850 M

SENNEBOGEN

PRELIMINARY

268 kW (Stage IIIa)
261 kW (Stage V)
250 kW (Electro)

62-95 t

21 m

maXCAB

850E

Mobile material handling machine

Stage V

850E Advanced. The E-Series

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 - non-slip steps
State-of-the-art cameras - entire work area in view

5 Maintenance and service made easy
SENNEBOGEN Control System - easy fault diagnosis
Simple maintenance – clear labeling

6 Consultation and support in your area
3 production locations - 2 subsidiaries
130 sales partners - more than 350 service stations


SENNEBOGEN
850E

850E The E-Series. At a glance.

Four ways to save fuel

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

Quiet operation 2

- Consistently quiet operation thanks to de-coupled 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 pumps, motor control, and on-demand thermostatic control
- Fan reversal for cleaning in series

Powerful hydraulic system 4

- Strong pumps with power reserves
- Top efficiency thanks to large 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 Hydro Clean*

Maximum safety

- No-slip work surfaces
- Hand rails* 1
- 2 cameras to the right and rear
- Platform with railing next to sliding cab door

* Option

maXCAB The premium cab.

Equipment features

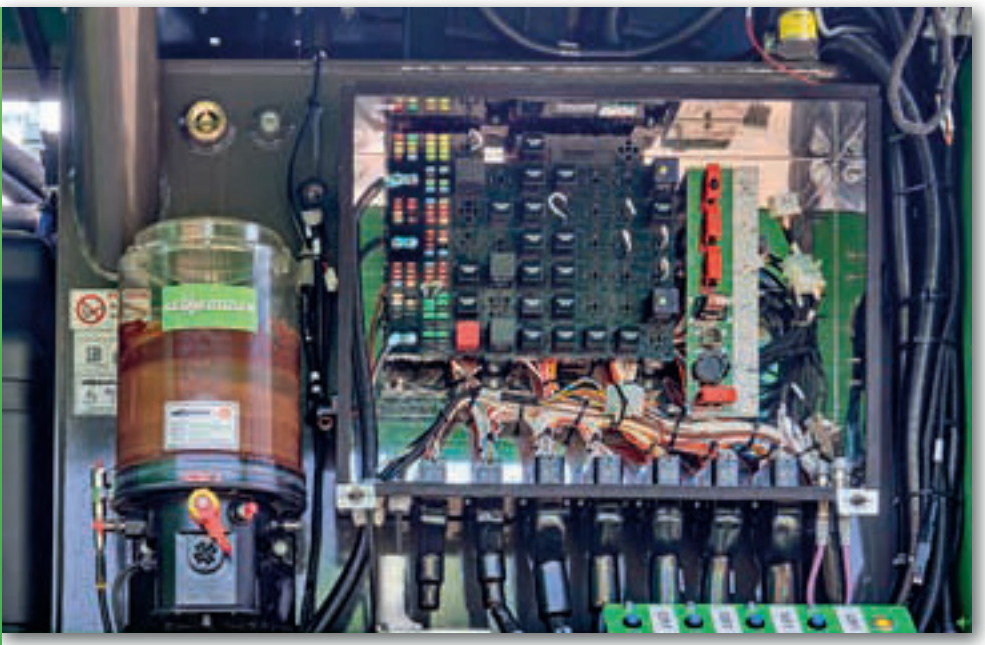
- Optimal indoor climate with automatic climate control, partly tinted windows
- Comfortable even temperature distribution via 9 air vents
- Panoramic view
- Air-suspension climate-control led comfort seat*, seat heater
- Quiet due to optimized soundproofing
- Safety & comfort thanks to the sliding door, large access opening
- Ergonomically arranged operating elements, 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

* Option

850E Maintenance and service made easy.



Optimized for maintenance

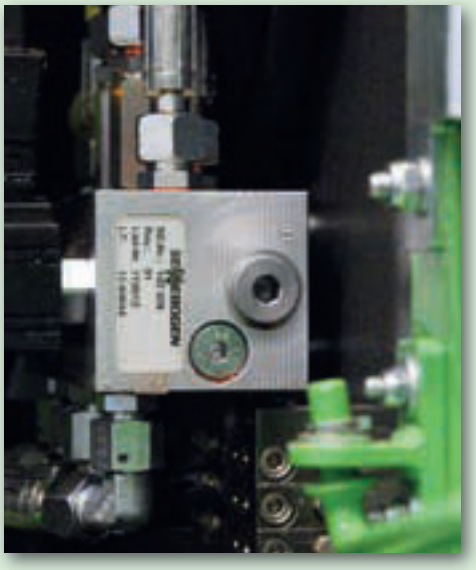
- Fast and easy diagnostic analysis thanks to the clearly labeled electrical distributor
- Easy accessibility to all service points of the machine
- Automatic central lubrication for equipment and slewing gear raceway

HydroClean*

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

Central measuring points

- Easily accessible, central measuring points
- Inspect the entire hydraulic system quickly



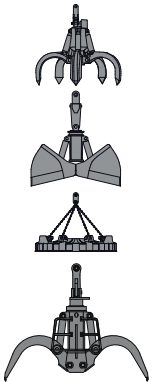
Clear labeling

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

* Option

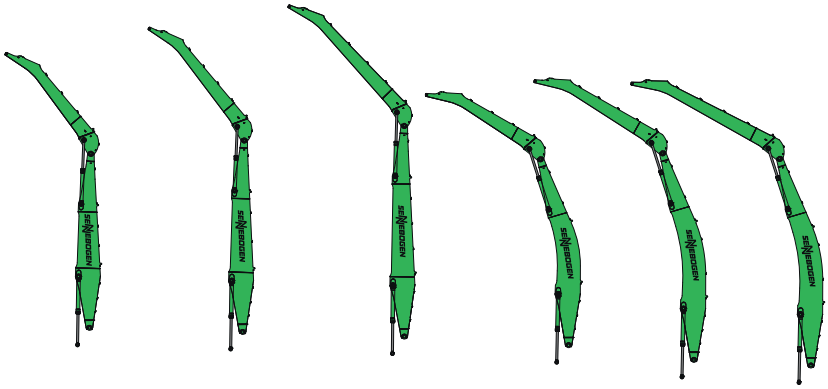
850 E Modular design - versatile solutions

Attachments



- Orange-peel grapple
- Double-shell grapple
- Magnetic plate
- Wood grab

Equipment options (others available upon request)

