

PRELIMINARY



227 kW (Stage IIIa)
231 kW (Stage V)
200 kW (Electro)



77 - 110 t



17 - 21 m



MAXCAB

MASTERCAB

855E Hybrid

Mobile material handler



1962: rope-driven S833
with elevated operator cab

What makes up the E-Series

- 65 years of experience in designing and constructing hydraulic material handling machines
- Uncompromisingly high performance in all areas: Focus on material handling
- Technology that can be mastered: High-quality components without over-engineering
- Long service life and high value retention

Your top benefits:

1

Green Efficiency

Save fuel – reduce operating costs Work quietly – protect operator and environment



2

Top-level performance

Durable mechanical systems – stressed parts optimized High speeds– high load capacities

3

Maximum usability

Maxcab comfort cab – work in comfort
SENCON – work program selection made easy



4

Maximum safety

Safe entry and exit – no-slip steps State-of-the-art cameras – entire work area in view

5

Maintenance and service made easy

SENNEBOGEN control system– easy error diagnostics
Simple maintenance– clear labelling

6

Consultation and support in your area

3 production sites – 2 subsidiaries 150 sales partners –
over 350 service stations





Subject to change. Additional options available upon request.

B55E Hybrid

The E-Series. At a glance.



Four ways to save fuel

- Up to 20 % savings: Work in EcoMode with reduced engine speed
- Idle automation reduces speed to 40 % of operating speed
- Stop automation switches the engine off when not needed
- Optimized engine settings, reduced specific fuel consumption, state-of-the-art exhaust after treatment



Quiet operation ²

- Consistently quiet operation thanks to decoupled engine mounts and soundproofing in the doors
- Sound pressure level reduced by up to 4.5 dB; sound power level according to 2000/14/EC up to 2 dB lower than required

High-capacity cooling ³

- Constant, reliable performance thanks to large-dimensioned and robust fans and coolers
- Water and oil coolers with top-notch efficiency thanks to axial-piston pump and motor control and on-demand thermostatic control
- Fan reversal for cleaning in series

⁴ Subject to technical changes. Further options available upon request.



Powerful hydraulic system 4

- Strong pumps with power reserves
- Top efficiency thanks to large-dimensioned hydraulic valves and lines
- Extra-long change intervals of 4,000 operating hours through initial fill-up with special oil with extended service life when using SENNEBOGEN HydroClean*

Maximum safety

- No-slip work surfaces
- Hand rails 1
- 2 cameras to the right and rear
- Step grid with railing next to cab sliding door
- Protective guard*, windshield/roof



The premium cab.

Panoramic view

Equipment features

- optimal indoor climate with automatic climate control, partly tinted windows
- comfortable even temperature distribution via 9 air vents
- panoramic view
- Air suspended comfort seat, seat heater
- quiet due to optimized soundproofing
- Safety & comfort thanks to the sliding door, large access opening
- operating elements arranged ergonomically, SENCON
- 12 V, 24 V, and USB charging sockets, cellphone holder, document folder
- various options : electric cooler box behind the driver seat, slip covers, seat climate control

SENNEBOGEN Joysticks

- Joysticks on resonant, seat-mounted consoles
- Comfortable grip thanks to ergonomic design
- Shortcuts for direct and sensitive control
- Quicker access thanks to optimized design of buttons and switches

B55E
Hybrid

Maintenance and service made easy.



Optimized for maintenance

- Fast and easy diagnostic analysis thanks to the clearly labeled electrical distributor
- Easy access to all service points on the machine
- Automatic central lubrication for equipment and slewing gear raceway



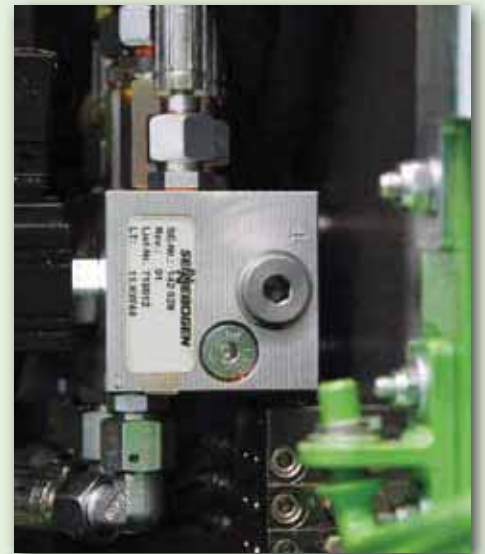
SENNEBOGEN- HydroClean*

- Optimal protection of hydraulic components thanks to 3 µm micro-filter
- Cleaner hydraulic oil, extended oil service life



Central measuring points

- Easily accessible
- Quickly inspect the entire hydraulic system

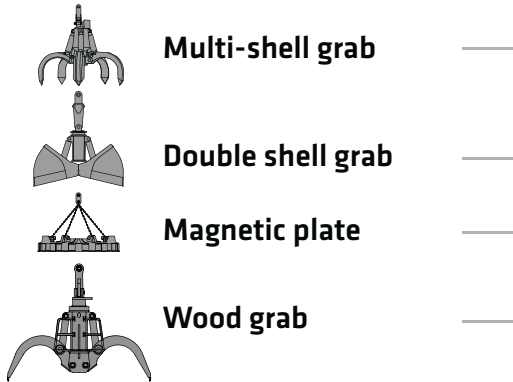


Clear labeling

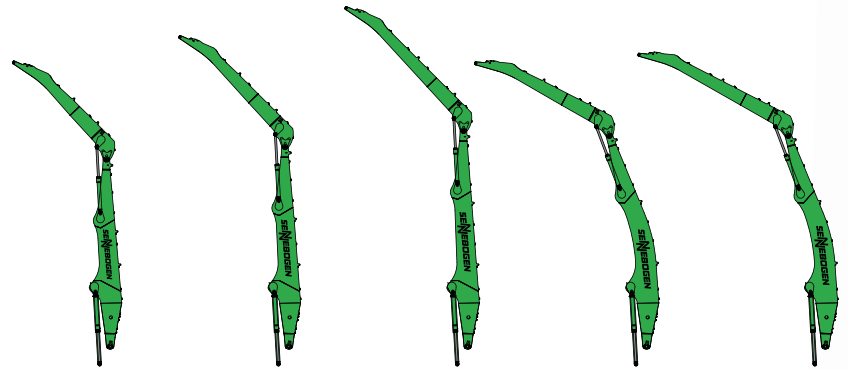
- All parts labeled with a unique part number
- Easy and reliable spare parts ordering

* Option

Attachments



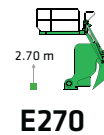
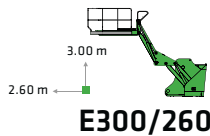
Equipment options (others available upon request)



Cabs



Cab elevation



K17

K19

K21

B19

B20

Upper carriage



Diesel-hydraulic drive



Electrohydraulic drive

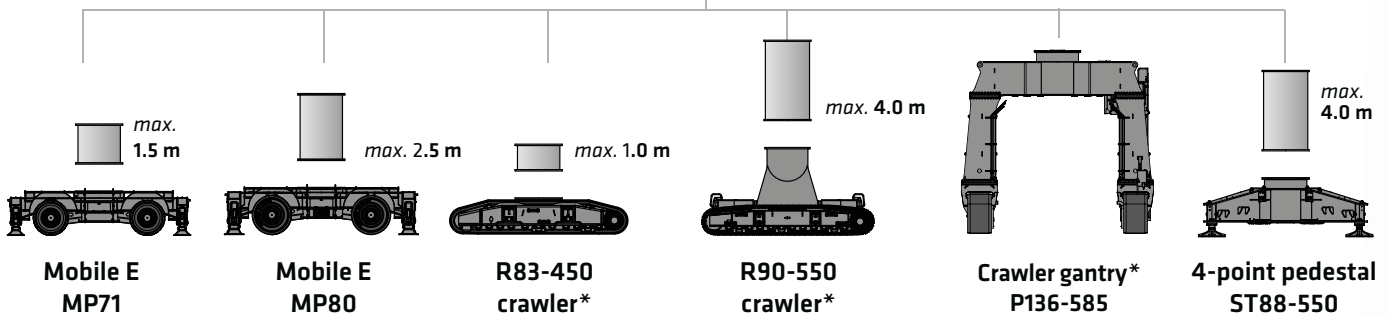


Motorized cable reel



Transformer

Undercarriage variants



Advantages at a glance

- Decade-long experience
- most advanced computer simulation
- the greatest degree of stability and longest service life

