Material Handling Machine

LH 18 M Industry

Litronic®

Generation
6

Operating Weight
17,000 – 18,000 kg*

Engine
105 kW / 143 HP
Stage V

* Without attachment

LIEBHERR

Technical Data

Diesel Engine

Rating per ISO 9249	105 kW (143 HP) at 1,800 RPM
Model	Liebherr D924
Type	4 cylinder in-line
Bore/Stroke	104/132 mm
Displacement	4.5 l
Engine operation	4-stroke diesel Common-Rail turbo-charged and after-cooled reduced emissions
Air cleaner	dry-type air cleaner with pre-cleaner, primary and safety elements
Engine idling	sensor controlled
Electrical system	
Voltage	24 V
Batteries	2 x 135 Ah/12 V
Alternator	three-phase current 28 V/140 A
Stage V	
Harmful emissions values	according to regulation (EU) 2016/1628
Emission control	Liebherr-SCRT technology
Fuel tank	250 l
Urea tank	46 l

Cooling System

Diesel engine	water-cooled compact cooling system consisting cooling unit for water, hydraulic oil and charge air with step-less thermostatically controlled fan, fans for radiator cleaning can be completely folded away

Hydraulic Controls

Power distribution	via control valves with integrated safety valves, simultaneous and independent actuation of chassis, swing drive and equipment
Servo circuit	
Equipment and swing	with hydraulic pilot control and proportional joystick levers
Chassis	electroproportional via foot pedal
Additional functions	via switch or electroproportional foot pedals
Proportional control	proportionally acting transmitters on the joy-sticks for additional hydraulic functions

Hydraulic System

Hydraulic pump	
for equipment and travel drive	Liebherr axial piston variable displacement pump
Max. flow	250 l/min.
Max. pressure	350 bar
Hydraulic pump regulation and control	Liebherr-Synchron-Comfort-system (LSC) with electronic engine speed sensing regulation, pressure and flow compensation, torque con-trolled swing drive priority
Hydraulic tank	130 l
Hydraulic system	300 l
Hydraulic oil filter	1 main return filter with integrated partial micro filtration (5 µm)
MODE selection	adjustment of engine and hydraulic performance via a mode pre-selector to match application, e.g. for especially economical and environmen-tally friendly operation or for maximum material handling and heavy-duty jobs
S (Sensitive)	mode for precision work and lifting through very sensitive movements
E (Eco)	mode for especially economical and environ-mentally friendly operation
P (Power)	mode for high performance with low fuel con-sumption
P+ (Power-Plus)	mode for highest performance and for very heavy duty applications, suitable for continuous operation
Engine speed and performance setting	stepless alignment of engine output and hydraulic power via engine speed
Option	Tool Control: 20 preadjustable pump flows and pressures for add-on attachments

Swing Drive

Drive	Liebherr axial piston motor with integrated brake valve and torque control
Swing ring	Liebherr, sealed race ball bearing swing ring, internal teeth
Swing speed	0 – 10.0 RPM stepless
Swing torque	54 kNm
Holding brake	wet multi-disc (spring applied, pressure released)
Option	slewing gear brake Comfort

Operator's Cab

Cab	TOPS safety cab structure (tip-over protection) with individual windscreens or featuring a slide-in subpart under the ceiling, work headlights integrated in the ceiling, a door with a sliding window (can be opened on both sides), large stowing and depositing possibilities, shock-absorbing suspension, sounddamping insulating, tinted laminated safety glass, separate shades for the sunroof window and windscreen
Operator's seat Comfort	air cushioned operator's seat with 3D-adjustable armrests, headrest, lap belt, seat heater, adjustable seat cushion inclination and length, lockable horizontal suspension, automatic weight adjustment, adjustable suspension stiffness, pneumatic lumbar vertebrae support and passive seat climatisation with active coal
Operator's seat Premium (Option)	in addition to operator's seat comfort: active electronic weight adjustment (automatic re-adjustment), pneumatic low frequency suspension and active seat climatisation with active coal and ventilator
Control system	joysticks with control consoles and swivel seat, folding left control console
Operation and displays	large high-resolution operating unit, selfexplanatory, 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
Refrigerant	R134a
Global warming potential	1,430
Vibration emission**	
Hand/arm vibrations	< 2.5 m/s²
Whole-body vibrations	< 0.5 m/s²
Measuring inaccuracy	according with standard EN 12096:1997