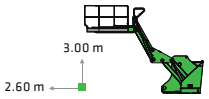


Cabs

Maxcab

Maxcab Industry

Cab elevation

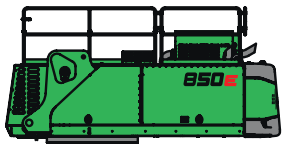


E300/260

E270

K17 | K19 | K21 | B17 | B19 | B20

Uppercarriage

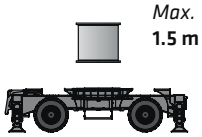


- Diesel-hydraulic drive
- Electrohydraulic drive

Options

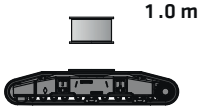
- Engine line drum
- Transformer

Undercarriage variants



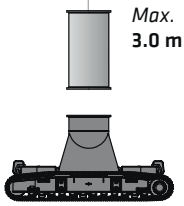
Max. 1.5 m

Mobile E
MP50



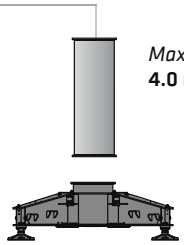
Max. 1.0 m

Crawler*
R73/420



Max. 3.0 m

Crawler*
R70/490



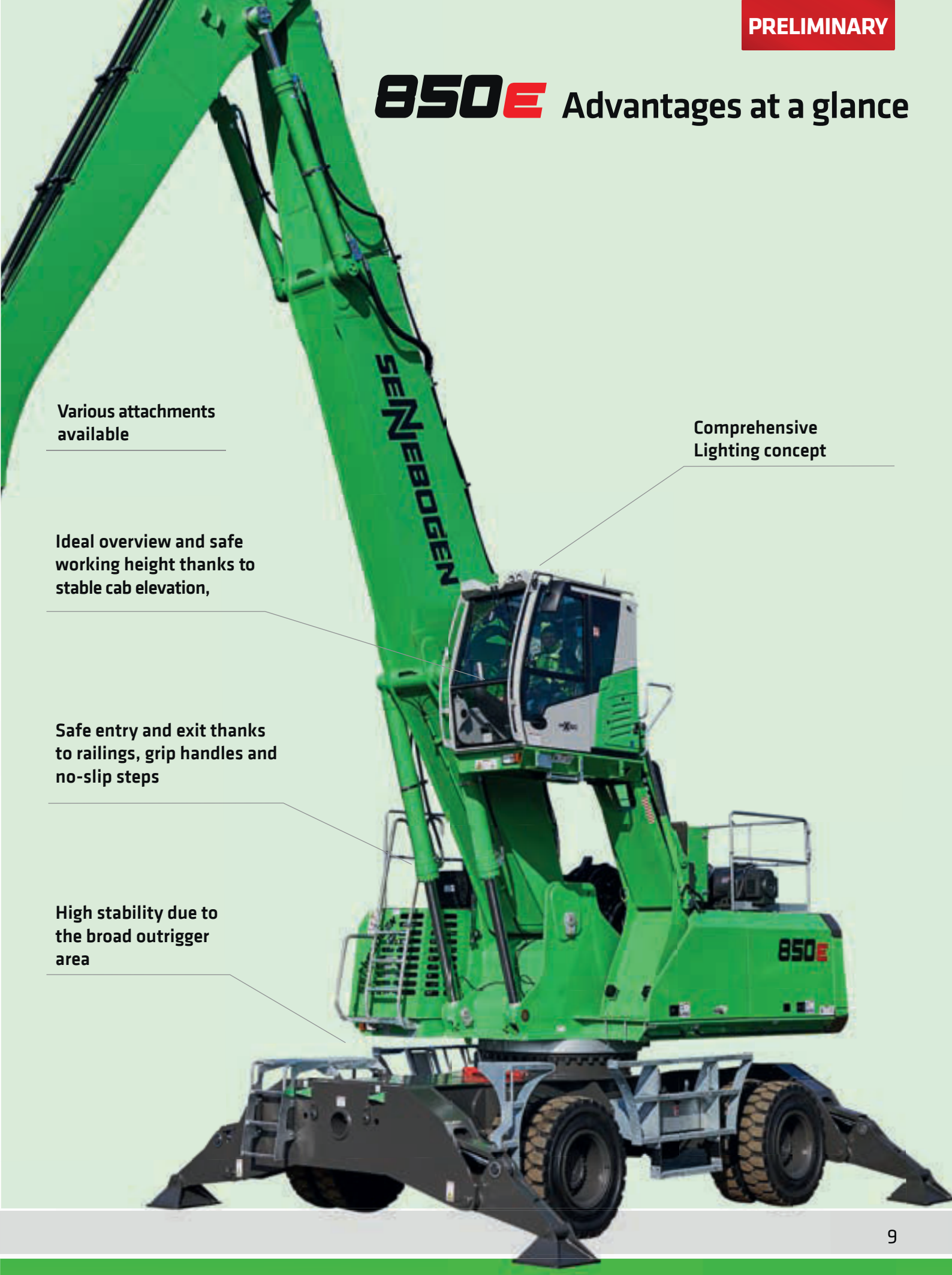
Max. 4.0 m

4-point underframe*
ST78/550

* Additional information on our crawler undercarriages can be found in the 850 R E-Series brochure.

PRELIMINARY

850E Advantages at a glance



Various attachments available

Comprehensive Lighting concept

Ideal overview and safe working height thanks to stable cab elevation,

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

High stability due to the broad outrigger area

850E Technical data, equipment

M

MACHINE TYPE

Model (type)	**850**

ENGINE

Power	**261 kW at 1800^{-1} (Stage V)** **268 kW at 1800^{-1} (Stage IIIa)**
Model	**Cummins QSG 12 - Stage V** **Cummins QSM 11 - Stage IIIa** Direct injection, turbo charged, charge air cooler, reduced emissions, Eco Mode, idle automation, stop automation
Cooling	Water-cooled
Air filter	Dry filter with pre-separator, automatic dust discharge, main element and safety element, contamination indicator
Fuel tank	**880 l**
DEF tank	**100 l**
Electr. system	**24 V**
Batteries	**2 x 150 Ah**, battery disconnect switch
Options	■ Engine block heater ■ Electric fuel pump

UPPERCARRIAGE

Design	Torsion-resistant box design, precision crafted, steel bushings for boom mounting. clean, service-friendly design, longitudinal engine
Central lubrication	Automatic central lubrication system
Electrical system	Central electrical distributor, battery disconnect switch
Cooling system	3-circuit cooling system with high cooling capacity, thermostatically regulated fan drive reduces energy consumption and noise pollution
Options	■ Slewing gear brake via foot pedal ■ 360° uppercarriage railing for additional safety ■ LED lighting package ■ Fire extinguisher ■ Sea climate resistant coating as corrosion protection ■ Electric heater for hydraulic tank ■ Low temperature packages ■ Hydraulically-driven magnetic generator 20 kW / 25 kW ■ SENtrack DS telematics system

HYDRAULIC SYSTEM

Load-sensing/LUDV hydraulic system for work and travel functions

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	**350 bar**
Filtration	High-performance filtration with long change interval SENNEBOGEN HydroClean-hydraulic microfilter system water separation, optional
Hydraulic tank	**700 l**
Flow rate max.	up to 770 l/min Up to 280 l/min for rotary drive in the closed circuit
Control system	Proportional, additional precision hydraulic actuation of work movements, 2 hydraulic servo joysticks for the work functions, additional functions via switches and foot pedals
Cooling	Very large-dimensioned cooler unit with thermostatically controlled fan drive
Safety	All hydraulic systems are protected with safety valves. High energy efficiency due to large-dimensioned hydraulic valves and lines. Hydraulic accumulator for emergency lowering of the equipment in the case of engine failure. Central measurement connections for hydraulic testing. Burst pipe safety valve for the hub and stick cylinder.
Options	■ Bio-oil – environmentally friendly ■ Tool Control for the programming of up to

SLEWING DRIVE

Gearbox	2 piece compact planetary gear with slant axis hydraulic motor in a closed hydraulic system ensures powerful rotary drive.
Parking brake	Spring-loaded multi-disk brake
Slewing ring	Very strong slewing ring sealed with pinion gear lubrication
Slewing speed	0-6 min^{1}, continuous

850 E Technical data, equipment

CAB

Cab type	E270 hydraulically elevating cab
Cab equipment	Sliding door inc. sliding window, excellent ergonomics, climate automation, seat heater, air-suspension comfort seat, fresh air filter / circulating air filter, joystick steering, 12 V / 24 V connections, SENCON
Options	■ active seat climate control ■ Auxiliary heating system with timer ■ Active carbon filter for cabs ■ Bullet proof windshield ■ Bullet proof skylight ■ Safety side window and rear window ■ Sun protection for skylight and windshield ■ Protective roof grating ■ FOPS protective roof grating ■ Protective front grating ■ Radio with speakers ■ Maxcab Industry with continuous bullet proof windshield ■ electric cooler box

FUNCTIONING

Design	Decades of experience and the latest computer simulations guarantee the greatest degree of stability and life-span. Oversized bearing points with low-maintenance, sealed special bushings, precision-crafted.
Cylinders	Hydraulic cylinders with high-quality sealing and guide elements, end position damping, sealed bearing points
Options	■ 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 ■ Hoist limit / stick limitation adjustable for stop settings, e.g. in the hall

UNDERCARRIAGE

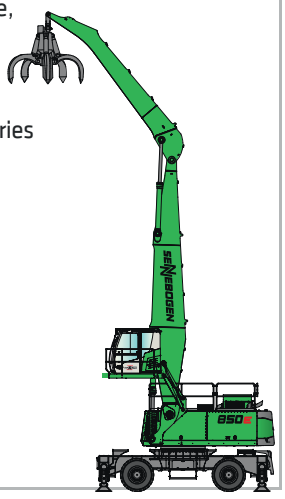
Design	Strong MP50 mobile undercarriage with 4 point outrigger support steering axle as hydraulically lockable floating axle. Floating axle cylinder with burst pipe safety valves, individual outrigger control for stability on uneven ground
Drive	All-wheel drive powered by variable-displacement hydraulic motors with direct-mounted, automatically actuated brake valve. Strong planetary axles, 2-circuit servo brake system with additional safety parking brake
Parking brake	Spring-loaded multi-disk brake
Tires	**8 x 14.00-24**, solid rubber
Speed	**0-14 km/h** variable
Options	■ Tires: **8 x 16.00-25** ■ Protection for travel drive ■ Shunting coupler

ELECTRIC DRIVE eGREEN

Option	■ Power: **250 kW / 400 Volt / 50 Hz** Total connected load 410 kVA, machine side fuse 500 A (alternatively 630 A with magnet system) for 400 V - star-delta connection motor start ■ Advantages: Lowest operating costs, low-noise and virtually vibration-free work, long service life of the hydraulic components

OPERATING WEIGHT

Mass	**approx. 62,000 kg** Basic 850 M machine with MP50 undercarriage, K17 with grab
Note	Operating weight varies by model and equipment.