Reliable working thanks to robust and FEM optimized equipment

Ideal overview and safe working height thanks to stable cab elevation

Better illumination of the work area through powerful LED headlights*

High load capacities even when fully extended, thanks to massive cylinders

Robust side cover made from recyclable sheet steel

Safe entry and exit thanks to railings, grip handles and no-slip steps

SENEBOGEN
Green Hybrid

Safe entry and exit thanks to platform with railing

High stability due to the broad outrigger area

855E
Hybrid

BSS
 Hybrid

SENNEBOGEN Green Hybrid Energy Recovery System



Save 30 % energy with the Green Hybrid system

- A combination of hydraulic cylinders at the outrigger and nitrogen piston accumulators with gas recovers energy during the work procedure
- Use of the recovered energy during the next working cycle reduces the necessary engine power



Safety

- Use of standard hydraulic components
- Energy storage in the enclosed rear section

Reduce operating costs

- High quality components for a long service life and reliability
- Proven concept: successfully in use since 2013
- High efficiency of the system – already very effective in small lifting movements

SGM orange peel grab (4 shells)



Design / size	Grab capacity	Weight ¹		max. piled density
		Shell shape ²		
		HO	G	
SGM	l	kg	kg	t/m ³
800.50-4	800	2245	2490	2.0
1000.50-4	1000	2345	2585	
1500.50-4	1500	2475	2830	
2000.50-4	2000	2660	3075	

SGM orange peel grab (5 shells)



Design / size	Grab capacity	Weight ¹		max. piled density
		Shell shape ²		
		HO	G	
SGM	l	kg	kg	t/m ³
800.50	800	2580	2740	2.0
1000.50	1000	2710	2870	
1500.50	1500	2860	3100	
2000.50	2000	3060	3370	
2500.50	2500	3130	3615	
3000.50	3000	3250	3875	
3500.50	3500	3420	4140	

Clamshell grab SGZ



Design / size	Grab capacity	Weight ¹	max. piled density
SGZ	l	kg	t/m ³
1500.50-HD	1500	2240	3.5
2000.50-HD	2000	2535	
3000.50-L	3000	2140	1.0
3500.50-L	3500	2260	
4000.50-L	4000	2480	0.8
4500.50-L	4500	2600	

Magnetic plates



Type series / model	Power	Deadweight	Breakaway force	Load-bearing capacity in kg
WOKO	kW	kg	kN	Bramme (safety factor 2)
S-RLB 15	11.7	2400	380	19000
S-RLB 17	17.8	3300	640	32000
S-RLB 19	22.0	5090	790	39500
Recommended magnetic generator: 20 - 25 kW				

*) Available upon request

1) Weight information without grab suspension, stick bolts, hose system

2) Half-open shells: shell sheet steel width 400 mm, 500 mm for 1,250 l capacity and higher

MACHINE TYPE

 Model (type) **855**

ENGINE

Power	Stage V: Rated Power: 231 kW at 2100 rpm 237 kW at 2000 rpm / 242 kW at 1800 rpm Stage IIIa: Rated Power: 227 kW at 2000 rpm 254 kW at 1800 rpm
Model	Cummins L9 Direct injection, turbo-charged, charge air cooler, reduced emissions, Eco Mode, automatic idle, automatic stop, fuel pre-warming
Cooling	Water-cooled, cooler fan reversal
Diesel filter	With water separator and heating system
Air filter	Dry filter with integrated pre-separator, automatic dust discharge, main element and safety element, contamination indicator
Fuel tank	1000 l
DEF tank	100 l
Electr. Annex	24 V
Batteries	2 x 155 Ah , battery disconnect switch
Options	<ul style="list-style-type: none"> ■ Engine block heater ■ Electric fuel pump


UPPER CARRIAGE

Design	Torsion-resistant box design, precision crafted, steel bushings for boom bearings. Extremely service-friendly design, longitudinal engine.
Central lubrication	Automatic central lubrication for equipment and slewing ring
Electrical system	Central electrical distributor, battery disconnect switch
Cooling system	3-circuit cooling system with high cooling output, thermostatically regulated fan drive for oil cooler and water cooler, fan reversal for cleaning
Options	<ul style="list-style-type: none"> ■ Slewing gear brake via foot pedal ■ LED lighting packages ■ Fire extinguisher ■ Sea climate resistant coating as corrosion protection ■ Electric hydraulic tank preheating for temperatures below -20 °C

Options



- Low-temperature
- Hydraulically driven magnetic generator
 20 kW / 25 kW
- SENtrack DS telematic system



HYDRAULIC SYSTEM


Load sensing/LUDV hydraulic system, hydraulic pilot-controlled work functions, load limit sensing control	
Pump type	Swashplate-type variable-displacement piston pump, load pressure-independent flow distribution for simultaneous, independent control of work functions
Pump control	Zero-stroke control, on-demand flow control – the pumps only pump as much oil as will actually be used, pressure purging, load limit sensing control
Operating pressure	max. 350 bar
Delivery rate	2 x 369 l/min and 1 x 240 l/min for rotary drive in the closed circuit
Filtration	High-performance filtration with long change interval
Hydraulic tank	900 l
Control sys- tem	Proportional, precision hydraulic actuation of work movements, 2 hydraulic servo joysticks for the work functions, additional functions via switches and foot pedals
Safety	Hydraulic circuits with safety valves, secured emergency lowering of the equipment at engine standstill, pipe fracture safety valves for lift cylinder and stick cylinder
Options	<ul style="list-style-type: none"> ■ Bio-oil – environmentally friendly ■ ToolControl for programming the pressure/ rate for up to 10 tools ■ Additional hydraulic circuit for shear attachment ■ Load moment warning with capacity utilization indicator ■ Overload safeguard with shutdown ■ 60 µm pressure filter for attachments ■ 3 µm hydraulic micro-filter – SENNEBOGEN HydroClean




SLEWING DRIVE


Gearbox	Compact planetary gear with slant-axis hydraulic motor, integrated brake valves
Parking brake	Spring-loaded multi-disk brake
Slewing ring	Very strong slewing ring sealed with pinion lubrication
Slewing speed	0–5,5 rpm, stepless

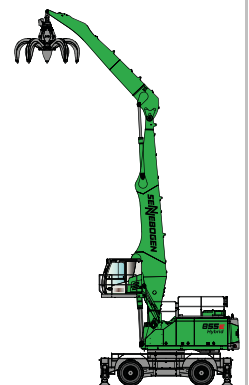
 CAB 	
Cab elevation	E270, hydraulically elevating cab
Cab equipment	Sliding door inc. sliding pane, vibration damped, tinted safety glass, front pane can be openend, roof window, windscreen wiper for front pane, radio preparation, air-suspended comfort seat, joystick steering, SENNEBOGEN SENCON control & diagnosis system
Options	<ul style="list-style-type: none"> ■ 30° tiltable cab ■ Cab elevation E300/260, can be elevated and moved forward hydraulically ■ Cab elevation Skylift 700/900 ■ Mastercab (Large-capacity port cab) ■ Maxcab Industry ■ Armored-glass windshield ■ Armored-glass sunroof ■ Safety side window and rear window ■ Windscreen wiper for front window/sky-light ■ Rolling shade for roof window and windshield ■ FOPS protective roof guard ■ Protective front guard ■ Charcoal filter for circulating and outside air ■ Auxiliary heating ■ Climatic seat ■ Radio ■ Electric cool box