Undercarriage

Drive	oversized two speed power shift transmission with additional creeper speed, Liebherr axial piston motor with functional brake valve on both sides
Travel speed	
Joystick steering	0 – 3.5 km/h stepless (creeper speed + transmission stage 1) 0 – 7.0 km/h stepless (transmission stage 1) 0 – 12.0 km/h stepless (creeper speed + transmission stage 2) 0 – 12.0 km/h stepless (transmission stage 2)
Wheel steering (Option)	0 – 3.5 km/h stepless (creeper speed + transmission stage 1) 0 – 7.0 km/h stepless (transmission stage 1) 0 – 13.0 km/h stepless (creeper speed + transmission stage 2) 0 – 20.0 km/h stepless (transmission stage 2)
Driving operation	automotive driving using accelerator pedal, cruise control function: storage of variable accelerator pedal positions
Axles	32 t drive axles; manual or automatic hydraulically controlled front axle oscillation lock
Service brake	two circuit travel brake system with accumulator; wet and backlash-free disc brake
Holding brake	wet multi-disc (spring applied, pressure released)
Stabilization	stabilizing blade + 2 point outriggers

Equipment

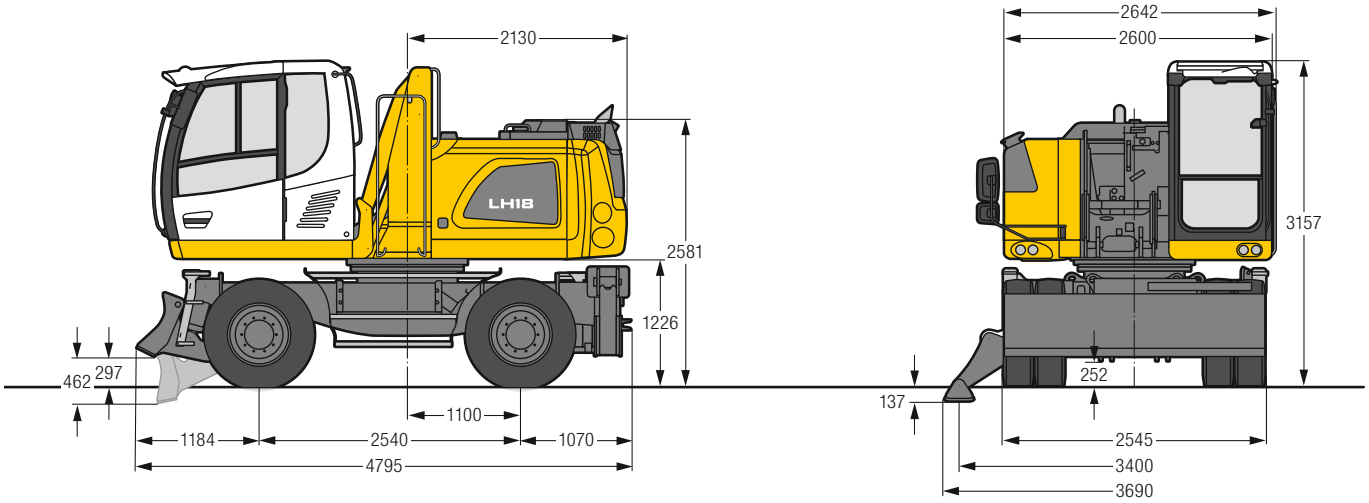
Type	high-strength steel plates at highlystressed points for the toughest requirements. Complex and stable mountings of equipment and cylinders
Hydraulic cylinders	Liebherr cylinders with special seal system as well as shock absorption
Bearings	sealed, low maintenance

Complete Machine

Lubrication	Liebherr central lubrication system for upper-carriage and equipment, automatically
Steps system	safe and durable access system with anti-slip steps main components hot-galvanised
Noise emission	
ISO 6396	L_{pA} (inside cab) = not specified
2000/14/EC	L_{WA} (surround noise) = not specified