850E Load ratings

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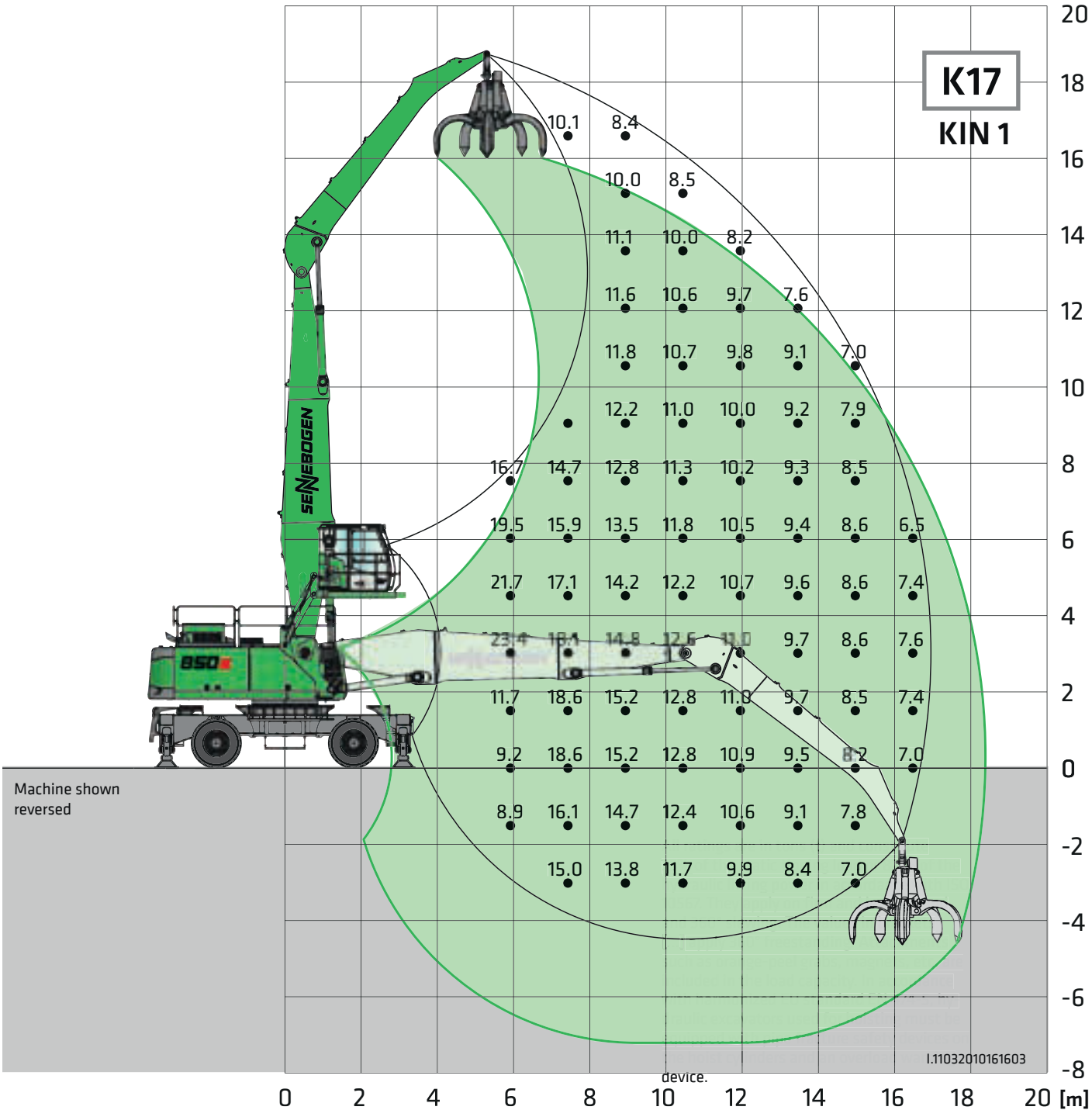


device.

Undercarriage: MP50

Compact boom: 10 m

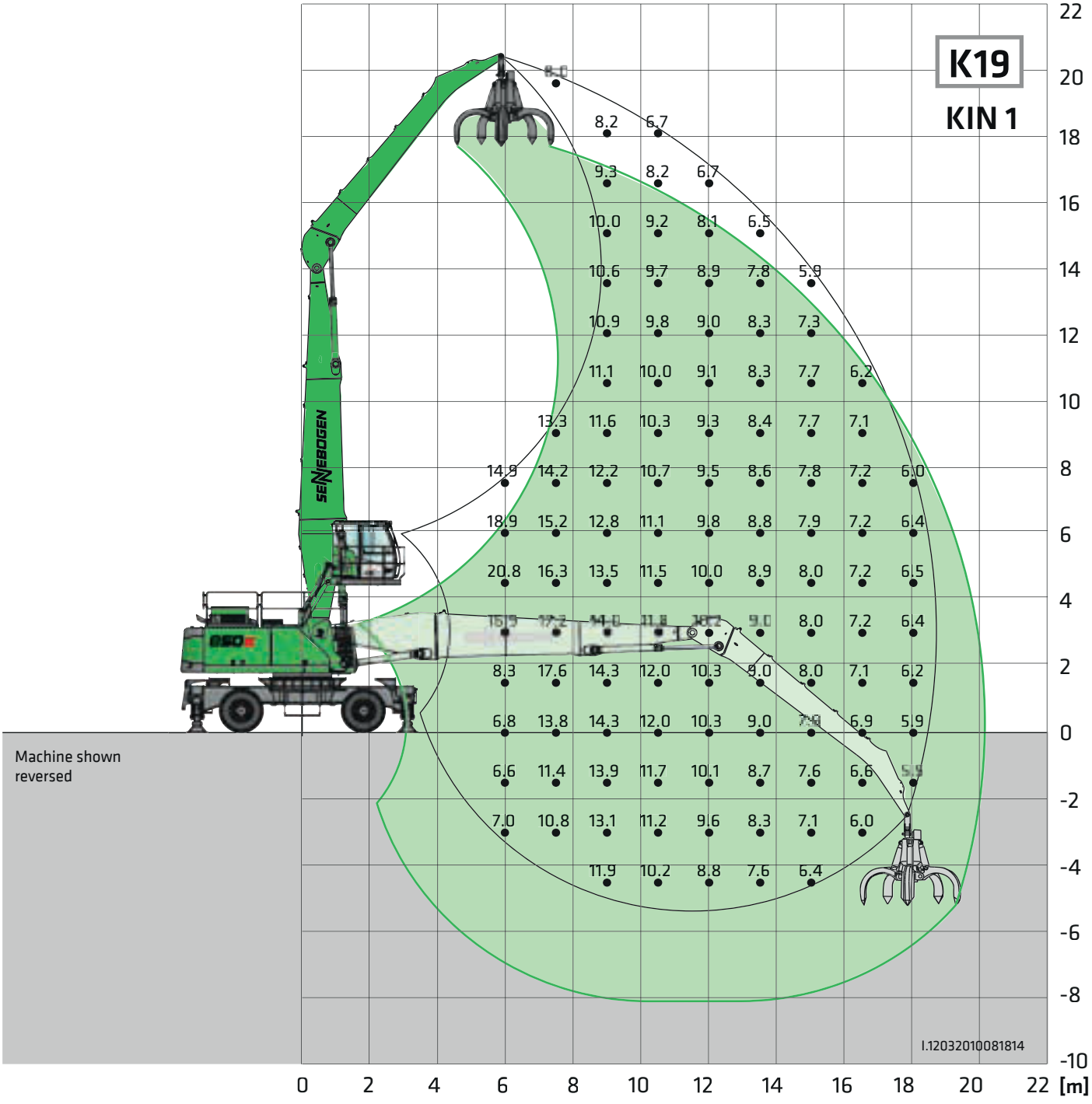
Dipper stick: 7.5 m

Cab: Maxcab E270, hydraulic elevation

All ratings are in tons (t) and constitute 75% of the static tipping load or 87 % of the hydraulic lifting power in accordance with ISO 10567. They apply on firm and level ground and 360° slewing. The values in brackets [...] apply 360° freestanding. Attachments such as orange-peel grabs, magnets, etc. are included in the load capacity. In accordance with harmonized EU standard EN 474-5, hydraulic excavators used for hoisting must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device.

850E Load ratings

M



Undercarriage: MP50	**Compact boom:**	11 m	**Cab:**	Maxcab E270, hydraulic elevation
	Dipper stick:	8.4 m		

All ratings are in tons (t) and constitute 75% of the static tipping load or 87 % of the hydraulic lifting power in accordance with ISO 10567. They apply on firm and level ground and 360° slewing. The values in brackets [...] apply 360° freestanding. Attachments such as orange-peel grabs, magnets, etc. are included in the load capacity. In accordance with harmonized EU standard EN 474-5, hydraulic excavators used for hoisting must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device.

