

SENEBOGEN



97 kW (Tier IIIa)

104 kW (Tier IVf)



23.9/25.1 t



9-12 m



MAXCAB

B21E

Mobile material handling machine

Tier IVf emission standards

821E Advanced. The E-Series.



1962: Rope-driven S833 with elevated operator cab

What makes up the E-Series

- 60 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 product service life and high value retention

Your top benefits:

- 1 Green Efficiency**
Save fuel – reduce operating costs
Work quietly – protect operator and environment
- 2 Peak performance**
Durable mechanical systems – stressed parts optimized
High speeds – high load capacities
- 3 Maximum operating comfort**
Comfortable Maxcab operator cab – relaxed work
SENCON – SENNEBOGEN Control System
- 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**
Easy fault diagnosis – central reading points
Easy maintenance – clear labeling
- 6 Consultation and support**
3 production sites – 2 subsidiaries
120 sales partners – over 300 service stations





821E The E-Series. At a glance.



Four ways to save fuel

- Up to 20% savings: working in Eco Mode 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 aftertreatment



Quiet operation

- Consistently quiet operation thanks to decoupled engine mounts and soundproofing in the doors **3**
- 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

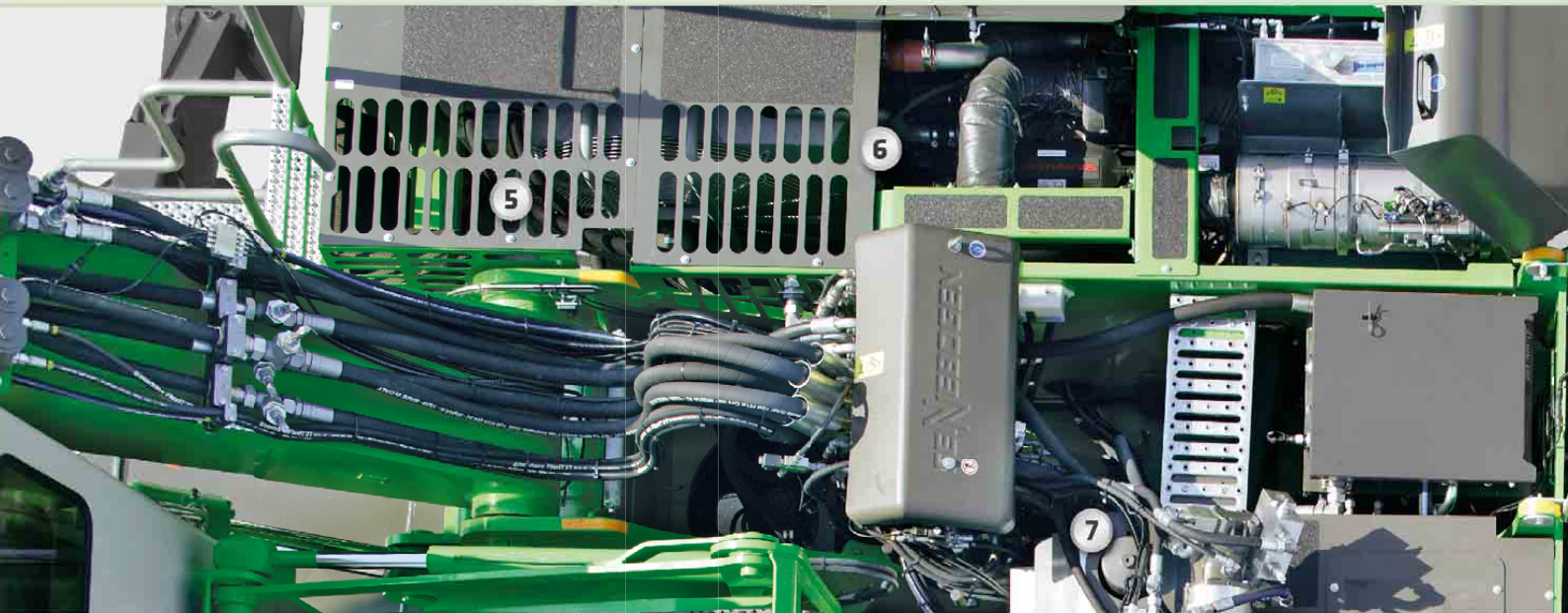
- Constant, reliable performance thanks to oversized and robust fans and radiators **4**
- Charge air cooler, water and oil coolers with top-notch efficiency thanks to axial-piston pump and motor control and on-demand thermostatic control



Maximum safety

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

Preliminary image with crawler undercarriage



Smart radiator technology

- Comes standard: automatic, fast and strong fan reversal for blowing out radiators and continuous cooling capacity
- Side-by-side radiators, easily accessible and clean cooling technology **5**
- Fuel savings through optimized fan operation **6**

Powerful hydraulic system

- Strong pumps with power reserves
- Top efficiency thanks to oversized hydraulic valves and lines
- Extra-long change intervals of 4,000 operating hours through initial fill-up with HVLPD oil with extended service life when using SENNEBOGEN HydroClean* **7**

* Optional, see page 7

821E The E-Series. Pure comfort.