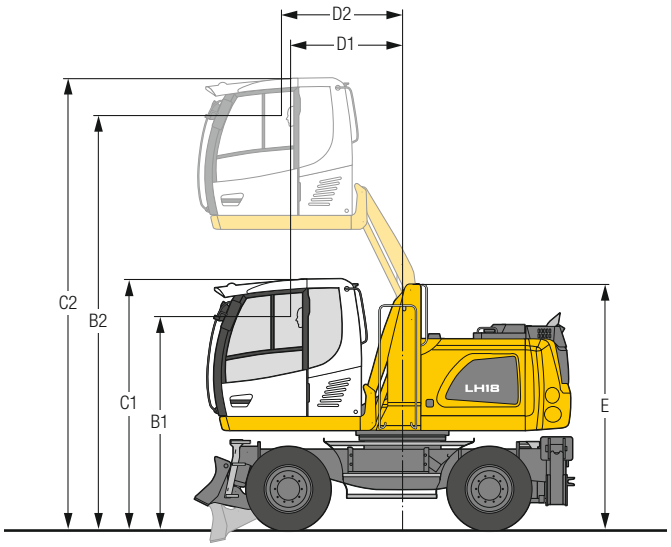
** for risk assessment according to 2002/44/EC see ISO/TR 25398:2006

Dimensions



Choice of Cab Elevation

Cab Elevation LHC
(Hydraulic Elevation)



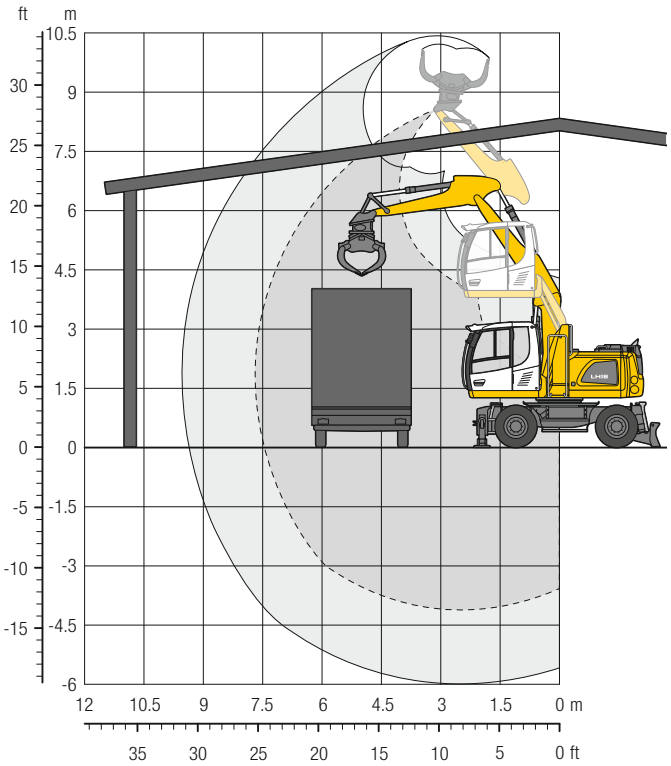
Increase type	LHC 255
B1	2,690 mm
B2	5,230 mm
C1	3,157 mm
C2	5,698 mm
D1	1,420 mm
D2	1,529 mm
E	3,098 mm

The hydraulically adjustable cab allows the driver, that he can choose his field of view freely and at any time within the stroke.

Tyres 10.00-20

Equipment VK8

PRELIMINARY

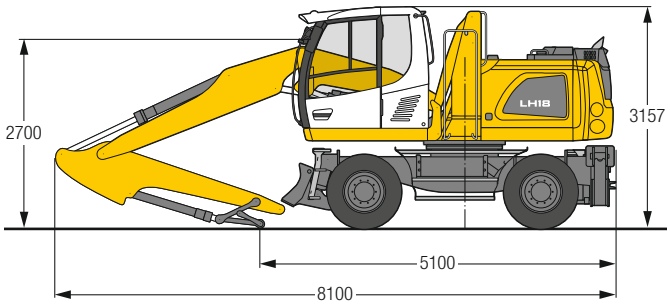


Operating Weight

The operating weight includes the basic machine with stabilizing blade + 2 point outriggers, hydr. cab elevation, 8 solid tyres plus intermediate rings, two-piece boom 4.85 m, stick with tipping kinematics 2.65 m and sorting grab SG 20B/0.40 m³ perforated shells.