850E Load ratings

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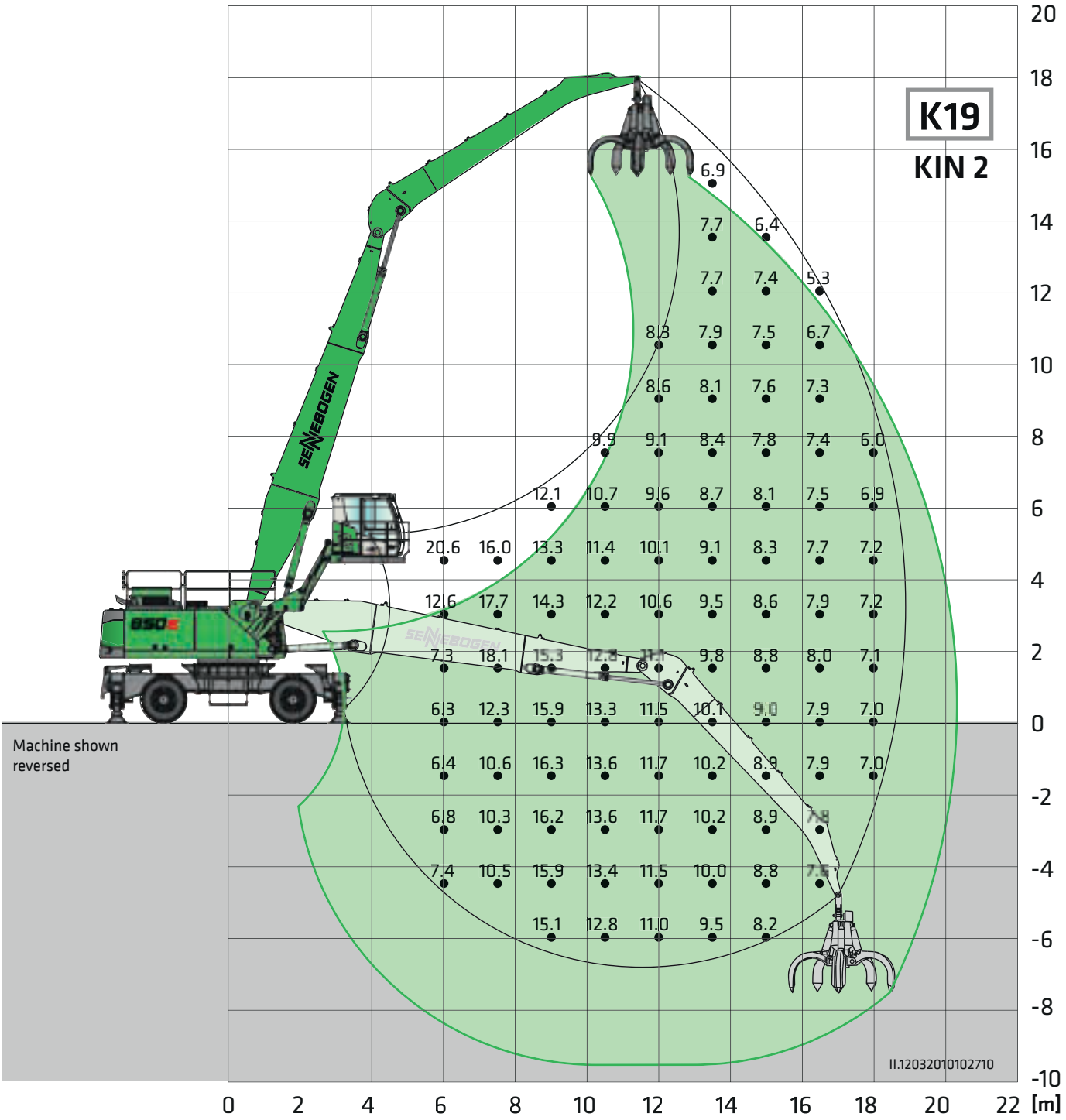

Undercarriage: MP50

Compact boom: 11 m

Dipper stick: 8.4 m

Cab: Maxcab E300/260, can be elevated and moved forward hydraulically

All ratings are in tons (t) and constitute 75% of the static tipping load or 87 % of the hydraulic lifting power in accordance with ISO 10567. They apply on firm and level ground and 360° slewing. The values in brackets [...] apply 360° freestanding. Attachments such as orange-peel grabs, magnets, etc. are included in the load capacity. In accordance with harmonized EU standard EN 474-5, hydraulic excavators used for hoisting must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device.

850E Load ratings

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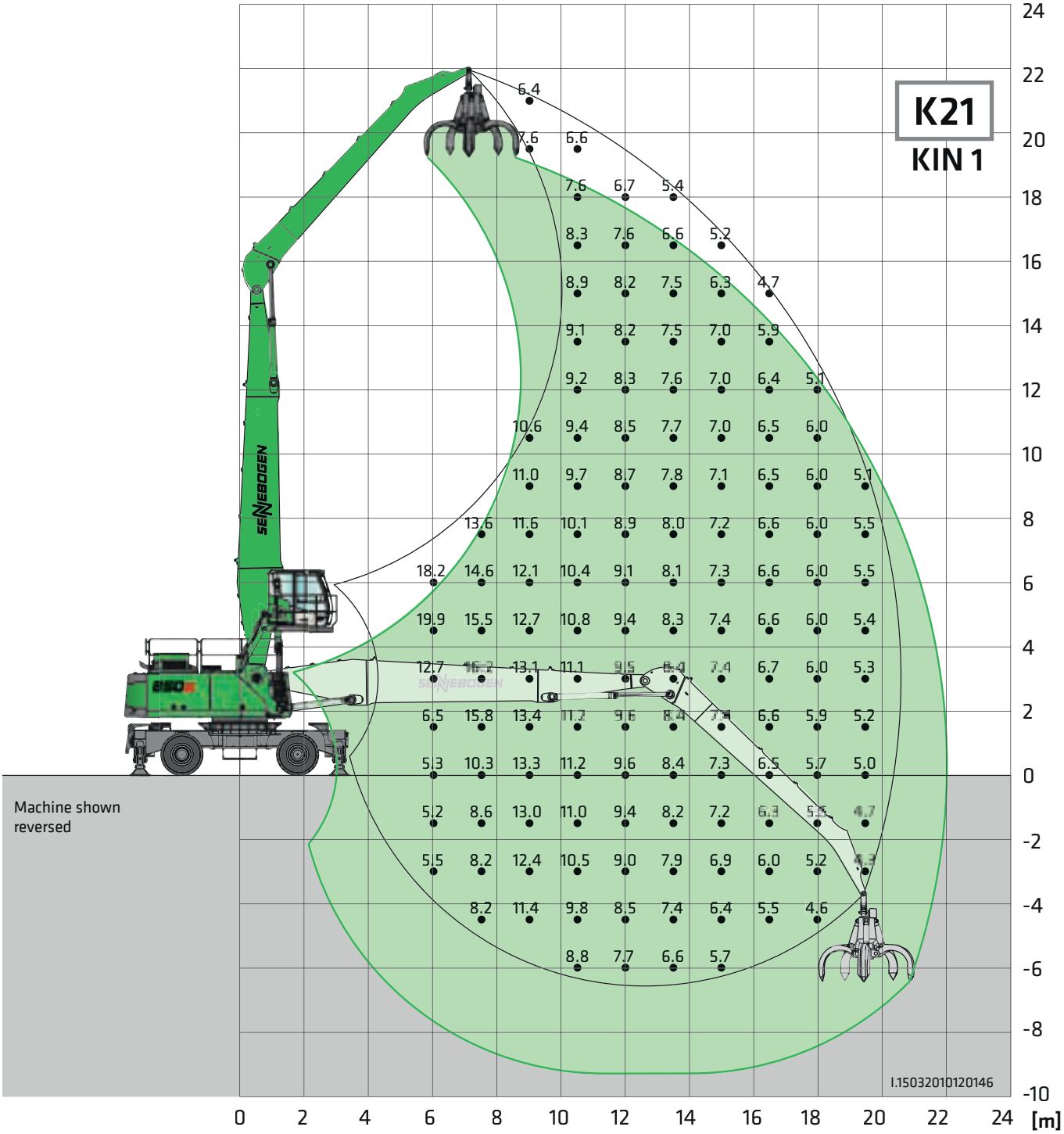

Undercarriage: MP50	**Compact boom:**	12.1 m	**Cab:**	Maxcab E270, hydraulic elevation
	Dipper stick:	9.5 m		

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850E Load ratings

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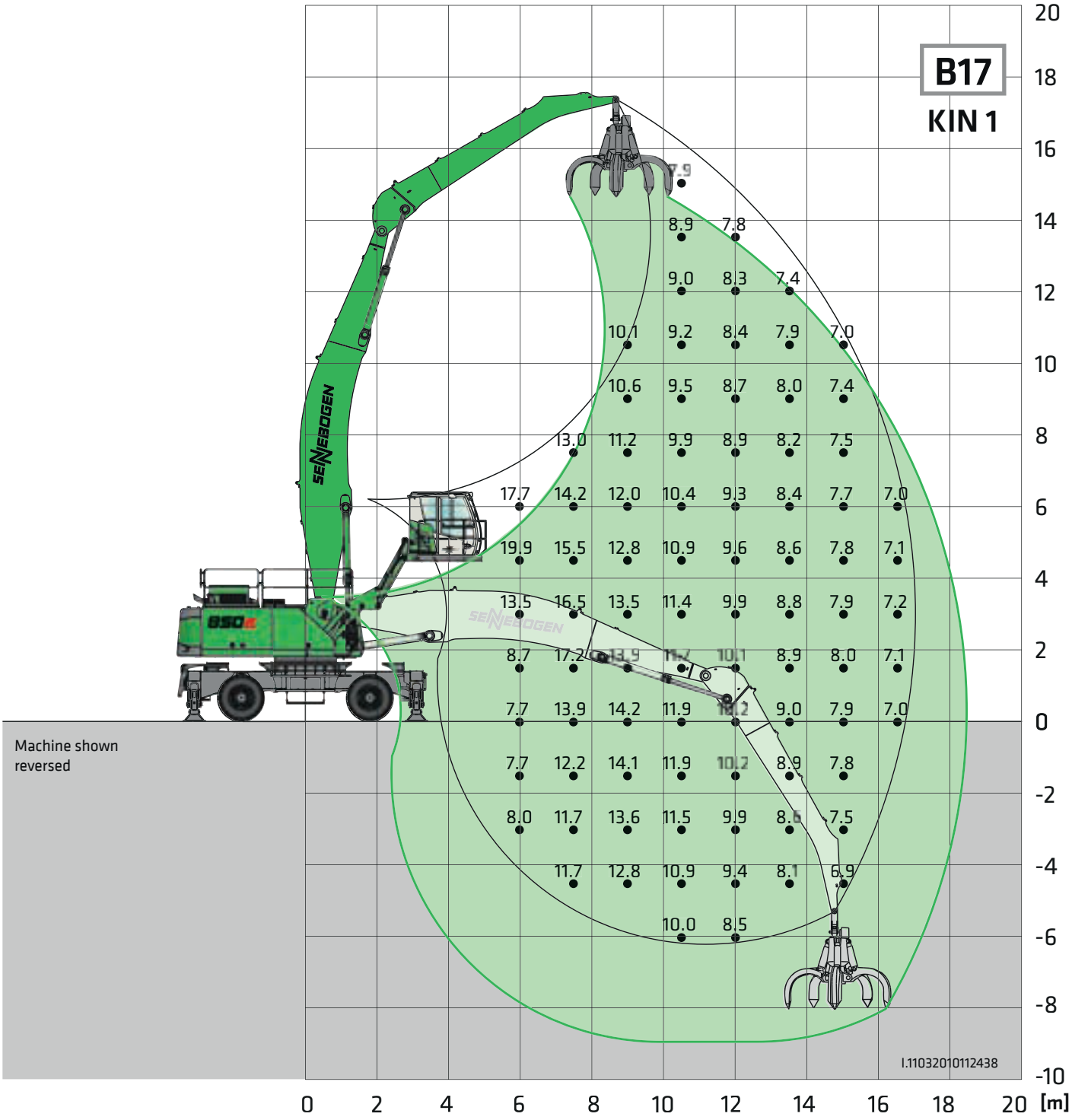

