.0*	8.3 10.0*
	-4,5	17.5*	17.5*	13.6*	13.6*	10.2*	10.2*	

## Stick 3.95 m

Under-carriage	m	3,0 m	4,5 m	6,0 m	7,5 m	9,0 m	10,5 m	m
S-HD	9,0							6.7* 6.7*
	7,5							6.4* 6.4*
	6,0							8.0* 8.0*
	4,5					9.8*	9.8*	6.7 6.8*
	3,0			13.0*	13.0*	15.3*	15.3*	11.5*
	1,5			7.1*	7.1*	16.9	18.0*	11.1 13.0*
	0			10.0*	10.0*	16.2	19.3*	10.6 14.0*
	-1,5	14.7*	14.7*	15.9	19.2*	10.4	14.2*	7.6 11.1*
	-3,0	20.6*	20.6*	16.0	18.0*	10.3	13.6*	7.6 10.6*
	-4,5	21.2*	21.2*	15.6*	15.6*	10.5	11.8*	
LC-V	9,0							6.7* 6.7*
	7,5							6.4* 6.4*
	6,0							8.1* 8.1*
	4,5					10.0*	10.0*	8.8* 8.8*
	3,0			11.4*	11.4*	15.6*	15.6*	11.6*
	1,5			7.2*	7.2*	17.8	18.2*	11.7 13.1*
	0			10.4*	10.4*	17.1	19.3*	11.2 14.0*
	-1,5	15.1*	15.1*	16.9	19.2*	11.0	14.2*	8.1 11.1*
	-3,0	21.2*	21.2*	16.9	17.9*	11.0	13.5*	8.1 10.5*
	-4,5	20.7*	20.7*	15.3*	15.3*	11.2	11.6*	

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 495 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.













# Lift Capacities

with Mono Boom SME 6.15 m, Counterweight 8.4 t and Track Pads 600 mm

## Stick SME 2.15 m

Under-carriage	m	3,0 m		4,5 m		6,0 m		7,5 m		9,0 m		10,5 m		m
		Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	
S-HD	7,5					11.2*	11.2*					11.2*	11.2*	6.0
	6,0					11.4*	11.4*					9.5	10.7*	7.1
	4,5			16.1*	16.1*	12.0	12.5*	8.6	10.8*			8.2	10.6*	7.7
	3,0			17.2	19.0*	11.4	13.7*	8.3	11.3*			7.5	10.7*	8.0
	1,5			16.6	19.2*	11.0	14.6*	8.1	11.6*			7.4	10.8*	8.1
	0			16.5	19.3*	10.8	14.6*	8.0	11.5*			7.6	10.9*	7.8
	-1,5	19.7*	19.7*	16.6	17.6*	10.8	13.7*					8.5	11.0*	7.2
-3,0	17.4*	17.4*	14.6*	14.6*	11.1	11.1*					10.6*	10.6*	6.2	
-4,5														
LC-V	7,5					11.2*	11.2*					11.2*	11.2*	6.0
	6,0			13.6*	13.6*	11.5*	11.5*					9.9	10.7*	7.1
	4,5			16.4*	16.4*	12.6*	12.6*	9.0	10.8*			8.5	10.6*	7.7
	3,0			18.1	19.2*	12.0	13.8*	8.8	11.3*			7.9	10.7*	8.0
	1,5			17.5	19.5*	11.6	14.6*	8.6	11.6*			7.8	10.8*	8.1
	0			17.4	19.2*	11.4	14.6*	8.5	11.4*			8.1	10.9*	7.8
	-1,5	20.4*	20.4*	17.4*	17.4*	11.4	13.5*					9.1	11.0*	7.2
-3,0	17.0*	17.0*	14.2*	14.2*	10.7*	10.7*					10.5*	10.5*	6.2	
-4,5														