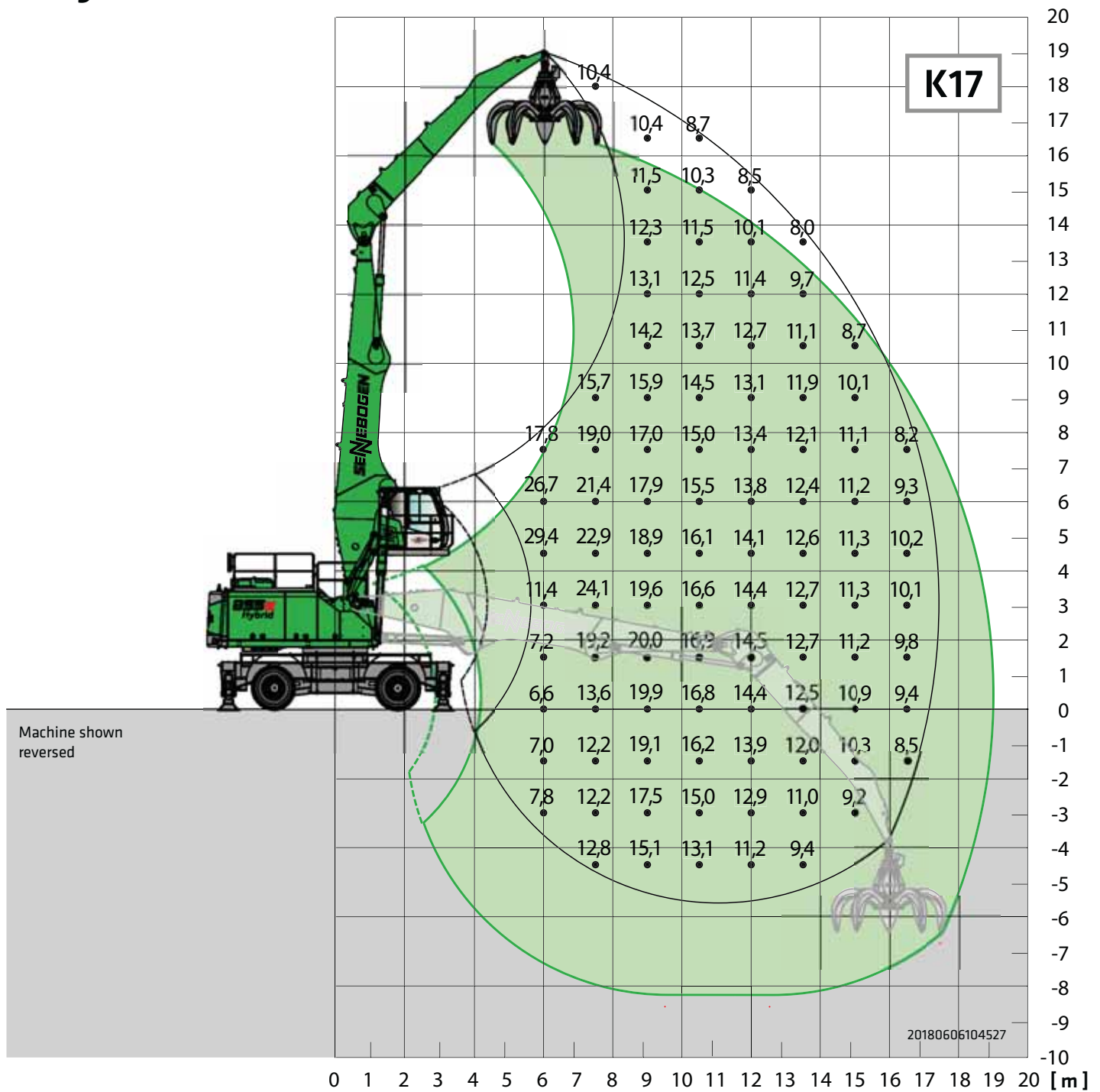
 FUNCTIONING	
Design	Decades of experience, state-of-the-art computer simulation, highest level of stability, longest service life, large-dimensioned and low-maintenance bearing points, sealed special bearing bushes, precision-crafted, quick-release couplings on the connections – open/close/rotate grab
Cylinders	Hydraulic cylinders with high-quality sealing and guide elements, end position damping, sealed bearing points
Options	<ul style="list-style-type: none"> ■ Ball valves in the hydraulic lines for quick and easy grab switching ■ Sea climate resistant coating ■ Sea climate resistant coating of all cylinders, nickel-plated and chrome-plated ■ Float position of the equipment ■ Hoisting limiter / stick limitation adjustable for stop settings, e.g. in the hall

 UNDERCARRIAGE	
Design	MP71 E mobile undercarriage with integrated 4-point outrigger system, hydraulic locking pendulum steering axle and pendulum axle cylinder with pipe fracture safety valves
Drive	All-wheel drive powered by a variable-displacement hydraulic motor with direct-mounted, automatically actuated brake valve Planetary axles with integrated steering cylinders, service brake in 2-circuit system
Parking brake	Spring-loaded multi-disk brake
Tires	14.00-24 , 8x
Speed	0-12 km/h variable
Options	<ul style="list-style-type: none"> ■ Tires: 16.00-25, 8x ■ Traction drive protection ■ Shunting coupler

 ELECTRIC DRIVE 	
Option	<ul style="list-style-type: none"> ■ Power: 200 kW / 400 V / 50 Hz Total connected load 340 kVA, machine side fuse 400 A (alternatively 425 A with magnet system) for 400 V – via star-delta circuit ■ Advantages: Lowest operating costs, quiet and virtually vibration-free work, long service life of hydraulic components

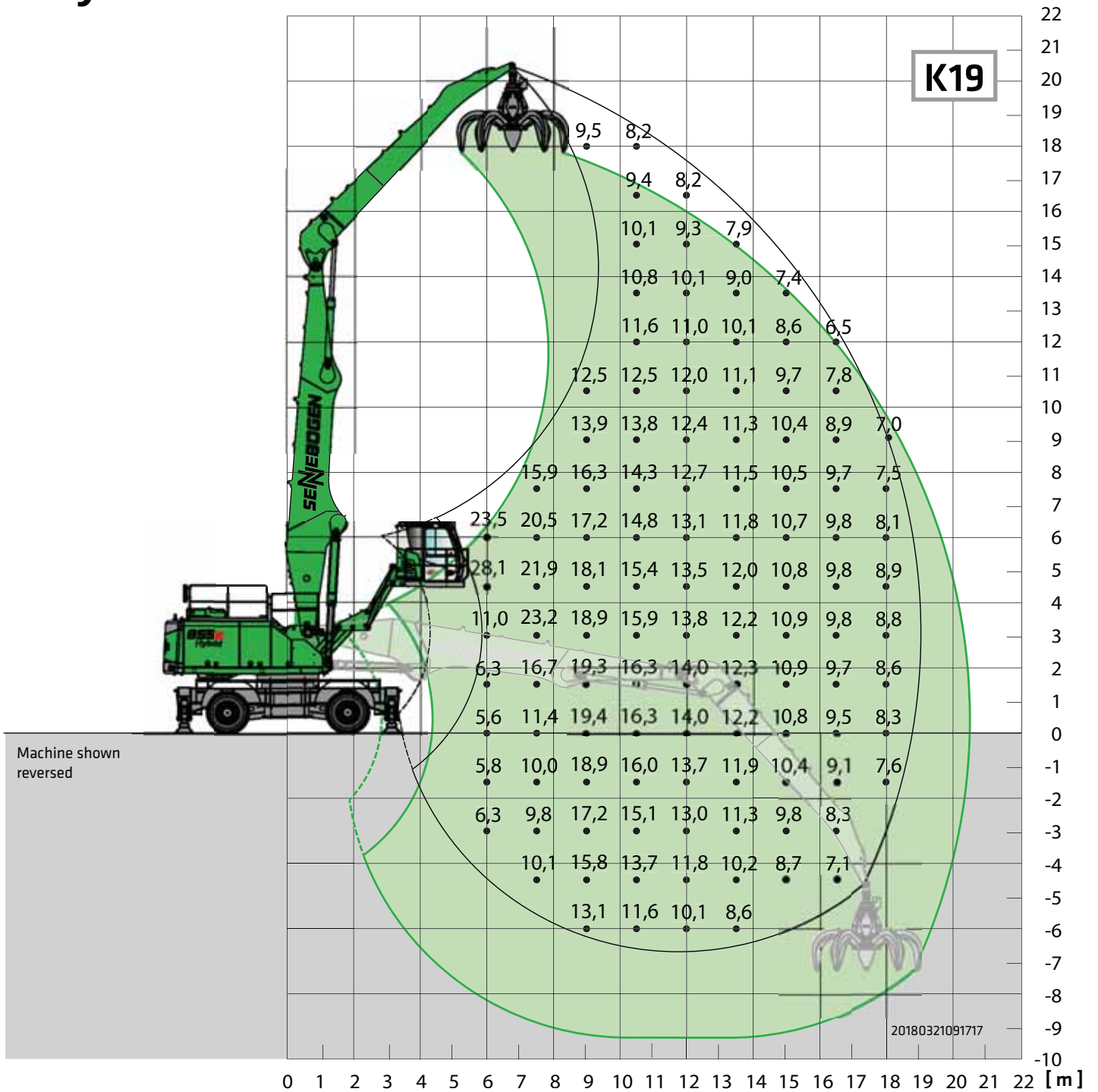
 OPERATING WEIGHT	
Mass	approx. 77,000 kg 855 M basic machine with K17 equipment and orange peel grab
Notice	Operating weight varies by design.