Undercarriage: MP50

Compact boom: 10.8 m

Dipper stick: 7.5 m

Cab: Maxcab E300/260, can be elevated and moved forward hydraulically

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850E Load ratings

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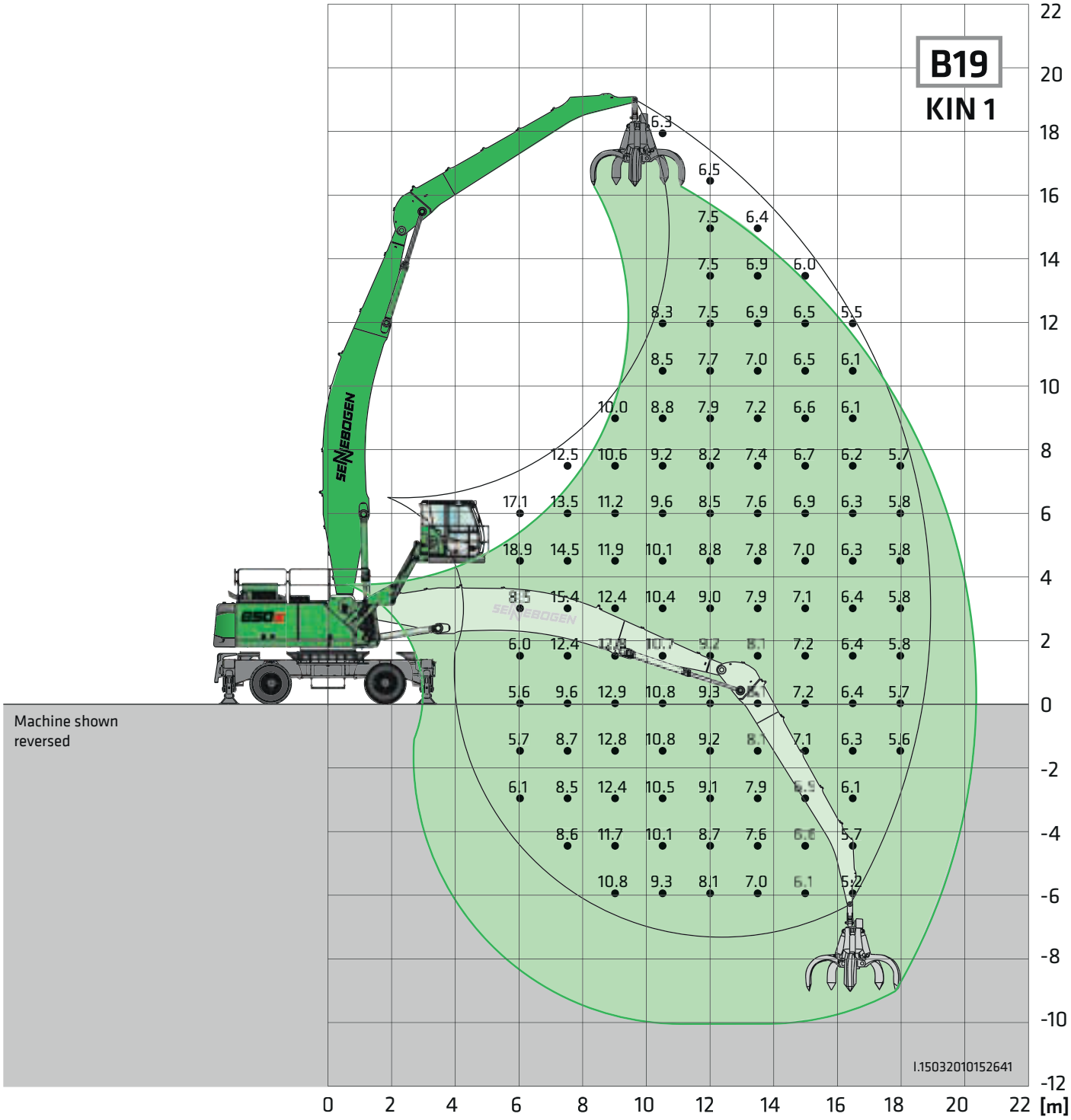

Undercarriage: MP50

Compact boom: 12 m

Dipper stick: 8.4 m

Cab: Maxcab E300/260, can be elevated and moved forward hydraulically

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850E Load ratings

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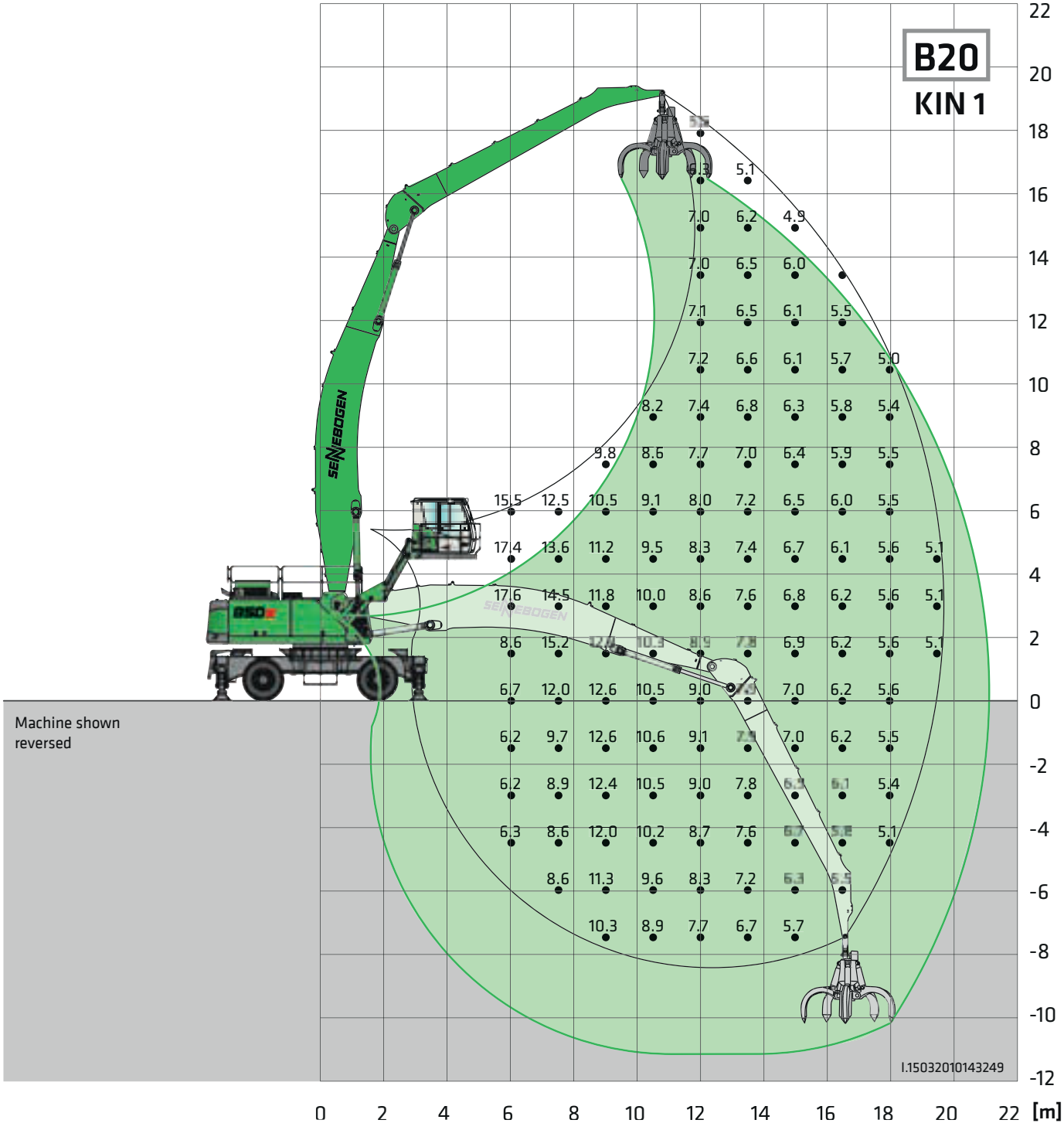