## Stick SME 2.60 m

Under-carriage	m	3,0 m		4,5 m		6,0 m		7,5 m		9,0 m		10,5 m		m
		Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	
S-HD	7,5					10.3*	10.3*					10.3*	10.3*	6.5
	6,0					10.7*	10.7*	8.8	10.0*			8.7	9.9*	7.5
	4,5			15.0*	15.0*	11.9*	11.9*	8.6	10.3*			7.5	9.9*	8.2
	3,0			17.5	18.1*	11.5	13.2*	8.3	10.9*			7.0	10.0*	8.5
	1,5			16.7	19.7*	11.0	14.3*	8.1	11.4*			6.8	10.1*	8.5
	0			16.4	19.6*	10.8	14.6*	7.9	11.5*			7.0	10.3*	8.2
	-1,5	18.5*	18.5*	16.4	18.3*	10.7	14.0*	7.9	10.8*			7.7	10.4*	7.7
-3,0	20.0*	20.0*	15.7*	15.7*	10.9	12.1*					9.4	10.3*	6.8	
-4,5			10.8*	10.8*							9.2*	9.2*	5.2	
LC-V	7,5					10.3*	10.3*					10.2*	10.2*	6.5
	6,0					10.8*	10.8*	9.3	10.0*			9.0	9.9*	7.5
	4,5			15.3*	15.3*	12.0*	12.0*	9.1	10.3*			7.9	9.9*	8.2
	3,0			18.3*	18.3*	12.1	13.3*	8.8	10.9*			7.4	10.0*	8.5
	1,5			17.6	19.8*	11.6	14.3*	8.5	11.4*			7.2	10.1*	8.5
	0			17.3	19.6*	11.4	14.6*	8.4	11.5*			7.5	10.3*	8.2
	-1,5	19.4*	19.4*	17.4	18.2*	11.3	13.9*	8.4	10.6*			8.3	10.4*	7.7
-3,0	19.6*	19.6*	15.4*	15.4*	11.5	11.8*					10.1	10.3*	6.8	
-4,5														5.2

 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 590 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.

# Lift Capacities

with Mono Boom SME 6.15 m, Counterweight 9.4 t and Track Pads 600 mm

## Stick SME 2.15 m

Under-carriage	m	3,0 m		4,5 m		6,0 m		7,5 m		9,0 m		10,5 m		m
		Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	
S-HD	7,5					11.2*	11.2*					11.2*	11.2*	6.0
	6,0					11.4*	11.4*					10.1	10.7*	7.1
	4,5			16.1*	16.1*	12.5*	12.5*	9.2	10.8*			8.7	10.6*	7.7
	3,0			18.4	19.0*	12.2	13.7*	8.9	11.3*			8.1	10.7*	8.0
	1,5			17.7	19.2*	11.8	14.6*	8.7	11.6*			7.9	10.8*	8.1
	0			17.6	19.3*	11.6	14.6*	8.6	11.5*			8.2	10.9*	7.8
	-1,5	19.7*	19.7*	17.6*	17.6*	11.6	13.7*					9.1	11.0*	7.2
-3,0	17.4*	17.4*	14.6*	14.6*	11.1*	11.1*					10.6*	10.6*	6.2	
-4,5														
LC-V	7,5					11.2*	11.2*					11.2*	11.2*	6.0
	6,0					11.4*	11.4*					10.1	10.7*	7.1
	4,5			16.1*	16.1*	12.5*	12.5*	9.2	10.8*			8.7	10.6*	7.7
	3,0			18.4	19.0*	12.2	13.7*	8.9	11.3*			8.1	10.7*	8.0
	1,5			17.7	19.2*	11.8	14.6*	8.7	11.6*			7.9	10.8*	8.1
	0			17.6	19.3*	11.6	14.6*	8.6	11.5*			8.2	10.9*	7.8
	-1,5	19.7*	19.7*	17.6*	17.6*	11.6	13.7*					9.1	11.0*	7.2
-3,0	17.4*	17.4*	14.6*	14.6*	11.1*	11.1*					10.6*	10.6*	6.2	
-4,5														