Maxcab comfort cab

- Air-suspension comfort seat with heater
- Convenient joystick control
- Hinged front window
- Sliding door, platform in front of cab
- Color monitor for right side and rear-facing camera feeds
- SENNEBOGEN OptiMode: Various modes to optimize performance



Platform with railing*

- Safety when entering and exiting the cab
- Sliding door makes entering and exiting easy and safe



Automatic climate control

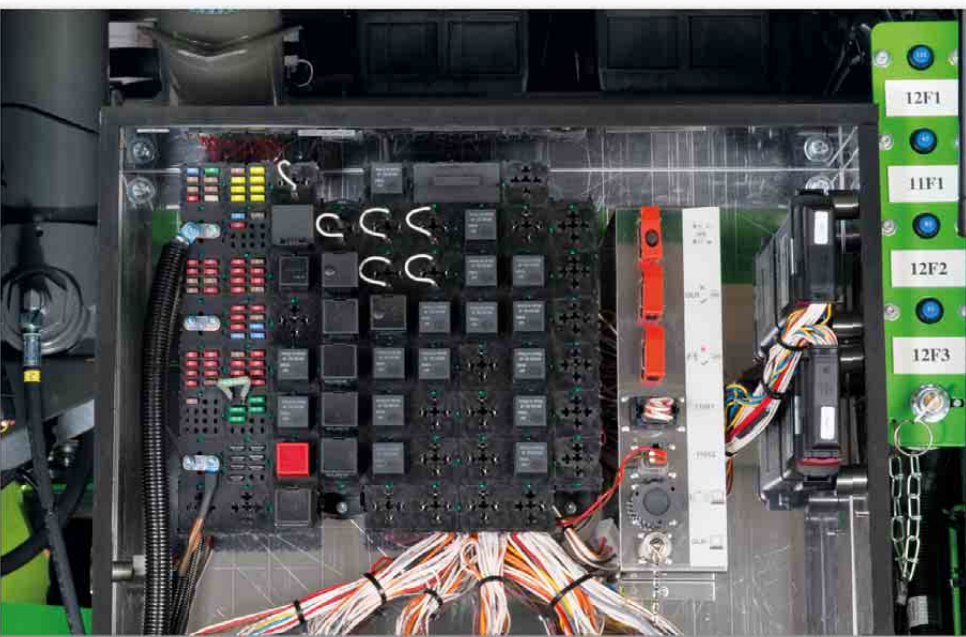
- Consistently pleasant cab climate thanks to 10 evenly distributed air vents
- Central controls make operation easy



SENCON

- Clear menu
- Determine operating values without the need for additional instruments
- Fast troubleshooting thanks to detailed messages

821E Maintenance and service made easy



Maintenance-optimized

- Quick and easy troubleshooting thanks to straightforward and clearly labeled electrical distributor
- Easy access to all service points on the machine
- Automatic central lubrication for attachment and slewing gear raceway



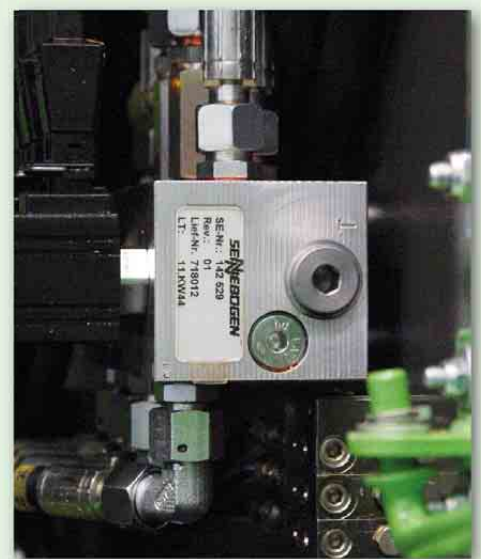
HydroClean*

- 3-µm microfilter for optimal protection of hydraulic components
- Cleaner hydraulic oil, longer service life



Central reading points

- Easily accessible, central reading points
- Quickly inspect entire hydraulic system







Clear labeling

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

* Optional

821E Modular design – versatile solutions

Attachments

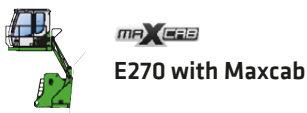
-  Orange-peel grapple
-  Double-shell grapple
-  Magnetic plate
-  Scrap metal shears

Equipment options (others available upon request)