Undercarriage: MP50

Compact boom: 12 m

Dipper stick: 9.5 m

Cab: Maxcab E300/260, can be elevated and moved forward hydraulically

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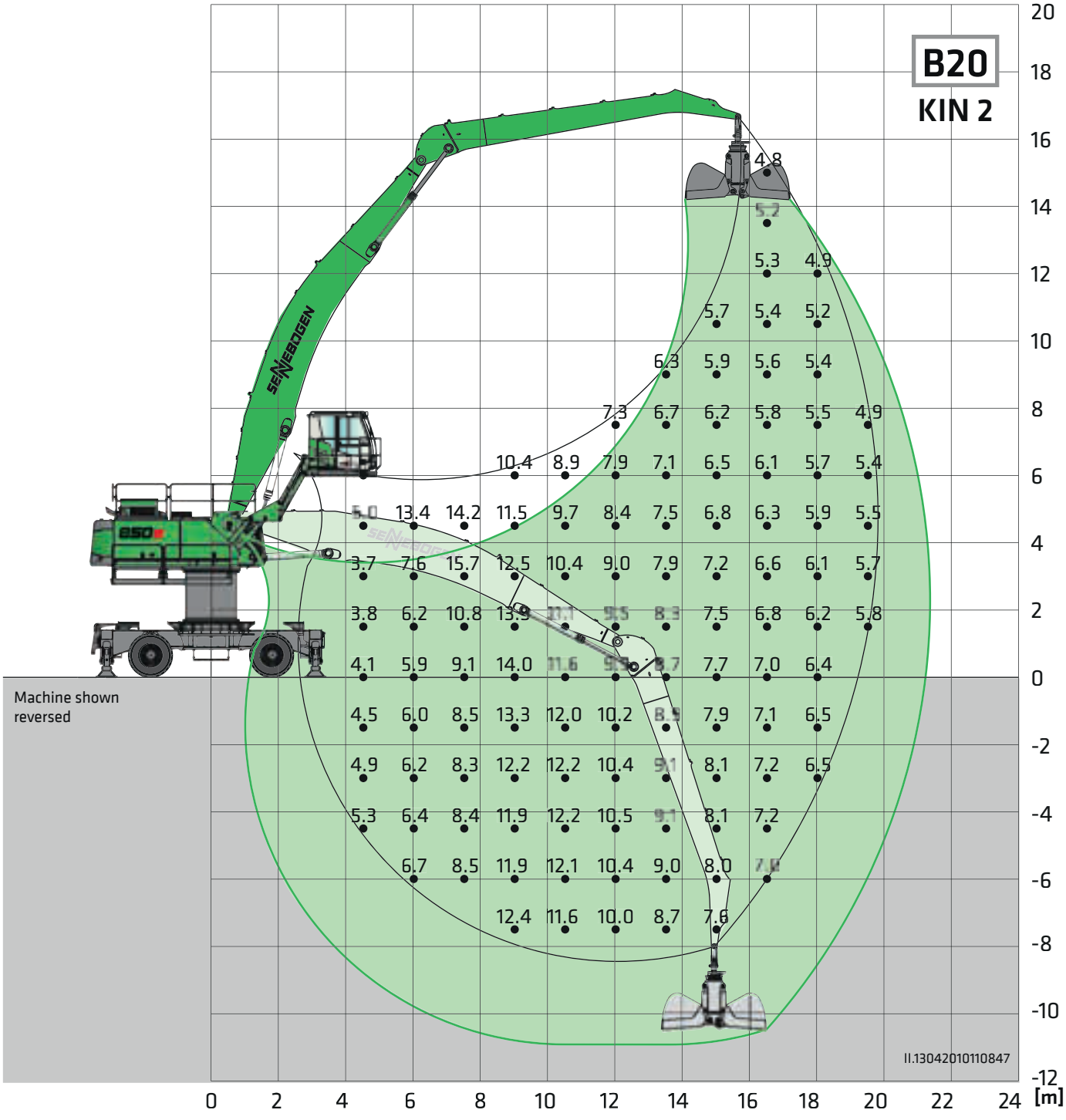

Undercarriage:	MP50	**Compact boom:**	12 m	**Cab:**	Maxcab E300/260, can be elevated and moved forward hydraulically
Pylon:	1.5 m	**Dipper stick:**	9.5 m		

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850E Load ratings

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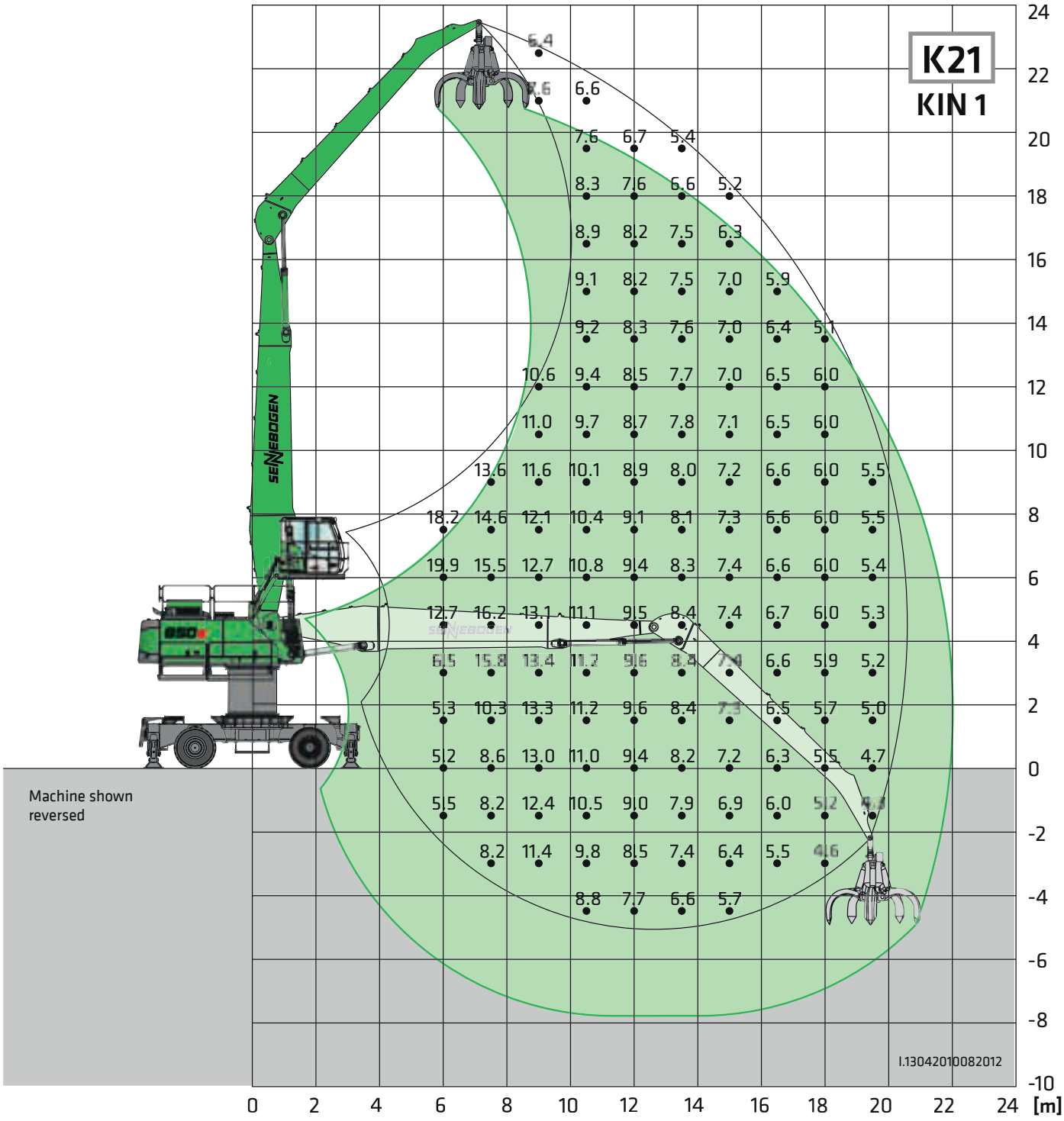

Undercarriage:	MP50	**Compact boom:**	12.1 m	**Cab:**	Maxcab E270, hydraulic elevation
Pylon:	1.5 m	**Dipper stick:**	9.5 m		

All ratings are in tons (t) and constitute 75% of the static tipping load or 87 % of the hydraulic lifting power in accordance with ISO 10567. They apply on firm and level ground and 360° slewing. The values in brackets [...] apply 360° freestanding. Attachments such as orange-peel grabs, magnets, etc. are included in the load capacity. In accordance with harmonized EU standard EN 474-5, hydraulic excavators used for hoisting must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device.