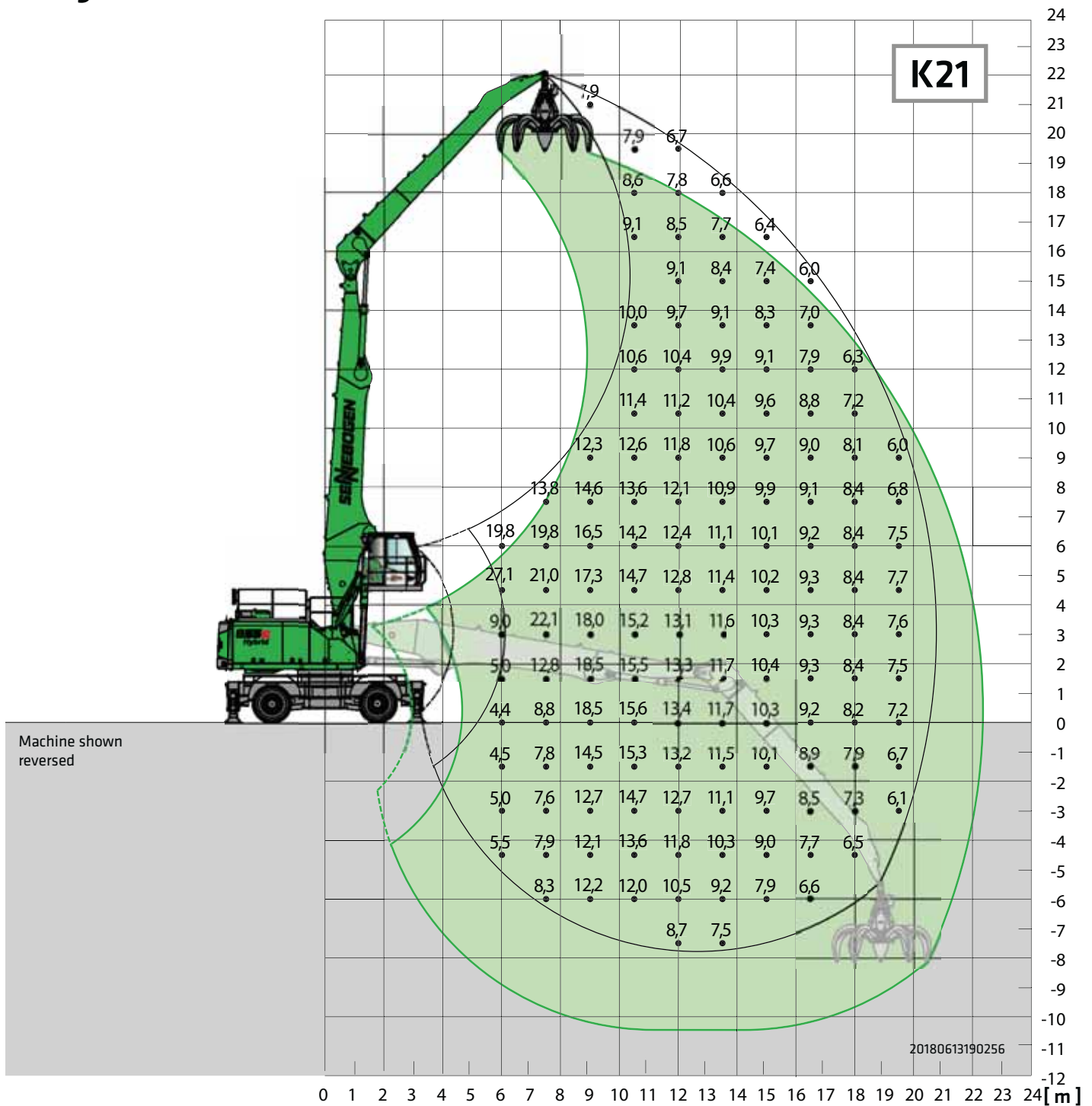
Undercarriage: MP71 **Compact boom:** 10.5 m **Cab:** Maxcab E270, hydraulically elevating
Grab stick: 7.5 m

All load ratings are specified in tons (t) and apply at the end of the stick, without attachment, on solid, level ground. Attachments such as grabs, magnets, load hooks, etc. are part of the specified load ratings. The specified values are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply at the required operating temperature in the Green Hybrid system. In accordance with EU standard EN 474/5, hydraulic material handling machines used for hoisting must be equipped with pipe fracture safety devices on the hoist and stick cylinders and an overload warning device. Loads rating apply to a machine with deployed 4-point outrigger support and 360° slewing.



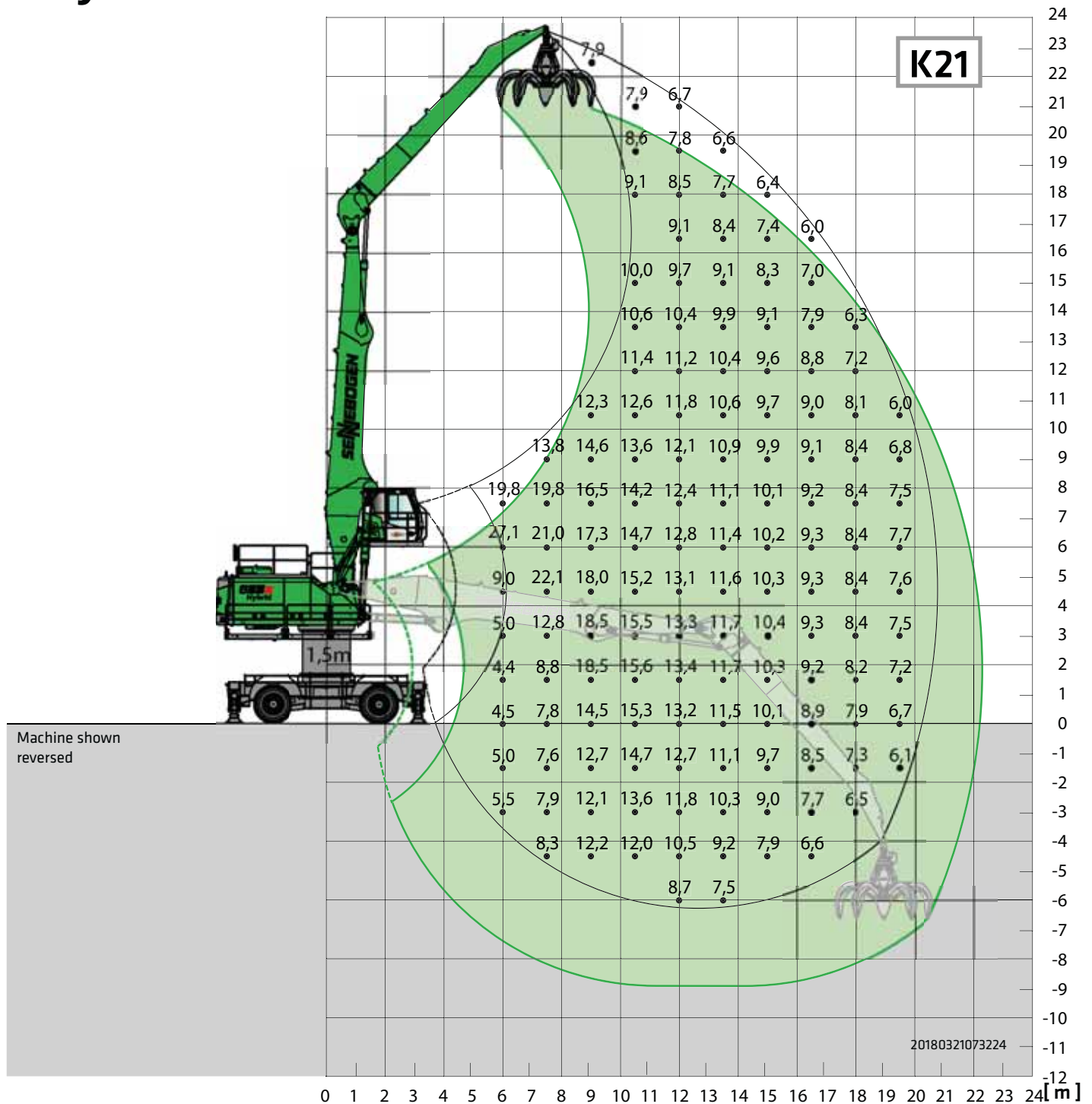
Undercarriage: MP71 **Compact boom:** 11.2 m **Cab:** Maxcab E300/260, can be elevated and moved forward hydraulically
Grab stick: 8.5 m