K9 K11 K11 ULM K12

Cabs





Uppercarriage

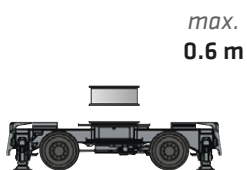


-  Diesel-hydraulic drive
-  Electrohydraulic drive

Options

-  Engine line drum
-  Transformer

Undercarriage variants



M mobile

max.
0.6 m

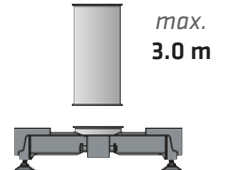


MHD mobile

max.
1.0 m

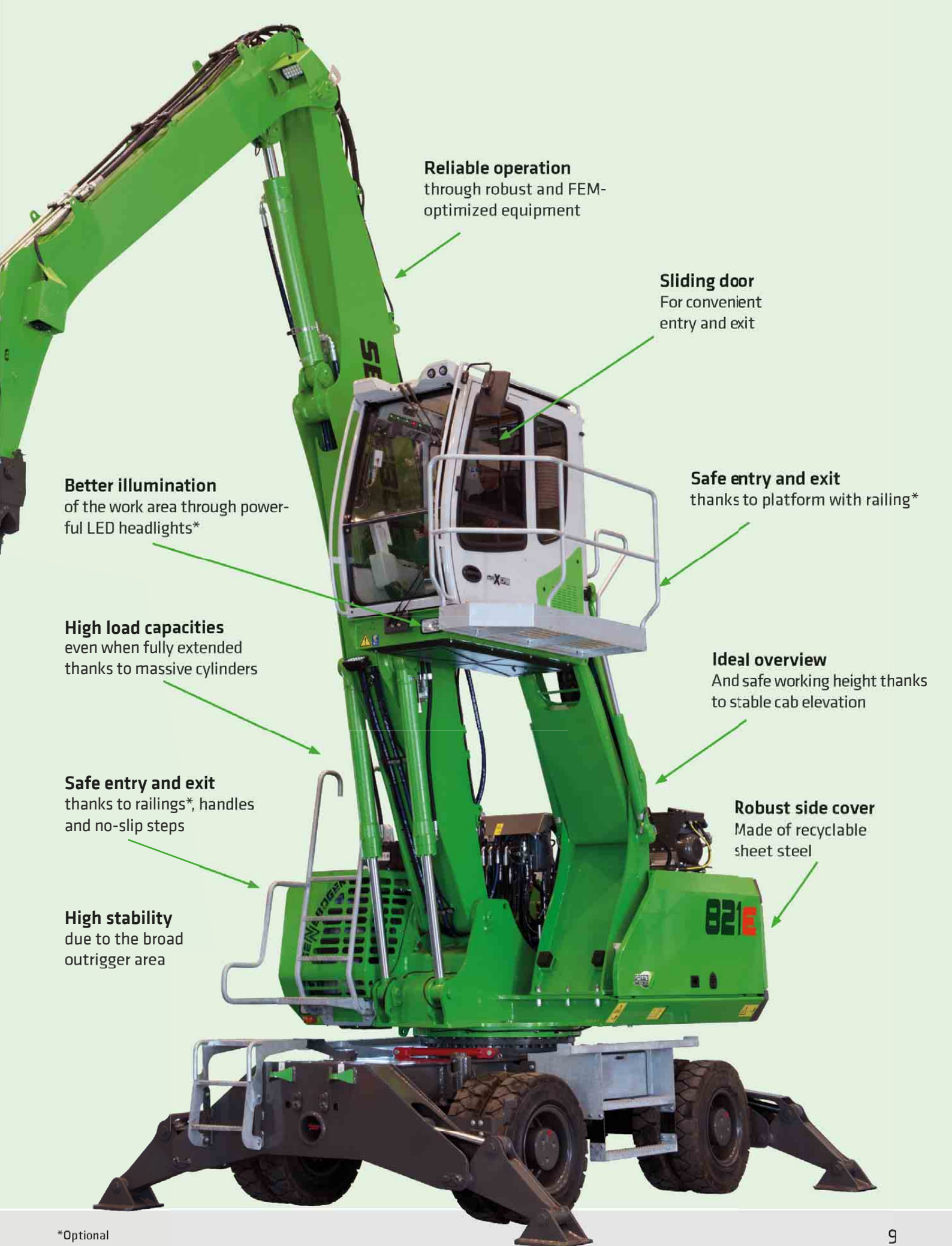


R25/240 crawler*



4-point underframe

max.
3.0 m



Reliable operation
through robust and FEM-
optimized equipment

Sliding door
For convenient
entry and exit

Better illumination
of the work area through power-
ful LED headlights*

Safe entry and exit
thanks to platform with railing*

High load capacities
even when fully extended
thanks to massive cylinders

Ideal overview
And safe working height thanks
to stable cab elevation

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

Robust side cover
Made of recyclable
sheet steel

High stability
due to the broad
outrigger area

*Optional

821E Technical data, equipment

MACHINE TYPE

Model (type) **821**

ENGINE

Power **97 kW / 130 hp at 2,200 rpm (IIIa)**

104 kW / 141 hp at 2,200 rpm (IVf)

Model **Cummins QSB 4.5 Tier IVf**
Direct injection, turbo-charged, charge air cooler, reduced emissions, Eco Mode, idle automation

Cooling Water-cooled

Air filter Dry air filter with cyclonic pre-filter, safety element, contamination indicator

Fuel tank **330 l**

DEF tank **30 l**

Electrical system **24 V**

Batteries 2 x cold-start high-performance batteries

Options

- Engine block heater for temperatures below -20 °C
- Electric fuel pump
- Jump-start terminals

UPPERCARRIAGE

Design Torsion-resistant upper frame with end shields all the way from boom linkage to counterweight for optimized force transmission, precision-crafted steel bushings for boom bearings, lockable storage compartment, outstanding design, very low noise emissions

Central lubrication Automatic central lubrication for equipment and slewing gear raceway

Electrical system Central electrical distributor, battery disconnect switch

Safety Right and rearview cameras

Options

- Slewing gear brake via foot pedal
- Perimeter uppercarriage railing for additional safety
- LED lighting package
- Fire extinguisher
- Special paint finish
- Electric hydraulic tank preheater with uppercarriage power socket
- Low-temperature package (oils, battery heater, hydraulic oil preheater, cab preheater, motor preheater)
- Platform with railing next to cab
- Hydraulically driven 9 kW/15 kW magnetic generator

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 **Max. 350 bar**

Filtration High-performance filtration with long change interval

Hydraulic tank **260 l**

Control system Proportional, precision hydraulic actuation of work movements, 2 hydraulic servo joysticks for the work functions, additional functions via switches and foot pedals