Weight	19,200 kg

Dimensions



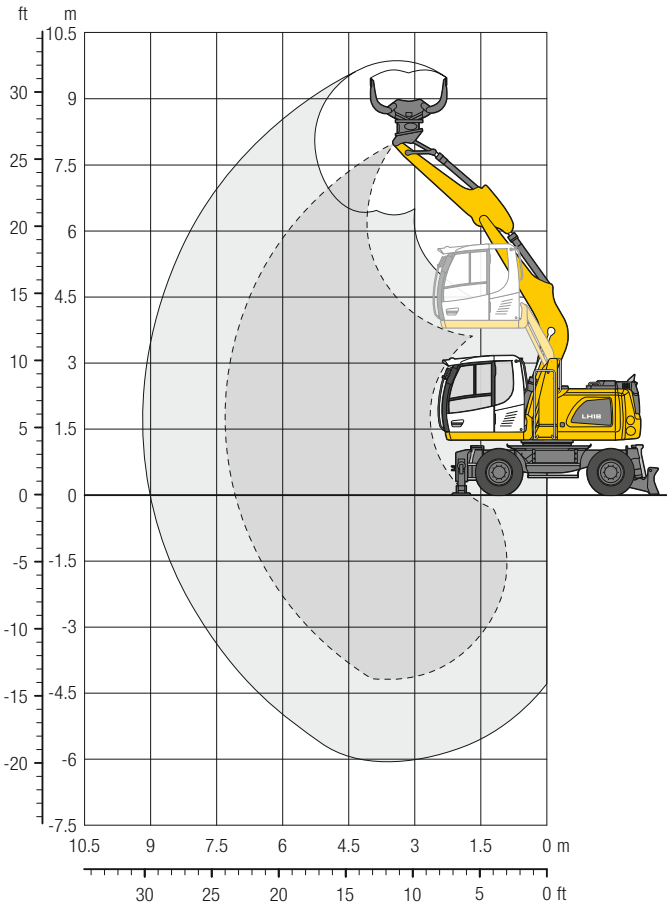
m	Undercarriage	3.0 m		4.5 m		6.0 m		7.5 m				m
7.5	Stabilizers raised			3.2*	3.2*					2.3*	2.3*	4.9
	Blade + 2 pt. outriggers down			3.2*	3.2*					2.3*	2.3*	
6.0	Stabilizers raised			3.9*	3.9*	2.7	2.9*			2.0*	2.0*	6.3
	Blade + 2 pt. outriggers down			3.9*	3.9*	2.9*	2.9*			2.0*	2.0*	
4.5	Stabilizers raised			4.2	4.6*	2.7	4.1*			1.9*	1.9*	7.1
	Blade + 2 pt. outriggers down			4.6*	4.6*	4.1*	4.1*			1.9*	1.9*	
3.0	Stabilizers raised	7.3	8.9*	4.1	5.7*	2.7	4.2	1.8	2.3*	1.8	1.9*	7.6
	Blade + 2 pt. outriggers down	8.9*	8.9*	5.7*	5.7*	4.3	4.5*	2.3*	2.3*	1.9*	1.9*	
1.5	Stabilizers raised	7.1	9.6*	4.1	6.1	2.6	4.1	1.8	2.8	1.7	2.0*	7.7
	Blade + 2 pt. outriggers down	9.6*	9.6*	6.4	6.5*	4.3	4.8*	3.0*	3.0*	2.0*	2.0*	
0	Stabilizers raised	7.1	10.5*	4.0	6.2	2.5	4.0			1.7	2.2*	7.5
	Blade + 2 pt. outriggers down	10.5*	10.5*	6.4	6.7*	4.2	4.8*			2.2*	2.2*	
–1.5	Stabilizers raised	6.8	10.8*	3.7	6.2	2.4	3.9			1.9	2.7*	6.9
	Blade + 2 pt. outriggers down	10.8*	10.8*	6.5	6.8*	4.1	4.7*			2.7*	2.7*	
–3.0	Stabilizers raised	6.6	10.7*	3.5	6.0					2.4	2.8*	5.9
	Blade + 2 pt. outriggers down	10.7*	10.7*	6.0*	6.0*					2.8*	2.8*	

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

The lift capacities on the stick end without attachment are stated in metric tons (t) and are valid on a firm, level supporting surface with blocked oscillating axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (+/– 15°) are specified over the steering axle with the stabilizers raised and over the rigid axle with the stabilizers down. The values apply with the optimum positioning of the two-piece boom. Indicated loads based on the ISO 10567 standard and do not exceed 75 % of tipping or 87 % of hydraulic capacity. The lift capacity of the unit is limited by its stability, the lifting capability of the hydraulic elements, or the maximum permissible lifting capacity of the load hook.
In accordance with the harmonised European Standard EN 474-5, hydraulic excavators used for lifting operations must be equipped with pipe fracture safety valves, an overload warning device, a load hook and a lift capacity chart.