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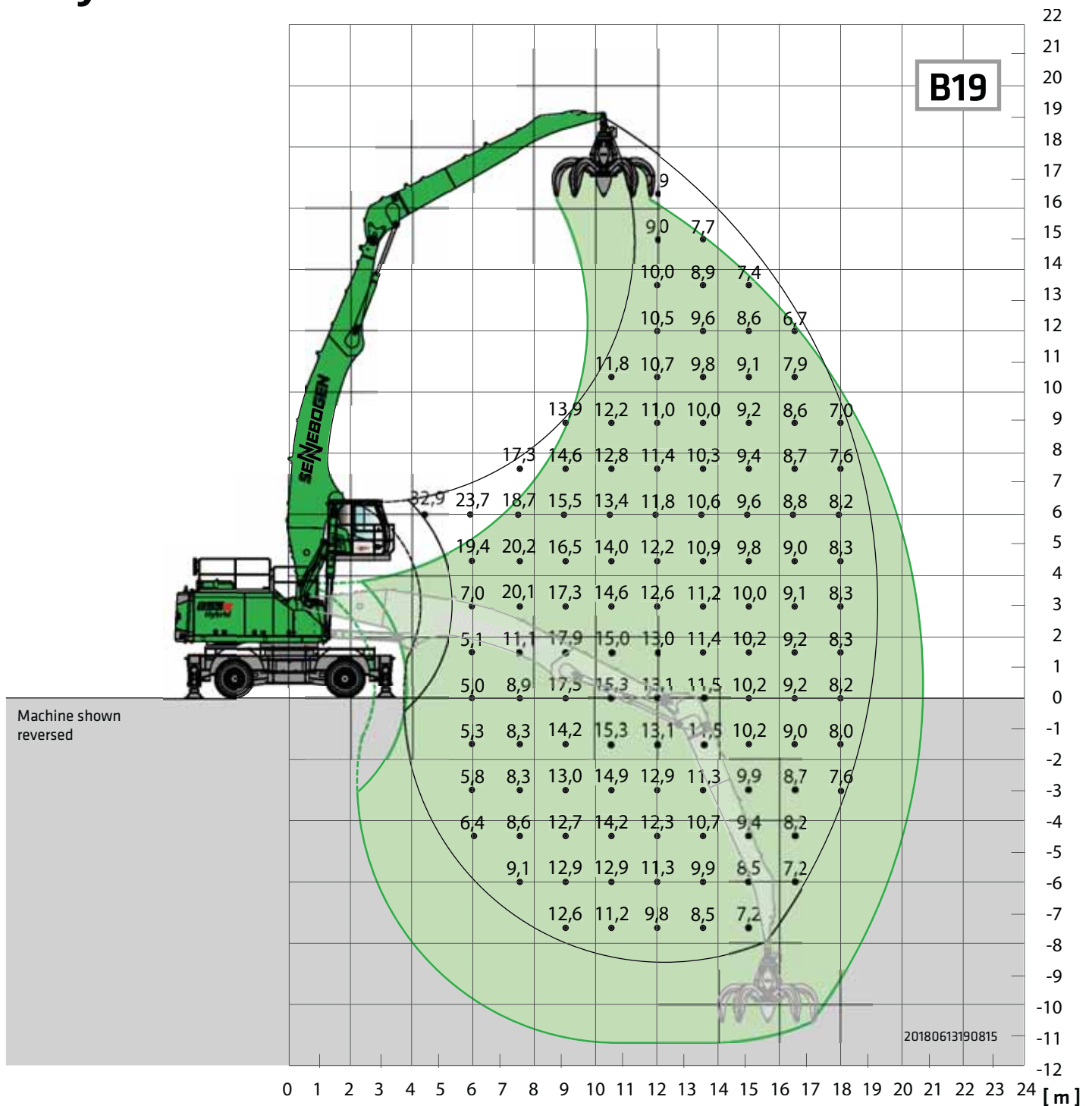
Undercarriage: MP71 **Compact boom:** 12.1 m **Cab:** Maxcab E270, hydraulically elevating
Grab stick: 9.5 m

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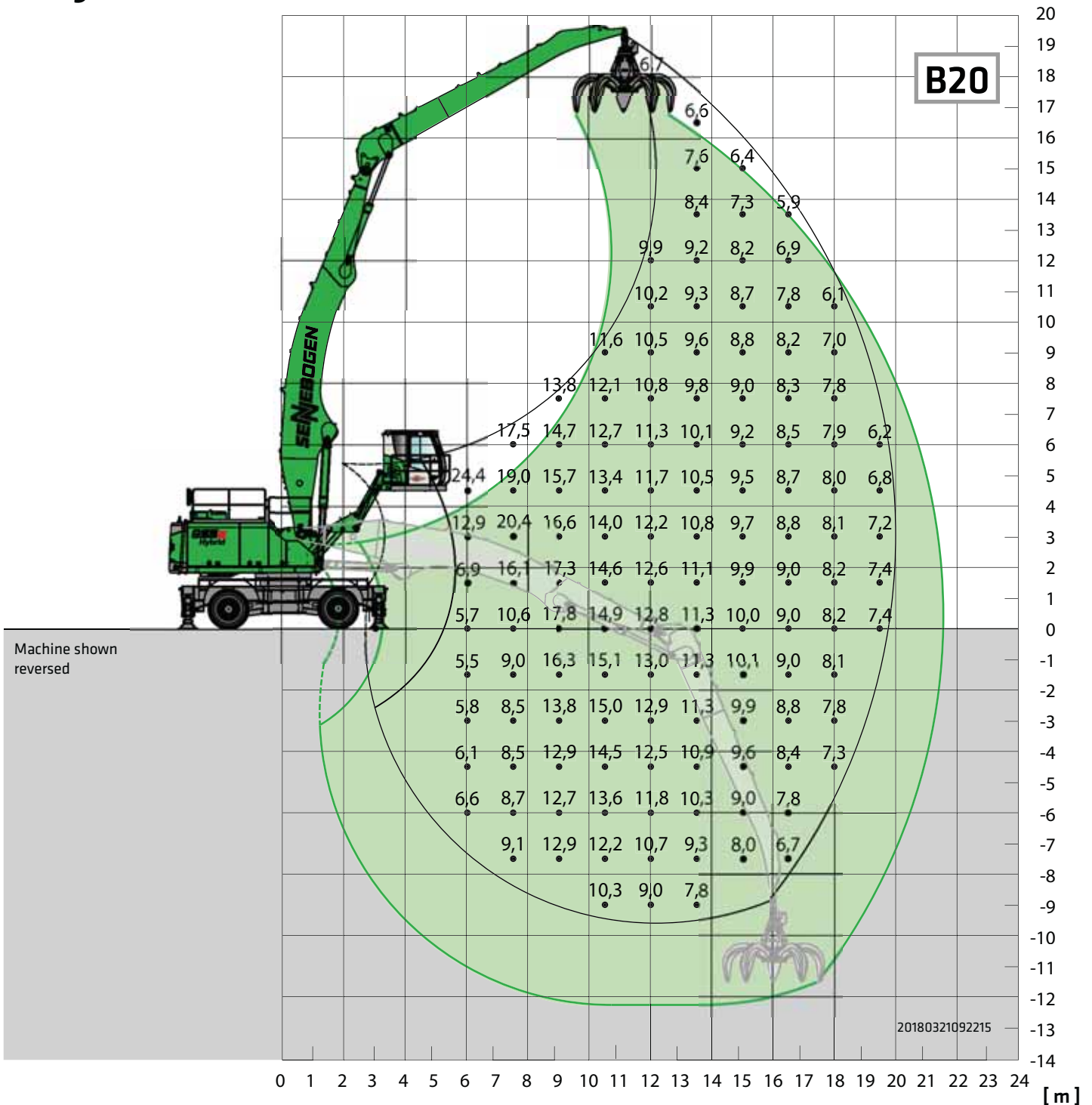
Undercarriage:	MP71	Compact boom:	12.1 m	Cab:	Maxcab E270, hydraulically elevating
Pylon:	1.5 m	Grab stick:	9.5 m		