Safety All hydraulic circuits secured with safety valves, hydraulic accumulator for emergency attachment and cab lowering if engine fails, pipe-fracture safety valves for stick and hoist cylinders

Options

- Bio-oil - environmentally friendly
- ToolControl for programming pressure/rate of up to 10 tools
- Additional hydraulic circuit for shear attachment
- Load moment warning with capacity utilization indicator with/without shutdown
- Electronic overload safeguard with overload shutdown
- SENNEBOGEN HydroClean 3-µm hydraulic microfilter system

SLEWING DRIVE

Gearbox Planetary gearbox with axial piston motor and integrated brake valve

Parking brake Spring-loaded, hydraulically vented safety multi-disk brake

Slewing ring Oversized slewing ring

Slewing speed 0-8 rpm, continuous. Hydraulic brake valves integrated into motor ensure wear-free braking.

821E Technical data, equipment

CAB **MAX** CRB

Cab type	E270 hydraulically elevating cab
Cab equipment	Sliding door, excellent ergonomics, automatic climate control, heated, air-suspension comfort seat, fresh/circulating air filter, joystick control, 12 V/24 V connections, SENCON
Options	<ul style="list-style-type: none"> ■ Auxiliary heating system with timer ■ Activated carbon filter for fresh/circulating air ■ Steering wheel with adjustable steering column ■ Sliding window in cab door ■ Armored-glass windshield ■ Armored-glass roof window ■ Polycarbonate safety side and rear panels ■ Windshield wiper with washer for lower windshield/glass roof panel ■ Rolling shade for roof window and windshield ■ Protective roof grating ■ FOPS protective roof grating ■ Protective front grating ■ Maxcab industrial cab with single-piece armored windshield ■ Radio kit/radio and CD with speakers

ATTACHMENTS

Design	Sealed and soiling-protected box design with oversized bearing points for long service life. Oversized bearing points with low-maintenance, sealed special bushings, precision-crafted
Cylinder	Special hydraulic cylinder with hydraulic end position damping, optimized kinematics for high lifting power. The material handling attachment is specifically designed for high-performance applications.
Central lubrication	Automatic central lubrication system
Options	<ul style="list-style-type: none"> ■ Ball valves on the hydraulic lines open, close, and rotate grapple ■ Multi-coupling ■ Adjustable hoisting limiter/stick limiter

UNDERCARRIAGE

Design	Strong undercarriage with 4-point outrigger support or combination of stabilizer blade and claw support (option), hydraulically locking pendulum steering axle. Pendulum axle cylinder with pipe-fracture safety valves
Drive	All-wheel drive powered by variable-displacement hydraulic motor with direct-mounted, automatically actuated brake valve and 2-speed power-shift transmission. Strong planetary axles with integrated steering cylinder, 2-circuit multi-disk service brake.
Parking brake	Spring-loaded multi-disk brake
Tires	8 x 10.00-20 solid rubber
Speed	Stage I: 0-5.5 km/h ; Stage II: 0-20 km/h
Options	<ul style="list-style-type: none"> ■ 8 x 10.00-20 pneumatic tires ■ Individual outrigger actuation ■ Additional pushing blade for 4-point support (front or rear) ■ 2-point claw support and stabilizer blade (front or rear) ■ Protection for travel drive/towing pintle