Equipment MK7

PRELIMINARY

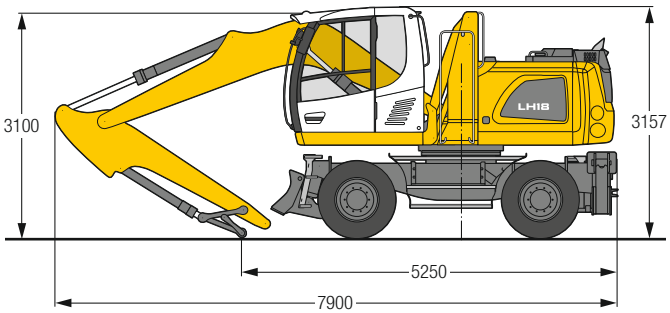


Operating Weight

The operating weight includes the basic machine with stabilizing blade + 2 point outriggers, hydr. cab elevation, 8 solid tyres plus intermediate rings, mono boom 4.60 m, stick with tipping kinematics 2.65 m and sorting grab SG 20B/0.40 m³ perforated shells.

Weight	18,900 kg

Dimensions



m	Undercarriage	3.0 m		4.5 m		6.0 m		7.5 m				m
7.5	Stabilizers raised									2.3*	2.3*	4.2
	Blade + 2 pt. outriggers down									2.3*	2.3*	
6.0	Stabilizers raised			3.4*	3.4*					2.0*	2.0*	5.9
	Blade + 2 pt. outriggers down			3.4*	3.4*					2.0*	2.0*	
4.5	Stabilizers raised			3.9*	3.9*	2.7	3.6*			1.9*	1.9*	6.7
	Blade + 2 pt. outriggers down			3.9*	3.9*	3.6*	3.6*			1.9*	1.9*	
3.0	Stabilizers raised	7.1*	7.1*	3.9	4.9*	2.6	4.1*			1.9*	1.9*	7.2
	Blade + 2 pt. outriggers down	7.1*	7.1*	4.9*	4.9*	4.1*	4.1*			1.9*	1.9*	
1.5	Stabilizers raised	6.4	6.4*	3.6	6.0*	2.4	4.0			1.8	2.1*	7.3
	Blade + 2 pt. outriggers down	6.4*	6.4*	6.0*	6.0*	4.2	4.5*			2.1*	2.1*	
0	Stabilizers raised	6.1	6.4*	3.5	5.9	2.4	3.9			1.9	2.4*	7.1
	Blade + 2 pt. outriggers down	6.4*	6.4*	6.2	6.6*	4.1	4.8*			2.4*	2.4*	
–1.5	Stabilizers raised	6.1	9.2*	3.4	5.8	2.3	3.8			2.1	3.0*	6.5
	Blade + 2 pt. outriggers down	9.2*	9.2*	6.1	6.5*	4.0	4.7*			3.0*	3.0*	
–3.0	Stabilizers raised	6.2	8.2*	3.4	5.5*					2.7	4.2*	5.4
	Blade + 2 pt. outriggers down	8.2*	8.2*	5.5*	5.5*					4.2*	4.2*	

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

The lift capacities on the stick end without attachment are stated in metric tons (t) and are valid on a firm, level supporting surface with blocked oscillating axle. These capacities can be slewed through 360° with the undercarriage in the transverse position. Capacities in the longitudinal position of the undercarriage (+/– 15°) are specified over the steering axle with the stabilizers raised and over the rigid axle with the stabilizers down. Indicated loads based on the ISO 10567 standard and do not exceed 75 % of tipping or 87 % of hydraulic capacity. The lift capacity of the unit is limited by its stability, the lifting capability of the hydraulic elements, or the maximum permissible lifting capacity of the load hook.
In accordance with the harmonised European Standard EN 474-5, hydraulic excavators used for lifting operations must be equipped with pipe fracture safety valves, an overload warning device, a load hook and a lift capacity chart.