850E Load ratings

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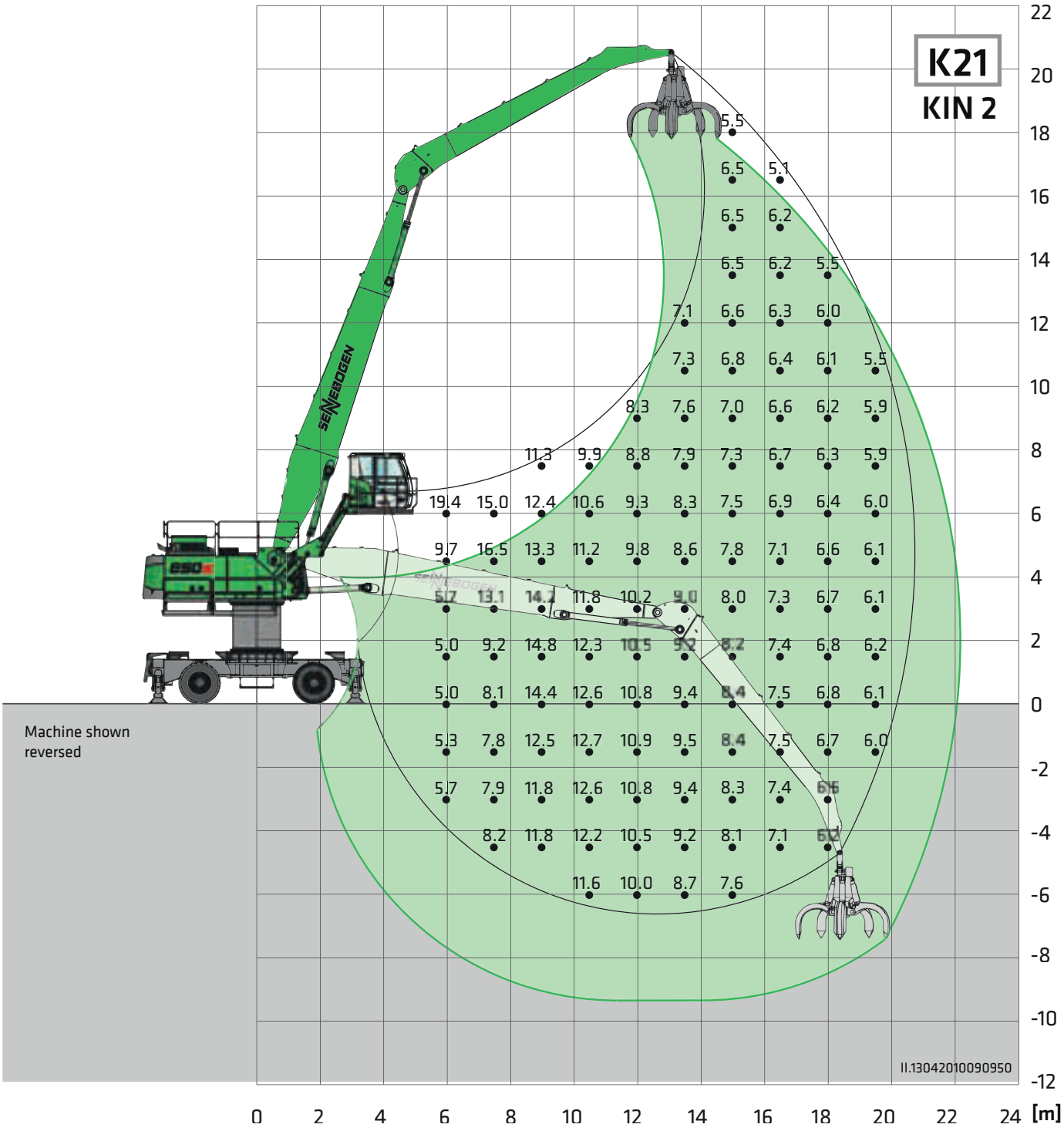

Undercarriage:	MP50	**Compact boom:**	12.1 m	**Cab:**	Maxcab E300/260, can be elevated and moved forward hydraulically
Pylon:	1.5 m	**Dipper stick:**	9.5 m		

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850 E Dimensions

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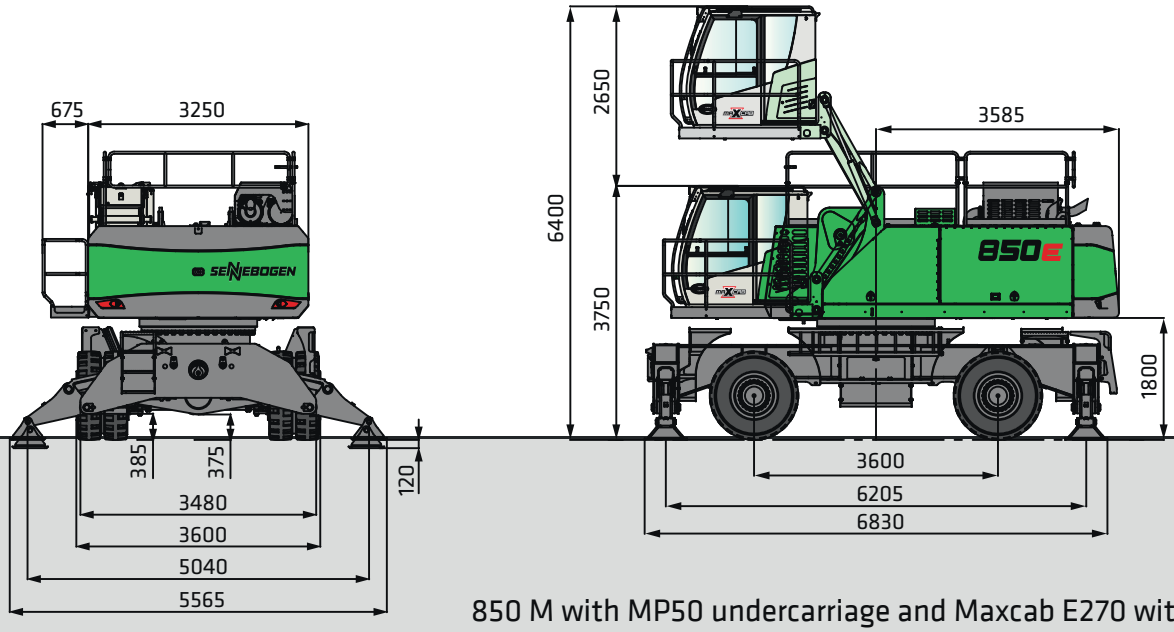
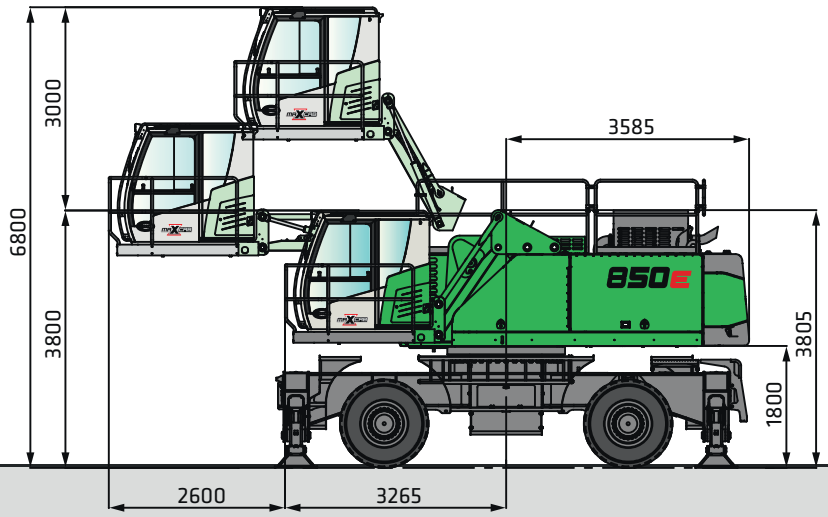