ELECTRIC DRIVE **eGREEN**

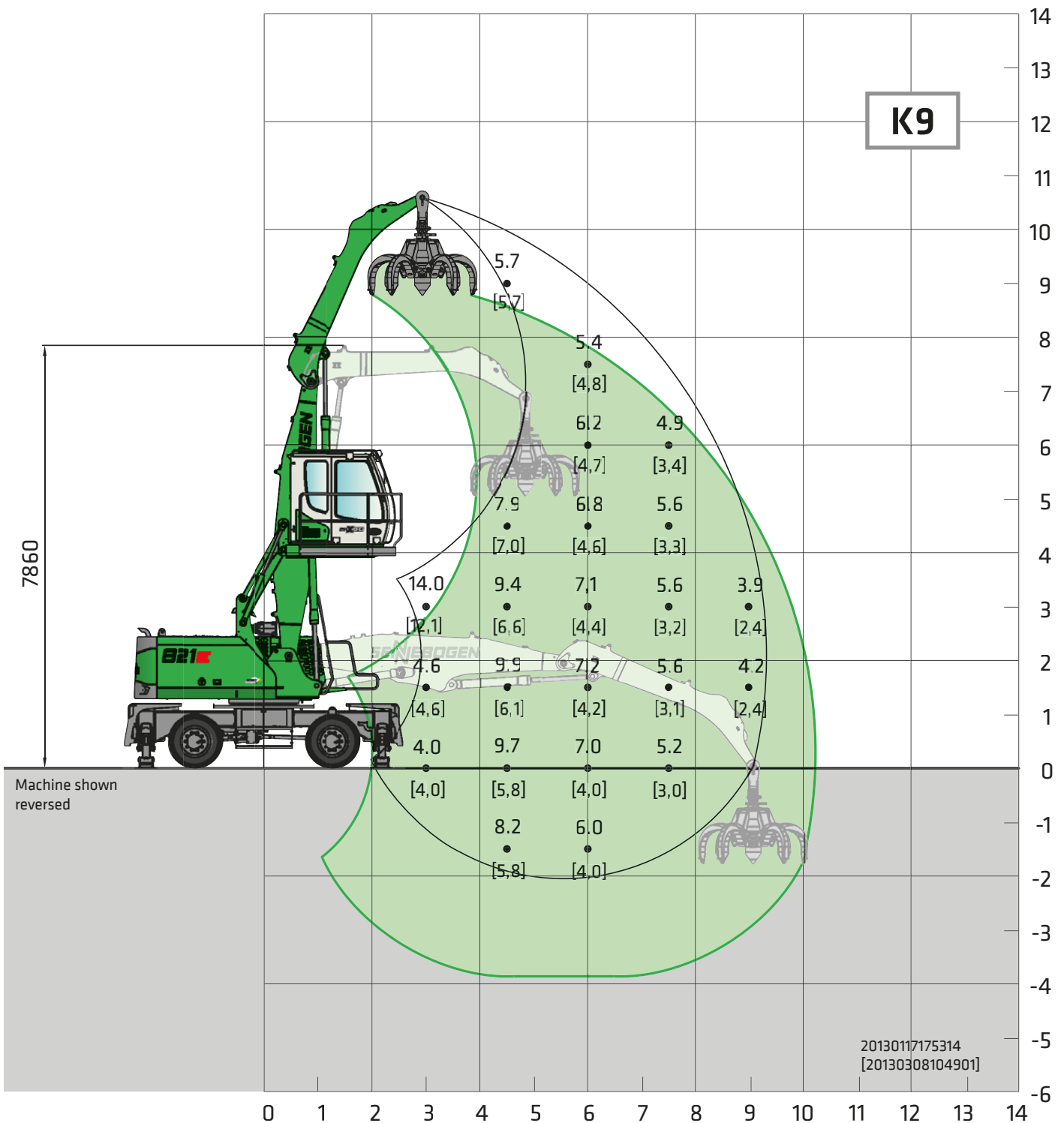
Option	<ul style="list-style-type: none"> ■ Power: 90 kW, 400 V, 50 Hz Total connected load 200 kVA, customer-provided 250 A fuse (alternatively 315 A with magnet system) for 400 V - delta-wye connection motor start ■ Advantages: Lowest operating costs, quiet and virtually vibration-free work, long service life of hydraulic components
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OPERATING WEIGHT

Mass	821 M with 4-point outrigger, K11 compact loading attachment and 600-l orange-peel grapple Approx. 23,950 kg
	821 MHD with 4-point outrigger, K12 compact loading attachment and 600-l orange-peel grapple Approx. 25,100 kg
Note	Operating weight varies by model and equipment.