## Stick SME 2.60 m

Under-carriage	m	3,0 m		4,5 m		6,0 m		7,5 m		9,0 m		10,5 m		m
		Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	Height	Can be slewed through 360°	
S-HD	7,5					10.3*	10.3*					10.3*	10.3*	6.5
	6,0					10.7*	10.7*	9.4	10.0*			9.2	9.9*	7.5
	4,5			15.0*	15.0*	11.9*	11.9*	9.2	10.3*			8.0	9.9*	8.2
	3,0			18.1*	18.1*	12.3	13.2*	8.9	10.9*			7.5	10.0*	8.5
	1,5			17.8	19.7*	11.8	14.3*	8.7	11.4*			7.3	10.1*	8.5
	0			17.5	19.6*	11.5	14.6*	8.5	11.5*			7.5	10.3*	8.2
	-1,5	18.5*	18.5*	17.6	18.3*	11.5	14.0*	8.5	10.8*			8.3	10.4*	7.7
-3,0	20.0*	20.0*	15.7*	15.7*	11.6	12.1*					10.0	10.3*	6.8	
-4,5			10.8*	10.8*							9.2*	9.2*	5.2	
LC-V	7,5					10.3*	10.3*					10.3*	10.3*	6.5
	6,0					10.7*	10.7*	9.4	10.0*			9.2	9.9*	7.5
	4,5			15.0*	15.0*	11.9*	11.9*	9.2	10.3*			8.0	9.9*	8.2
	3,0			18.1*	18.1*	12.3	13.2*	8.9	10.9*			7.5	10.0*	8.5
	1,5			17.8	19.7*	11.8	14.3*	8.7	11.4*			7.3	10.1*	8.5
	0			17.5	19.6*	11.5	14.6*	8.5	11.5*			7.5	10.3*	8.2
	-1,5	18.5*	18.5*	17.6	18.3*	11.5	14.0*	8.5	10.8*			8.3	10.4*	7.7
-3,0	20.0*	20.0*	15.7*	15.7*	11.6	12.1*					10.0	10.3*	6.8	
-4,5			10.8*	10.8*							9.2*	9.2*	5.2	

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 590 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.

# Serial Equipment

## Undercarriage

- Lashing eyes
- Sprocket with dirt ejector
- Track and carrier rollers, sealed and lifetime-lubricated

## Uppercarriage

- Access platforms without protruding parts
- Anti-skid surfaces
- Automatic swing brake lock
- Centralised lubrication system (automatic)
- DEF tank filling indicator
- DEF tank lockable access hatch
- Engine coolant level, visible from the cab
- Engine hood with gas spring opening
- Filters accessible from ground level
- Handrails
- Hydraulic oil level, visible from ground level
- Lockable fuel tank cap
- Lockable service doors
- Lockable storage and accessories compartment
- Lockable storage box
- Main switch, electric, with timer
- Main switch, manual, lockable
- Protection grid on radiator fan
- Safe uppercarriage side access platform
- Sound insulation
- Swing drive gearbox oil level, visible from the cab
- Swing-out radiators
- Windshield washer fluid tank, accessible from ground level

## Hydraulic System

- Dedicated swing circuit
- Filter with integrated fine filters
- Hydraulic pressure measuring ports
- Liebherr Positive Control system with 2 independent circuits
- 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

## Operator's Cab

- 7" multifunction colour 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
- Fuel consumption on touchscreen
- Fuel level on touchscreen
- Hydraulic oil level on touchscreen
- Interior lighting
- Laminated right hand side window
- LiDAT Plus (Liebherr data transfer system) \*
- Mechanical hour meters, visible from ground level
- Mobile phone storage net
- Movement priority between swing and boom, adjustable via touchscreen
- Movement priority for stick-in, 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
- ROPS safety cab structure (ISO 12117-2)
- Rubber floor mat, fixed on floor and removable
- Shortkey button on joystick configurable
- Storage box
- Storage nets
- Storage spaces
- Swing braking torque adjustable via touchscreen
- 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 cylinders regeneration
- Pivot points made of cast steel
- SAE split flanges on high pressure lines
- Stick cylinder regeneration

\* optionally extendable after one year



# Equipment Standard/Option

## Undercarriage

Chain guide 3 pieces	•
Chain guide 4 pieces	+
Chain guide full length	+
Cover and base plate for undercarriage centre section	•
Reinforced cover and base plate for centre section (LC-V undercarriage)	+
Reinforced cover plate for centre section (LC-V undercarriage)	+
Screws protection for sideframe (LC-V undercarriage)	+
Special painting	+
Steps	•
Steps wide	+
Track pads triple grouser reinforced 600 mm	•
Track pads triple grouser reinforced 750/900 mm	+
Tracks, sealed and greased, reinforced	•
Travel drive gearbox protection	+
Travel motor housing protection	+
Undercarriage LC-V	+
Undercarriage S-HD	•