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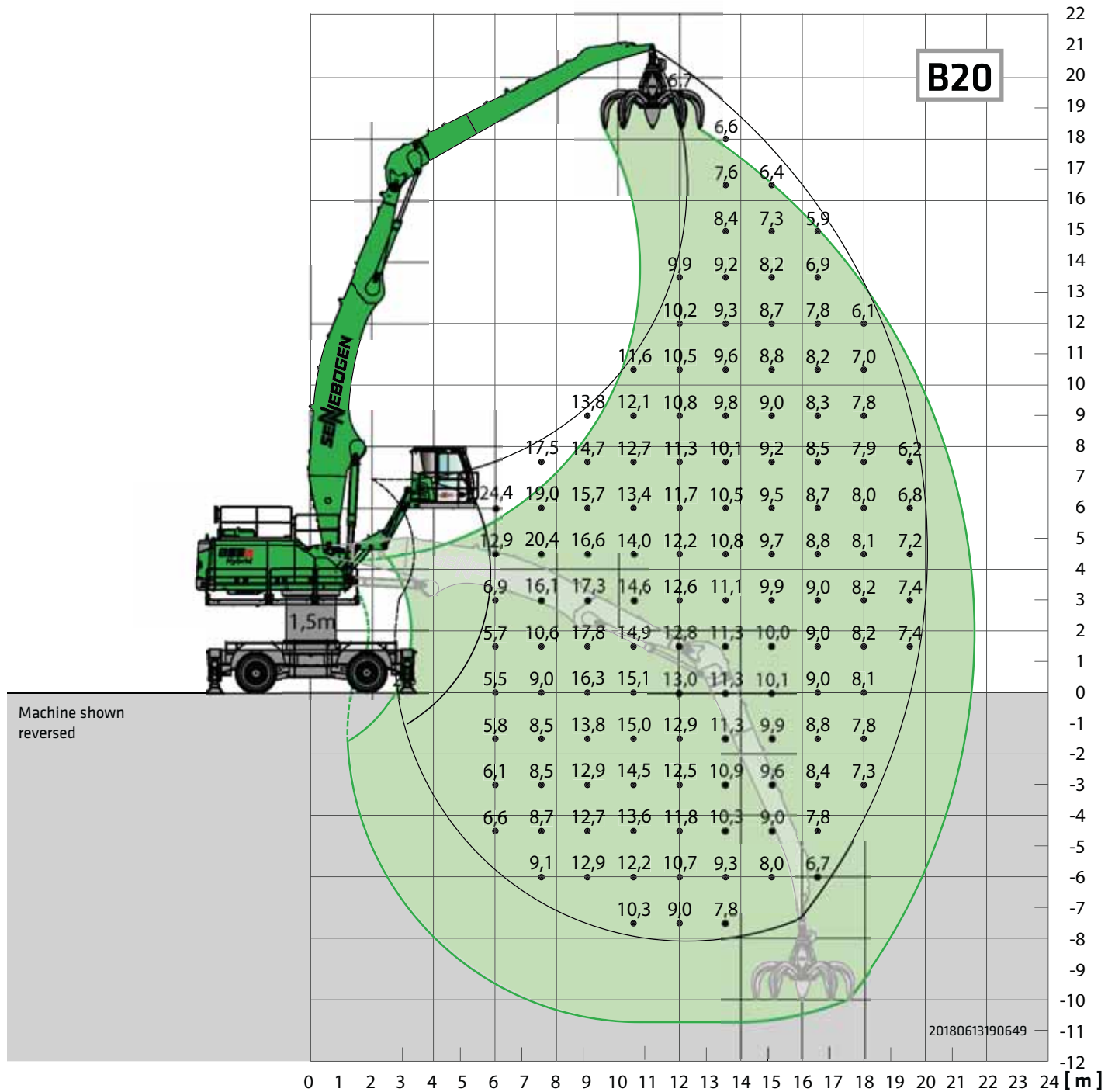
Undercarriage: MP71 **Compact boom:** 12 m banana **Cab:** Maxcab E270, hydraulically elevating
Grab stick: 8.5 m

All load ratings are specified in tons (t) and apply at the end of the stick, without attachment, on solid, level ground. Attachments such as grabs, magnets, load hooks, etc. are part of the specified load ratings. The specified values are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply at the required operating temperature in the Green Hybrid system. In accordance with EU standard EN 474/5, hydraulic material handling machines used for hoisting must be equipped with pipe fracture safety devices on the hoist and stick cylinders and an overload warning device. Loads rating apply to a machine with deployed 4-point outrigger support and 360° slewing.



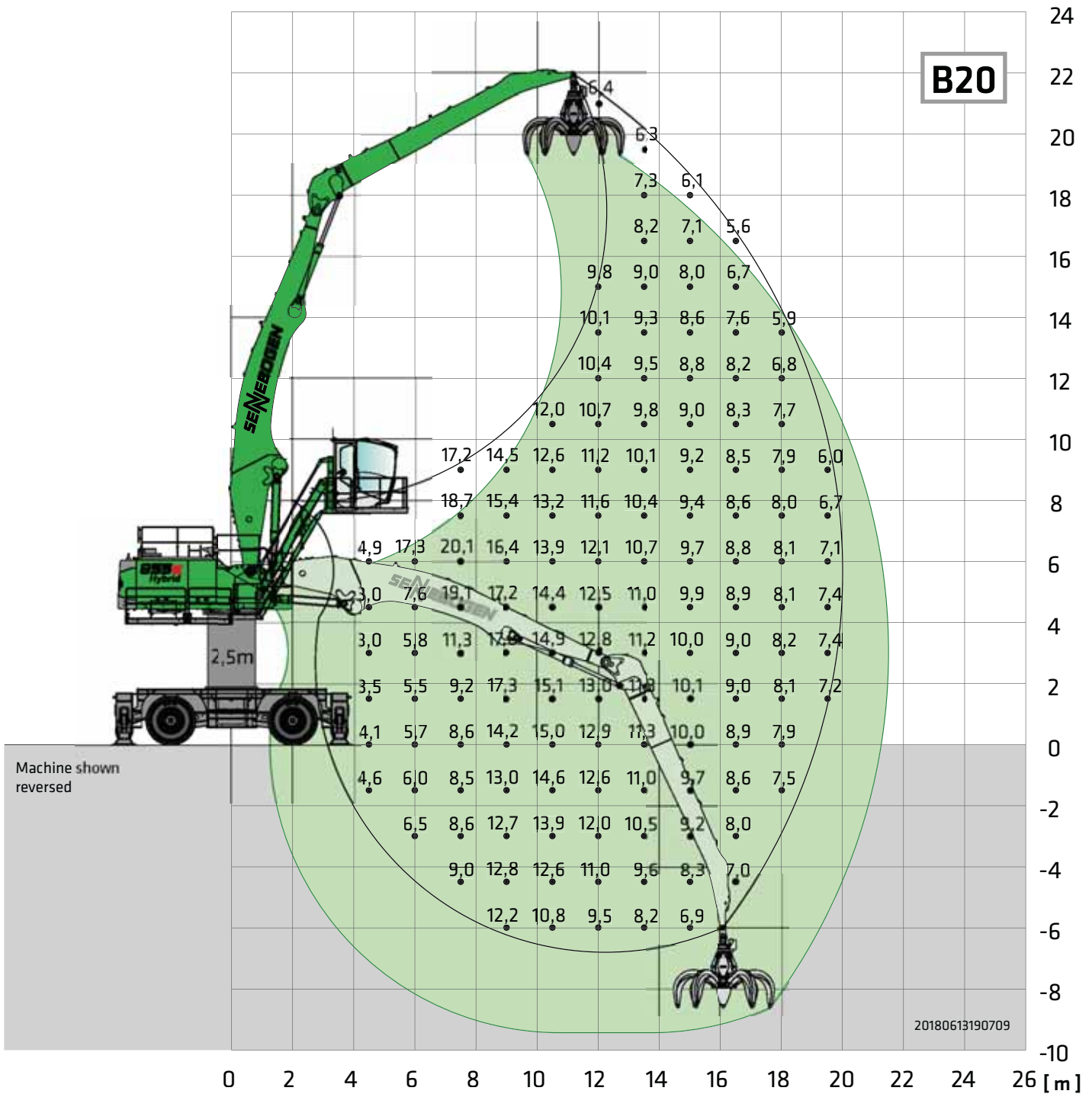
Undercarriage: MP71 **Compact boom:** 12 m banana **Cab:** Maxcab E300/260, can be elevated and moved forward hydraulically
Grab stick: 9.5 m

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Undercarriage: MP71 **Compact boom:** 12 m banana **Cab:** Maxcab E300/260, can be elevated and moved forward hydraulically
Pylon: 1.5 m **Grab stick:** 9.5 m

All load ratings are specified in tons (t) and apply at the end of the stick, without attachment, on solid, level ground. Attachments such as grabs, magnets, load hooks, etc. are part of the specified load ratings. The specified values are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply at the required operating temperature in the Green Hybrid system. In accordance with EU standard EN 474/5, hydraulic material handling machines used for hoisting must be equipped with pipe fracture safety devices on the hoist and stick cylinders and an overload warning device. Loads rating apply to a machine with deployed 4-point outrigger support and 360° slewing.