821E Load ratings

M

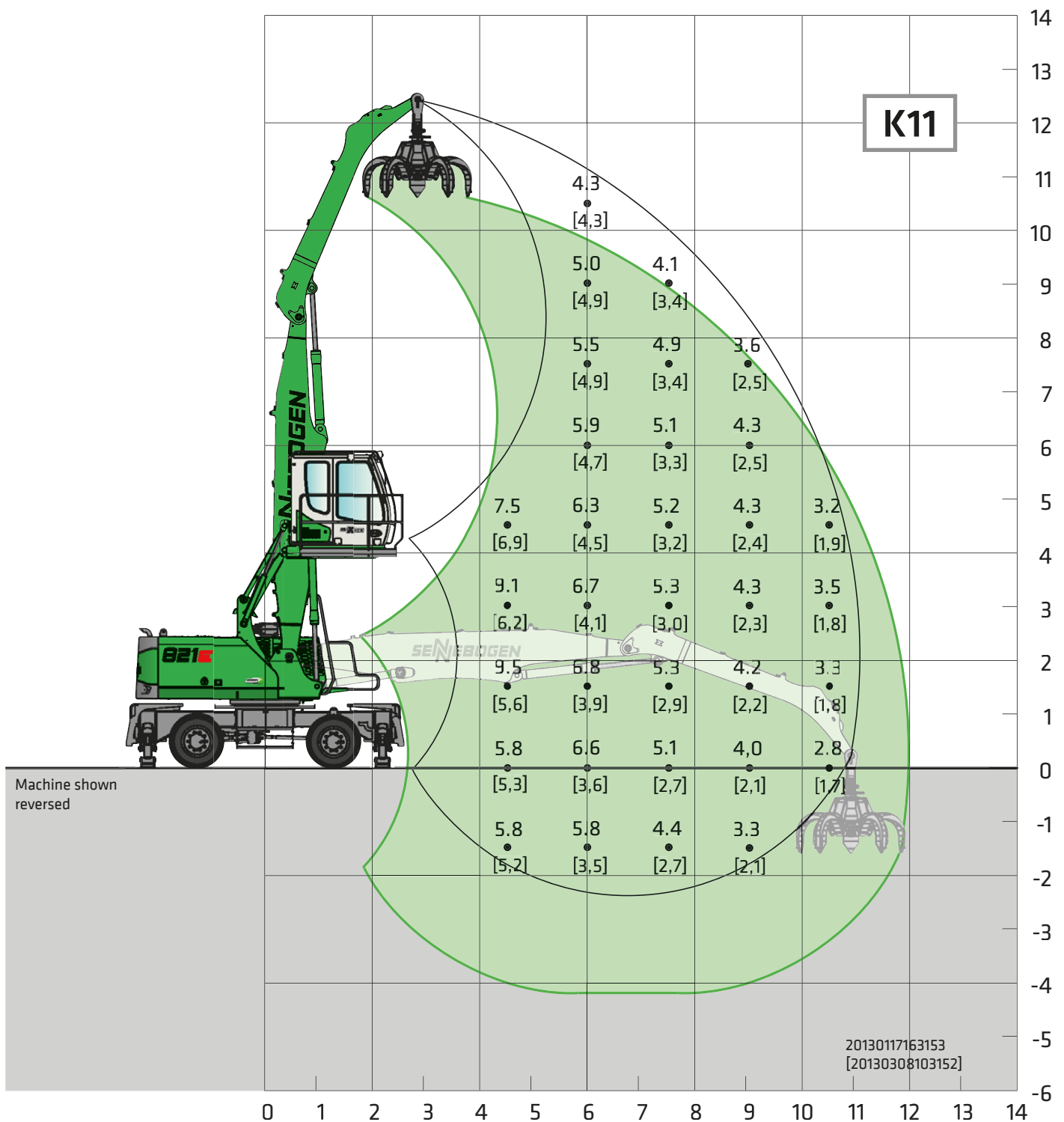


Undercarriage	MP21E	Compact boom Dipperstick	5.1 m 4.0 m	Cab	E270 Maxcab, hydraulically elevating
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All load ratings are in tons (t) and apply at the end of the stick, without attachment, on solid, level ground. Attachments such as grapples, magnets, load hooks, etc. are included in the load ratings. The ratings constitute 75% of the static tipping load or 87% of the hydraulic lifting power in accordance with ISO 10567. In accordance with EU standard EN 474-5, material handling machines used for hoisting must be equipped with pipe-fracture safety devices on the hoist cylinders and an overload warning device. Load ratings apply for a machine with deployed 4-point outrigger support and for 360° slewing. Load ratings in square brackets [] apply for blocked pendulum axle, undeployed outriggers, free-standing, 360° slewing.

821E Load ratings

M



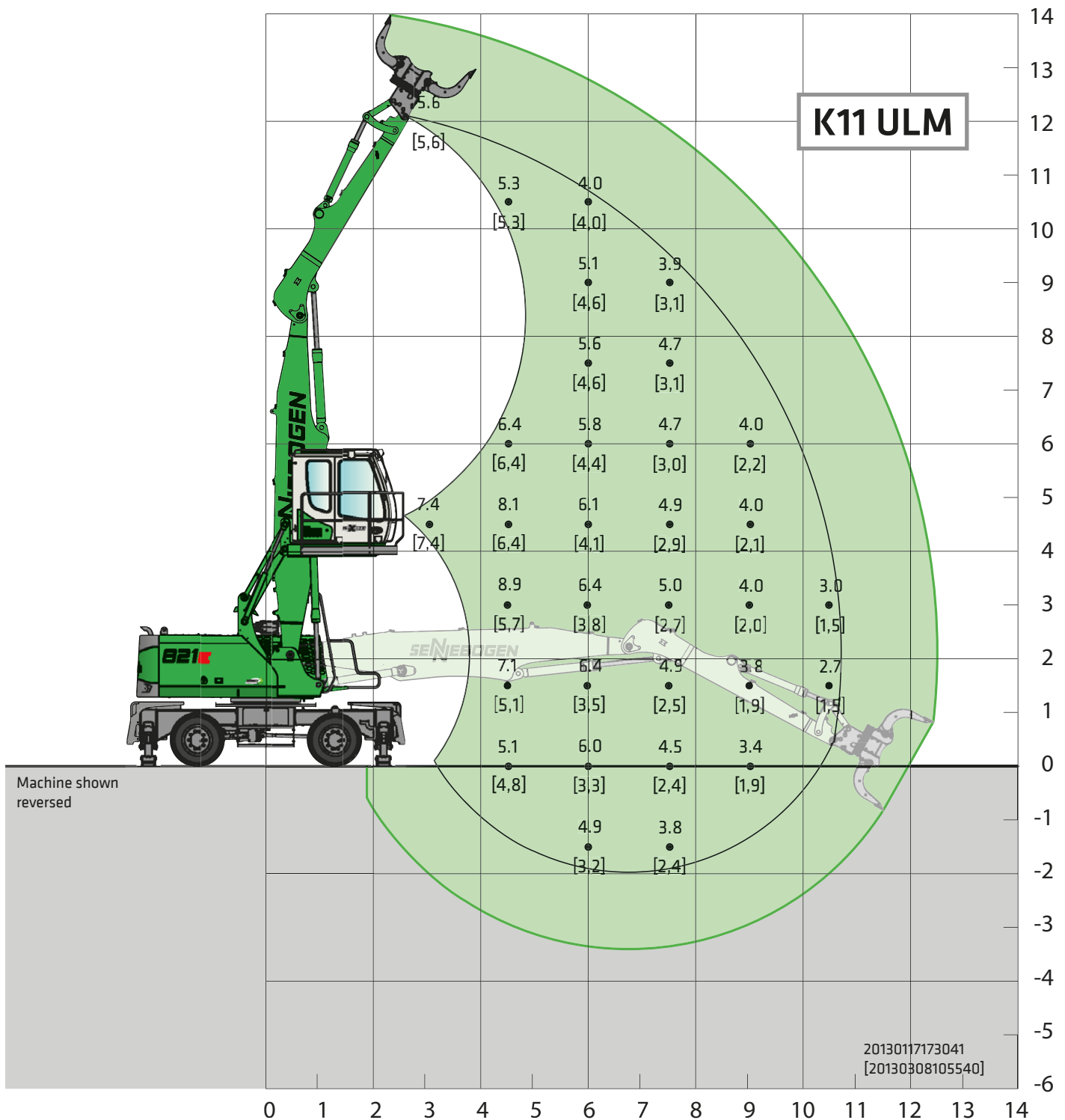
Undercarriage	MP21E	Compact boom Dipperstick	6.3 m 4.6 m	Cab	E270 Maxcab, hydraulically elevating
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Subject to change.