## Upper-carriage

Air pre-filter with cyclonical dust trap	+
Boxing ring	+
Counterweight heavy 9.4 t	+
Counterweight standard 8.4 t	•
Electric socket on uppercarriage (24 V)	+
Extended tool set including tool box	+
External starting aid (24 V)	+
Fuel anti-theft protection	+
Headlight on uppercarriage, front left, LED+, 1 piece, protection included	+1)
Headlight on uppercarriage, front right, LED, 1 piece, protection included	•1)
Headlight on uppercarriage, front right, LED+, 1 piece, protection included	+1)
Headlight on uppercarriage, lateral left, LED+, 1 piece	+1)
Headlight on uppercarriage, lateral right, LED+, 1 piece	+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	+
Reflective warning stickers	+
Reversible fan drive	+
Skyview 360°	+
Special painting	+
Tank refilling pump fuel	+
Tool set including storage case	•
Uppercarriage bottom and side protection	+
Uppercarriage bottom closure sheets	•



## 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)	+

# Equipment Standard/Option



## Operator's 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	+
Cool box (12 V)	+
Dark tinted windows	+
Electrically adjustable and heated outside rear-view mirrors	+
Electronic immobiliser	+
Emergency stop in cab	+
FGPS front guard	+
FGPS front guard tiltable	+
Filter for hydraulic hammer return flow	+
Fire extinguisher	+
First-aid box	+
Footrest	+
FOPS top guard	+
FOPS top guard flat	+
Handrests elevated for joysticks	+
Headlights on cab, front, LED, 2 pieces	• <sup>1)</sup>
Headlights on cab, front, LED+, 2 pieces	+ <sup>1)</sup>
Headlights on cab roof, front, LED+, 2 pieces	+ <sup>1)</sup>
High pressure circuit bypass	+
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	•
Luminosity control (LED+ headlights) <sup>1)</sup>	+
Medium pressure circuit	+
Mini-joysticks proportional	+
Movement restriction for boom	+
Movement restriction for stick	+
Operator seat Comfort	•
Operator seat Premium	+
Overload warning system	+
Preparation for machine guidance system	+
Preparation for tiltrotator	+
Preparation for weighing 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	+
Special painting	+
Sun visor	+
Switch between high pressure and bucket cylinder controls	+
Windscreen bottom protection grid	+



## Attachment

Boom bottom protection	+
Bucket cylinder rod protection	+
Centralised lubrication extended for connecting link	+
Floating boom	+
Headlight guard on boom, right	+
Headlight guards on boom, right and left	+
Headlight on boom, left, LED+, 1 piece	+ <sup>1)</sup>
Headlight on boom, right, LED, 1 piece	• <sup>1)</sup>
Headlight on boom, right, LED+, 1 piece	+ <sup>1)</sup>
Headlight on stick, bottom, LED+, 1 piece	+ <sup>1)</sup>
LIKUFIX electric signal plug	+
LIKUFIX for quick coupler SWA 66 hydraulic	+
Mono boom 6.45 m	+
Mono boom SME 6.15 m	+
Mono boom straight 7.00 m	+
Pipe fracture safety valve for stick cylinder	+
Pipe fracture safety valves for boom cylinders	+
Quick coupler SWA 66 hydraulic	+
Quick coupler SWA 66 mechanical	+
Special painting	+
Stick bottom protection	+
Stick 2.60 m	+
Stick 2.90 m	+
Stick 3.25 m	+
Stick 3.95 m	+
Stick SME 2.15 m	+
Stick SME 2.60 m	+
Tool Management	+
Two-piece boom 6.70 m	+

• = Standard, + = Option

<sup>1)</sup> 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.**

Notes

Lined area for taking notes, consisting of 25 horizontal lines.

# The Liebherr Group of Companies



## Wide Product Range

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

## Exceptional Customer Benefit

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

## State-of-the-art Technology

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

## Worldwide and Independent

Hans Liebherr founded the Liebherr family company in 1949. Since then, the family business has steadily grown to a group of more than 130 companies with more than 46,000 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.com](http://www.liebherr.com)

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