850 M with MP50 undercarriage and Maxcab E270 with hydraulic elevation feature



850 M with MP50 undercarriage Maxcab E300/260, can be elevated and moved forward hydraulically

850E Dimensions

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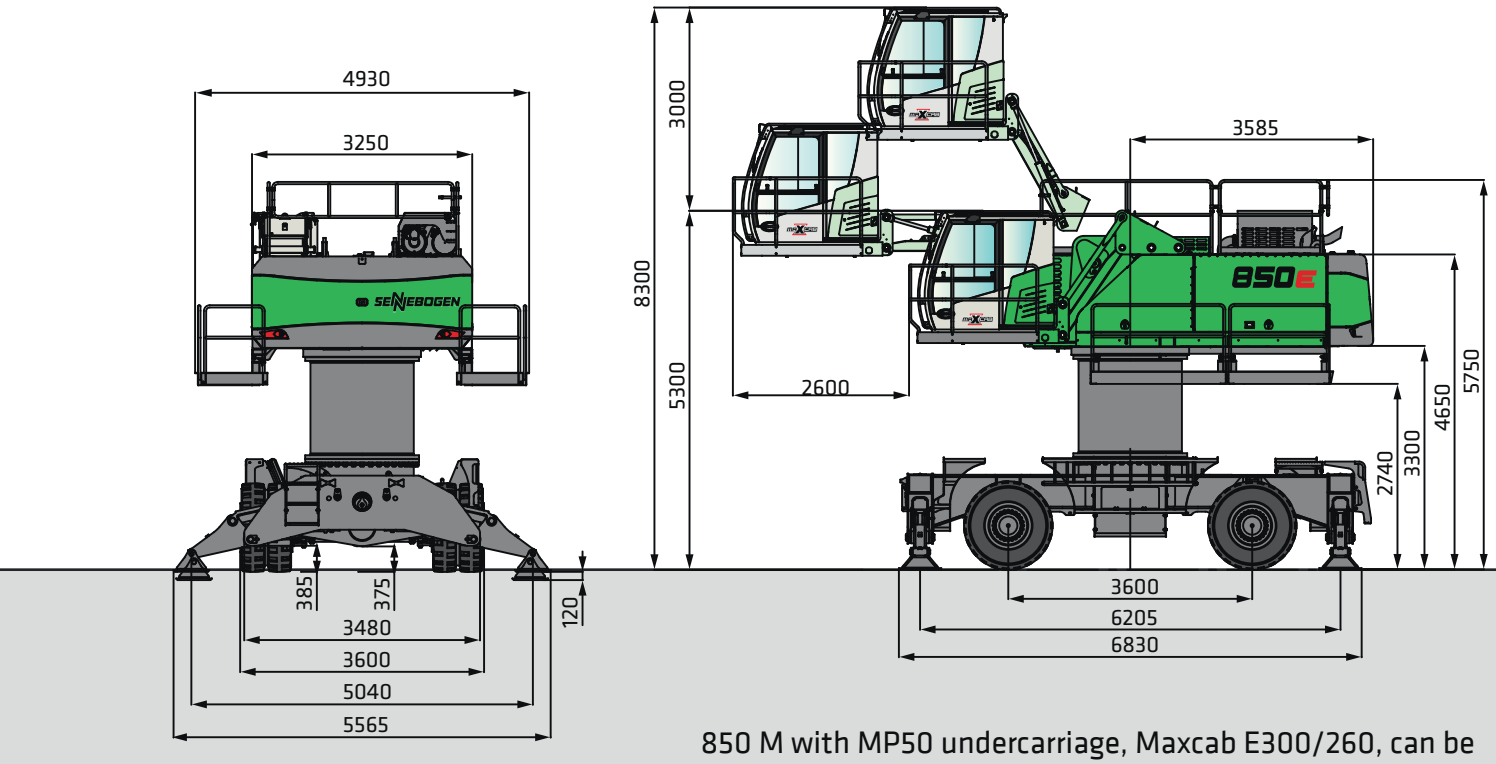
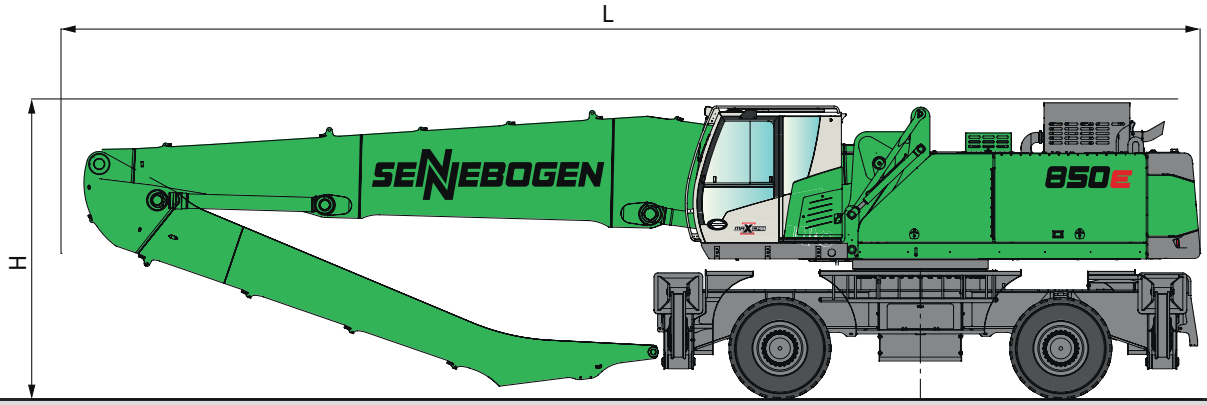


850 M with MP50 undercarriage, Maxcab E300/260, can be elevated and moved forward hydraulically, Pylon 1.5 m

850E Transport dimensions



	Load boom	Grab stick	Transport length (L)	Transport height (H)
K17	10.5 m	7.5 m	15.1 m	3.90 m
K19	11.2 m	8.5 m	15.8 m	3.90 m
K21	12.1 m	9.5 m	16.7 m	3.90 m
B17	10.8 m banana	7.5 m	15.2 m	3.90 m
B19	12.0 m banana	8.4 m	16.5 m	4.00 m
B20	12.0 m banana	9.5 m	16.5 m	4.00 m

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.

850E Recommended grabs

SGM orange peel grab (4 shells)

Design/size	Grab capacity	Weight[1] Shell		Max. load capacity
		HO	G	
SGM	l	kg	kg	t
800.50-4	800	2245	2490	10.0
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] Shell shape[2]		Max. load capacity
		HO	G	
SGM	l	kg	kg	t
800.50	800	2420	2610	10.0
1000.50	1000	2480	2655	
1500.50	1500	2645	2930	
2000.50	2000	2800	3160	
2500.50	2500	3130	3615	
3000.50	3000	3250	3875	
3500.50	3500	3420	4140	

SGZ double-shell grapple

Design/size	Grab capacity	Weight[1]	maximum payload
SGZ	l	kg	t
1500.50	1500	1989	8.0
2000.50	2000	2246	
2500.50	2500	2345	
3000.50	3000	2532	
4000.50	4000	2880	

Magnetic plates

Type series/model	Power	Deadweight	Breakaway force	load capacity in kg
WOKO	kW	kg	kN	Slab (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				

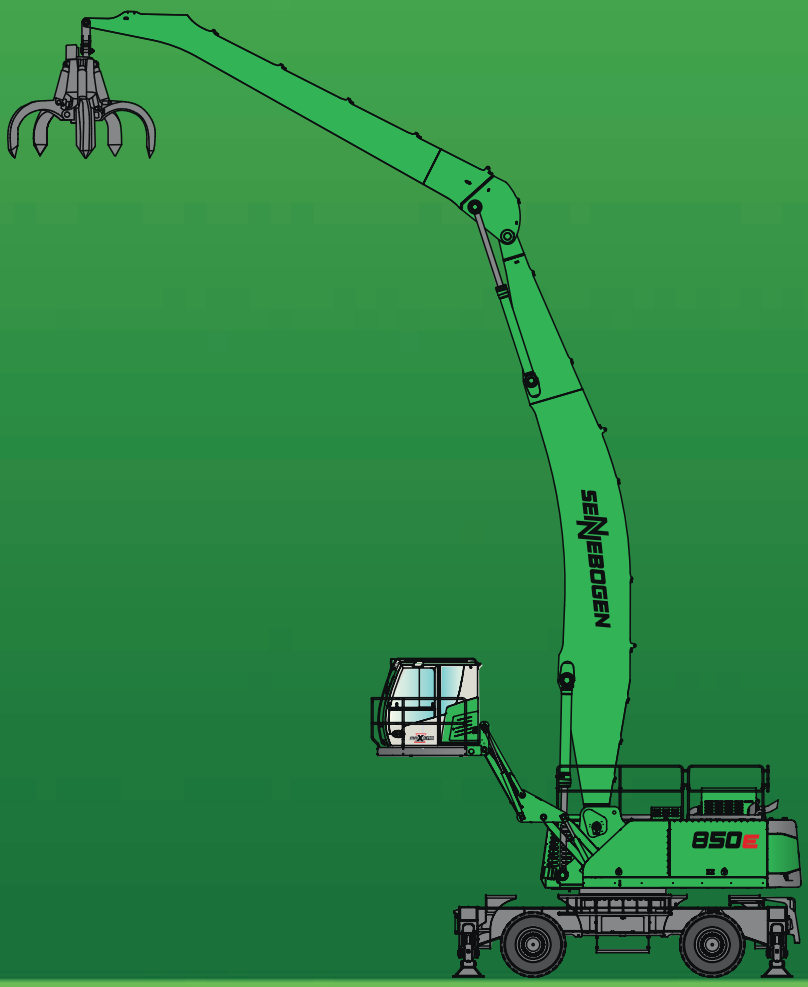
*) Available upon request

1) Weight information does not include grab suspension, stick bolts or hose system

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

Detailed information on grabs, as well as log grabs, quick-release systems, and other attachments can be found in the "Attachments" brochure

850E M



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