821E Load ratings

M

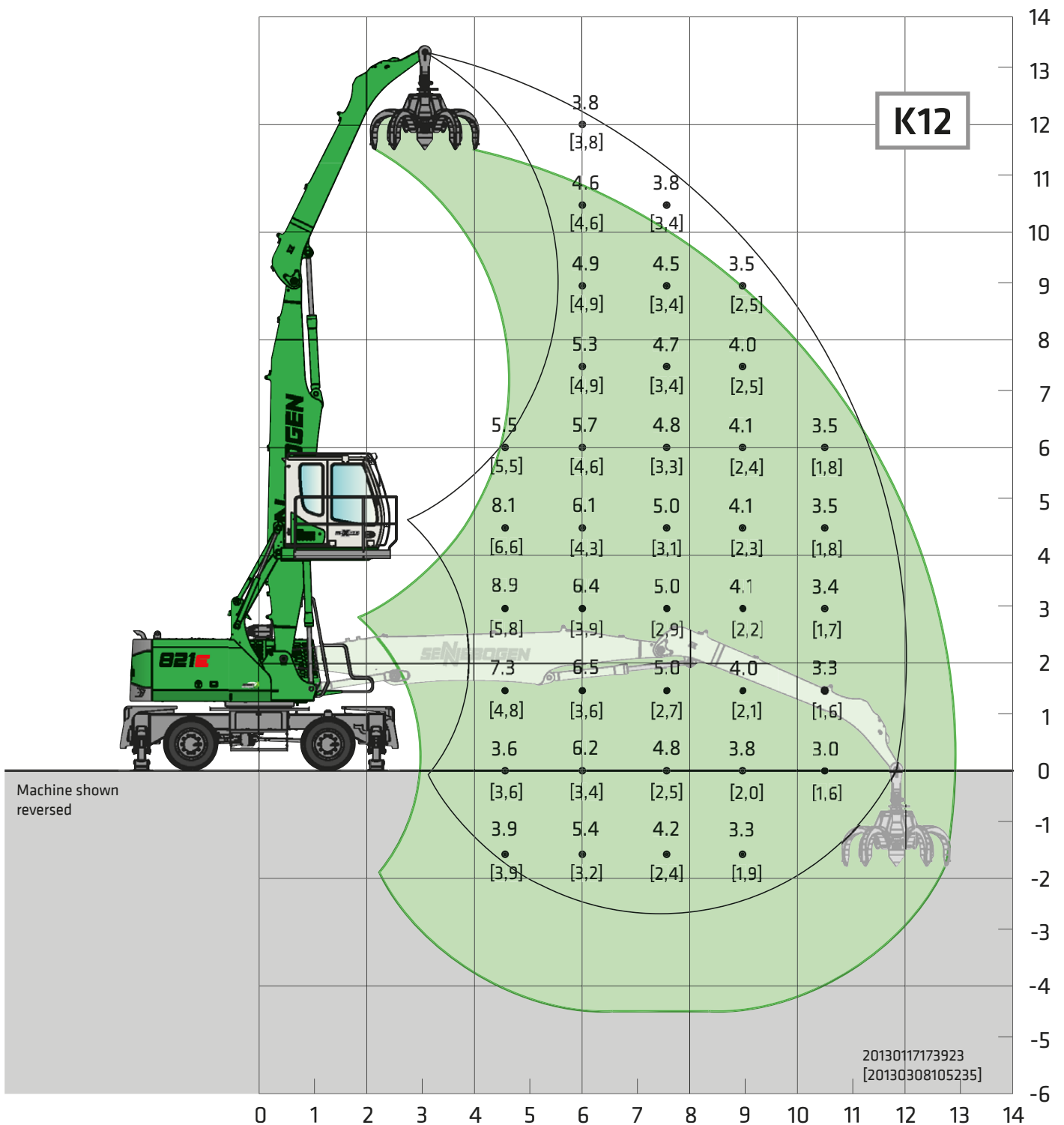


Undercarriage	MP21E	Compact boom Dipperstick	6.3 m 4.2 m	Cab	E270 Maxcab, hydraulically elevating
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821E Load ratings