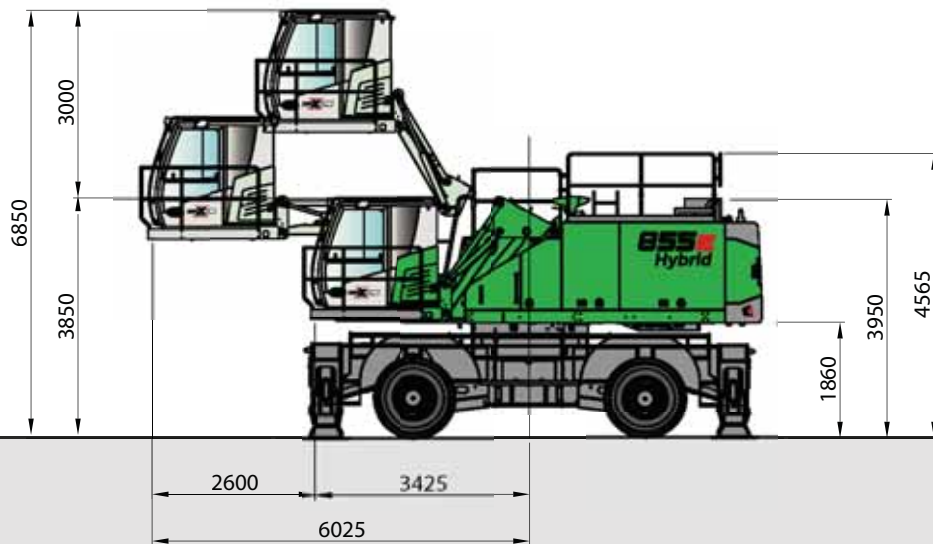
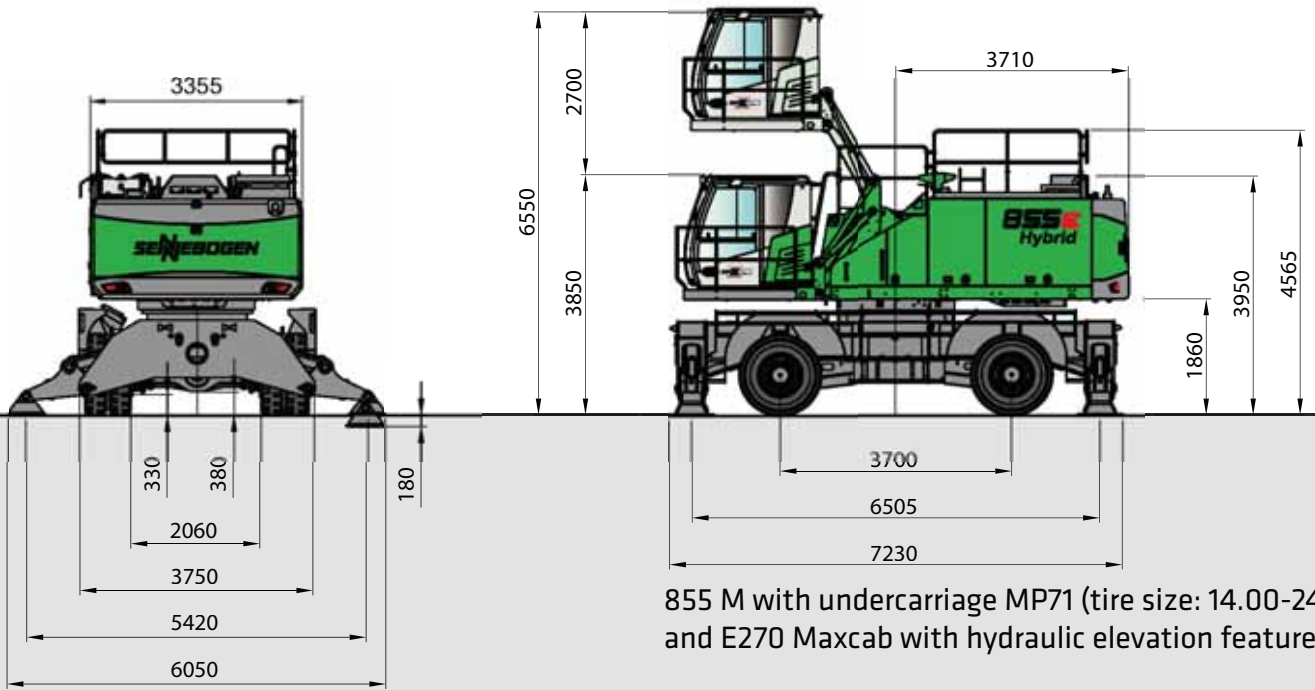


Undercarriage: MP80	Compact boom: 12 m banana	Cab: Skylift 700 with Master cab, hydraulically elevating
Pylon: 2.5 m	Grab stick: 9.5 m	

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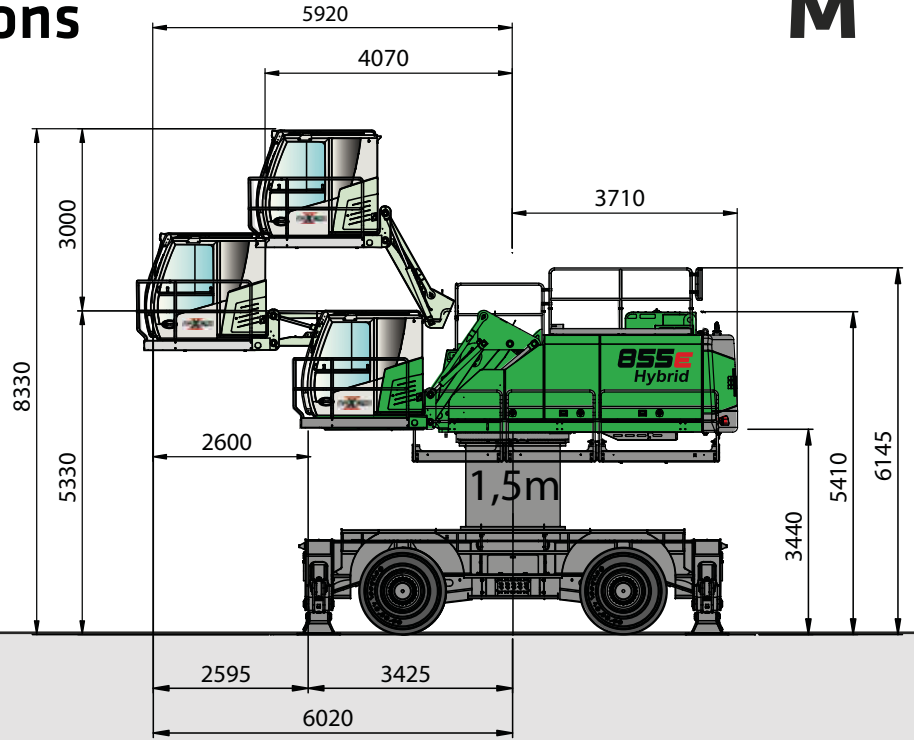
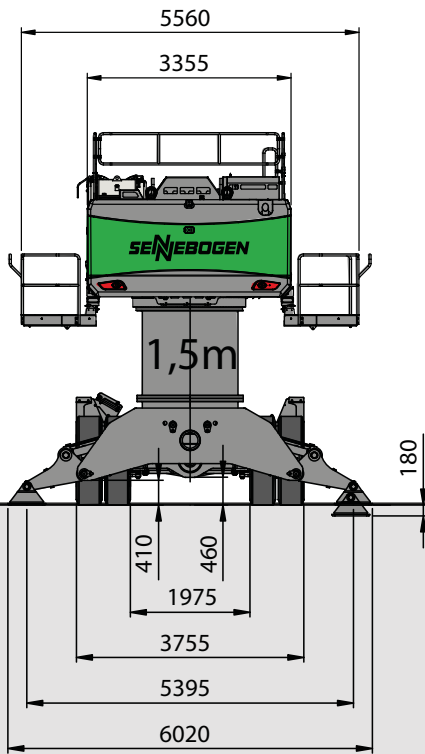
855E Hybrid Dimensions