Equipment

Undercarriage

Individual control outriggers	•
Shuttle axle lock, automatic	•
Outrigger monitoring system	+
Tyres, variants	+
Protection for travel drive	•
Protection for piston rods, outriggers	+
Two lockable storage compartments	•
Undercarriage, variants	+

Uppercarriage

Uppercarriage right side light, 1 piece, LED	•
Uppercarriage rear light, 2 pieces, LED	+
Refuelling system with filling pump	+
Main battery switch for electrical system	•
Amber beacon, at uppercarriage, LED double flash	+
Protection for headlights	+
Protection for rear lights	+
Tool equipment, extended	+

Hydraulic System

Electronic pump regulation	•
Liebherr hydraulic oil from –20 °C to +40 °C	•
Liebherr hydraulic oil, biologically degradable	+
Magnetic rod in hydraulic tank	•
Bypass filter	+
Preheating hydraulic oil	+

Engine

Fuel anti-theft device	+
Automatic engine shut-down (time adjustable)	+
Preheating fuel	+
Preheating coolant*	+
Preheating engine oil*	+

Cooling System

Reversible fan drive, fully automatic	+
Protective grid in front of cooler intake	•

Operator's Cab

Stabilizer, control lever, left console	+
Stabilizer, proportional control on left joystick	•
Cab lights front, halogen	+
Cab lights front, halogen (under rain cover)	•
Cab lights front, LED	+
Cab lights front, LED (under rain cover)	+
Armrest adjustable	•
Slewing gear brake Comfort, button on the left or right joystick	+
Operator's seat Comfort	•
Operator's seat Premium	+
Driving alarm (acoustic signal is emitted during travel, can be switched ON/OFF)	+
Fire extinguisher	+
Footrest	+
Horn, button on left joystick	•
Joystick steering (max. 12 km/h)	•
Cab elevation, hydraulic (LHC)	•
Cab elevation, rigid (LFC)	+
Automatic air conditioning	•
Wheel steering (slim version)	+
LiDAT, vehicle fleet management	•
Proportional control	•
Radio Comfort, control via display with handsfree set	+
Preparation for radio installation	•
Back-up alarm (acoustic signal is emitted traveling backward, can not be switched off)	+
Amber beacon, on cabin, LED double flash	+
Windows made from impact-resistant laminated safety glass	+
Windscreen wiper, roof	+
Windshield wiper, entire windscreen	•
Top guard	+
Front guard, adjustable	+
Sun visor	+
Left control console, folding	•

Equipment

Boom lights, 2 pieces, halogen	•
Boom lights, 2 pieces, LED	+
Stick lights, 2 pieces, halogen	•
Stick lights, 2 pieces, LED	+
Height limitation and stick shutoff, electronically	+
Stick camera (with separate monitor), bottom side, with protection	+
Liebherr quick coupler, hydraulic	+
Pipe fracture safety valves hoist cylinders	•
Pipe fracture safety valves stick cylinders	•
Quick coupling system LIKUFIX	+
Overload warning device	+

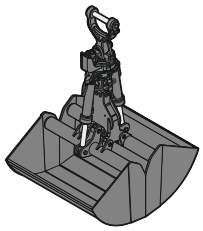
Complete Machine

Lubrication	
Lubrication undercarriage, manually – decentralised (grease points)	•
Lubrication undercarriage, manually – centralised (one grease point)	+
Central lubrication system for uppercarriage and equipment, automatically	•
Central lubrication system for undercarriage, automatically	+
Special coating	
Special coating, variants	+
Monitoring	
Rear view monitoring with camera	•
Side view monitoring with camera	•

• = Standard, + = Option
* = country-dependent

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.

Attachments



Grab for Loose Material

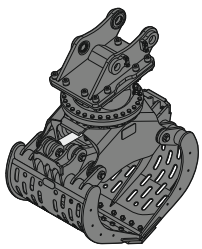
Shells for loose material with cutting edge (without teeth)

Grab model GM 10B			
Width of shells	mm	1,000	1,300
Capacity	m³	1.00	1.30
Weight	kg	1,095	1,135

Multi-Tine Grab

Grab model GM 55B (5 tines)		**open**	**semi-closed**	**closed**
Capacity	m³	0.40	0.40	0.40*
Weight	kg	995	1,120	1,375

* heart-shaped



Sorting Grab

Grab model SG 20B		**perforated**	**closed**	**perforated**	**closed**	**perforated**	**closed**	**perforated**	**closed**
Width of shells	mm	800	800	1,000	1,000	1,200	1,200	1,400	1,400
Capacity	m³	0.40	0.40	0.50	0.50	0.60	0.60	0.70	0.70
Max. closing force	kN	40	40	40	40	40	40	40	40
Weight incl. adapter plate SWA	kg	950	965	995	1,010	1,040	1,050	1,085	1,095

Printed in Germany by DHW RG-BK LHB/VF-12247535-1-03.19_enGB

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