M

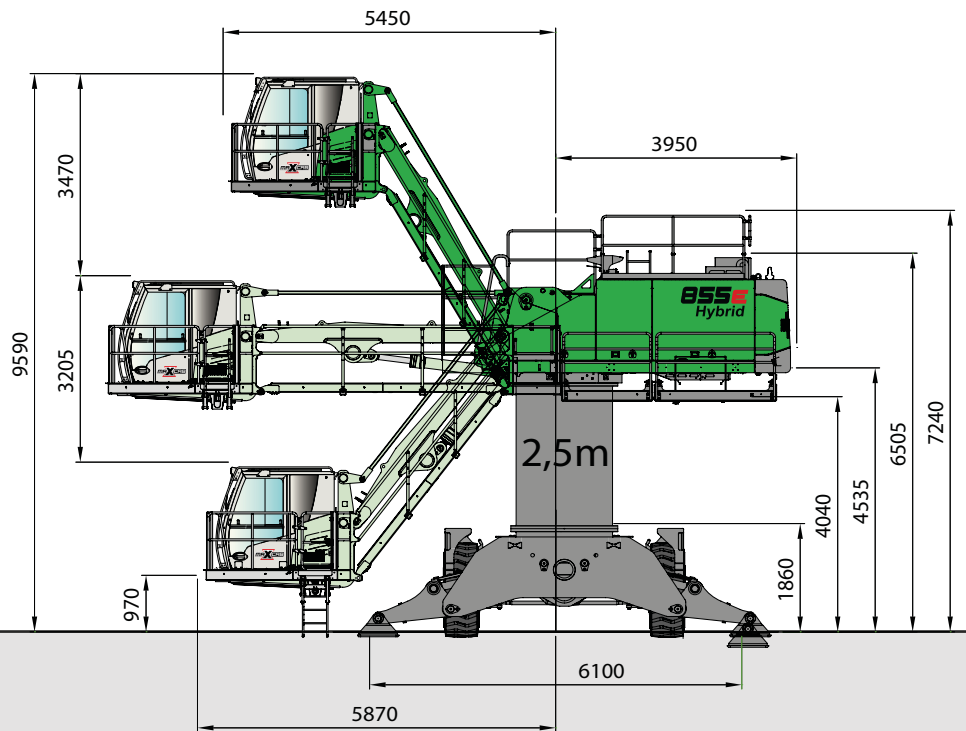
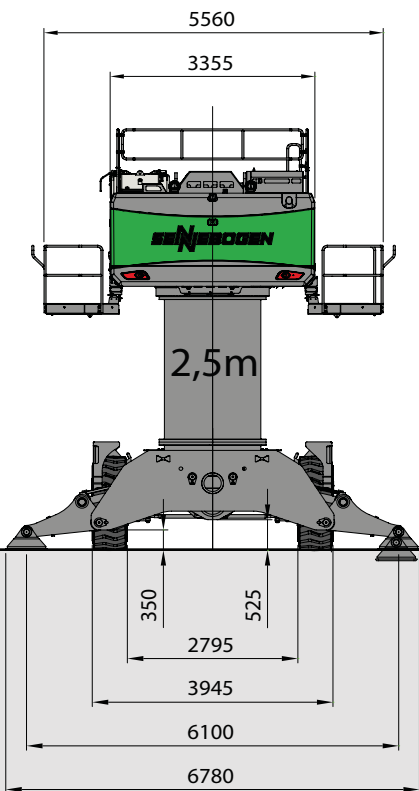


B55E Hybrid Dimensions

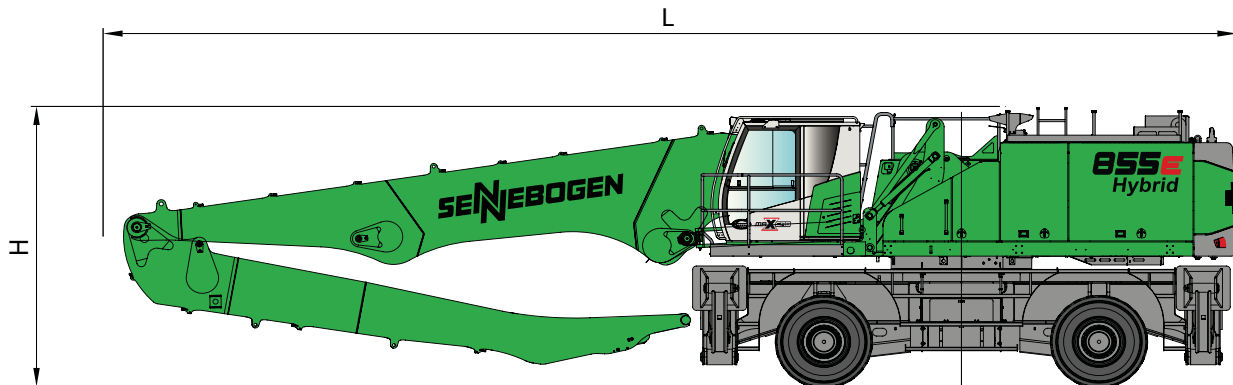
M



855 M with undercarriage MP71 (tire size: 16.00-25)
 Maxcab E300/260, can be elevated and moved
 forward hydraulically, Pylon 1.5 m



855 M with undercarriage MP80 (tire size: 23.5-25),
 Maxcab with hydraulic elevation Skylift 700 and 2.5 m pylon



The following transport dimensions apply to tire sizes 14:00-24 and 16:00-25:

	Load boom	Grab stick	Transport length (L)	Transport height (H)
K17	10.5 m	7.5 m	15.3 m	4.00 m
K19	11.2 m	8.5 m	16.0 m	4.00 m
K21	12.1 m	9.5 m	16.9 m	4.00 m
B19	12.0 m Banana	8.5 m	16.6 m	4.00 m
B20	12.0 m Banana	9.5 m	16.5 m	4.00 m*

* Stick removed.

Note:

This catalog describes machine models, scopes of equipment of individual models, and configuration options (standard equipment and optional equipment) of the machines supplied by SENNEBOGEN Maschinenfabrik GmbH.

Machine illustrations can contain optional equipment and supplemental equipment. Actual equipment may vary depending on the country to which the machines are delivered, especially in regard to standard and optional equipment and tolerances.



Notes

M

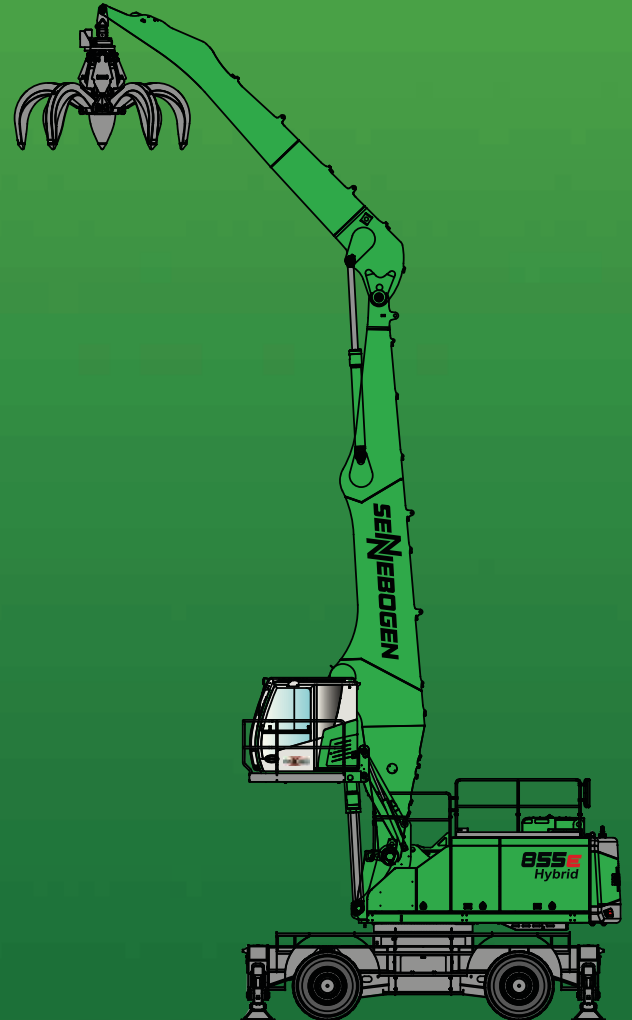
A large, empty grid of green lines on a white background, intended for taking notes. The grid consists of approximately 30 columns and 40 rows of small squares.





855E

M



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The Sennebogen logo, consisting of the word 'SENNEBOGEN' in a bold, stylized, sans-serif font. The letters are white with a black outline, set against a dark green rectangular background.

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