M



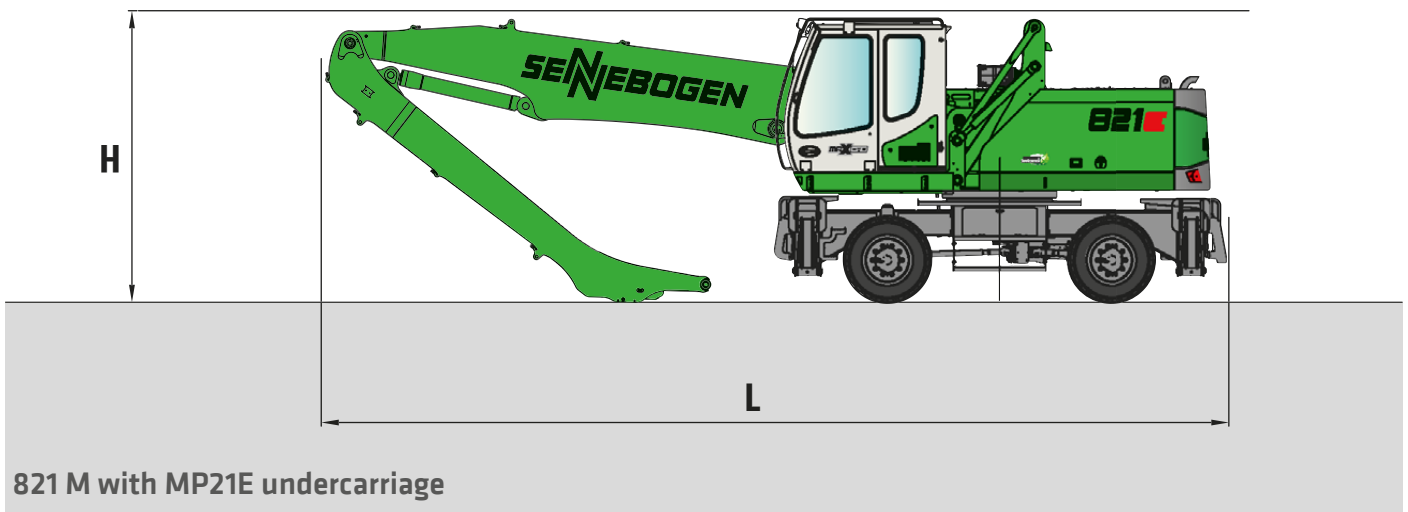
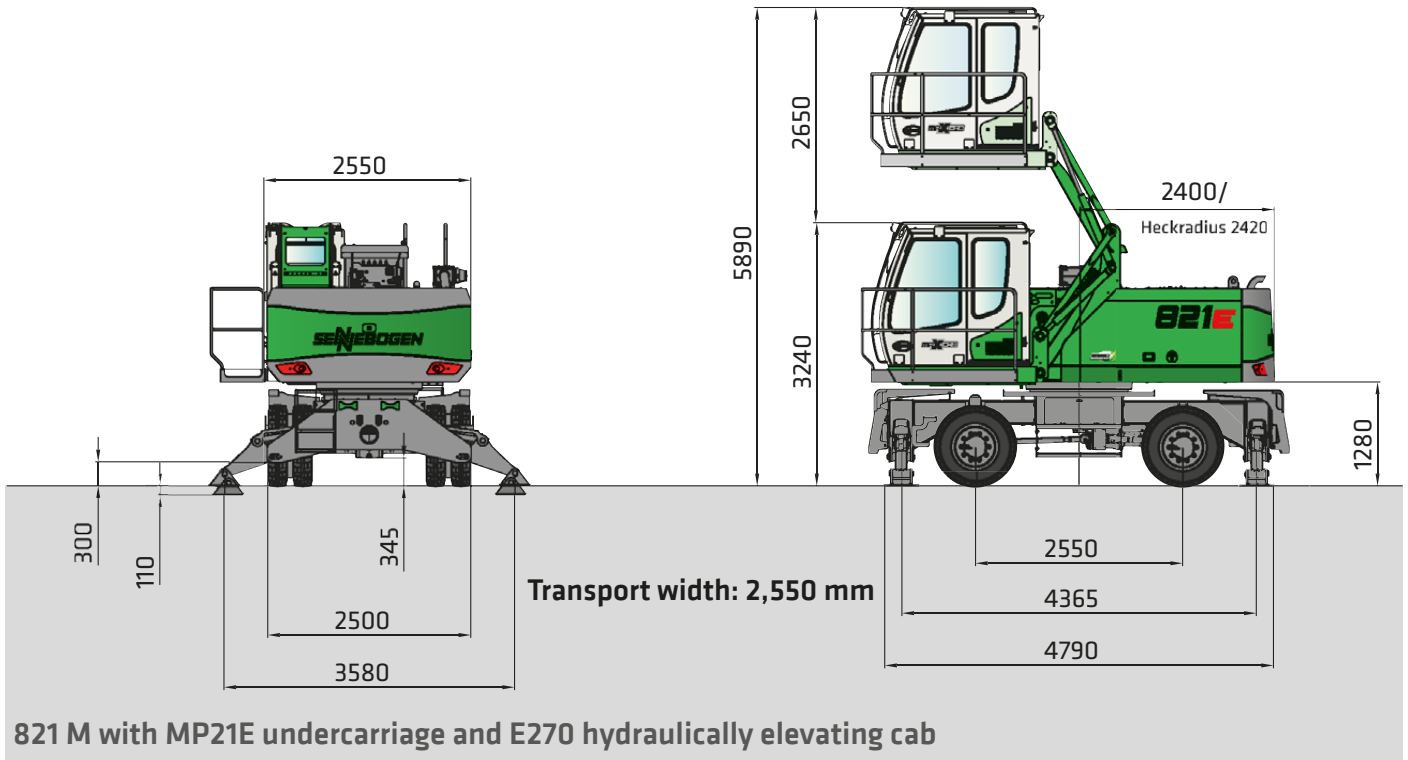
Undercarriage	MP21E	Compact boom Dipperstick	7.0 m 4.9 m	Cab	E270 Maxcab, hydraulically elevating
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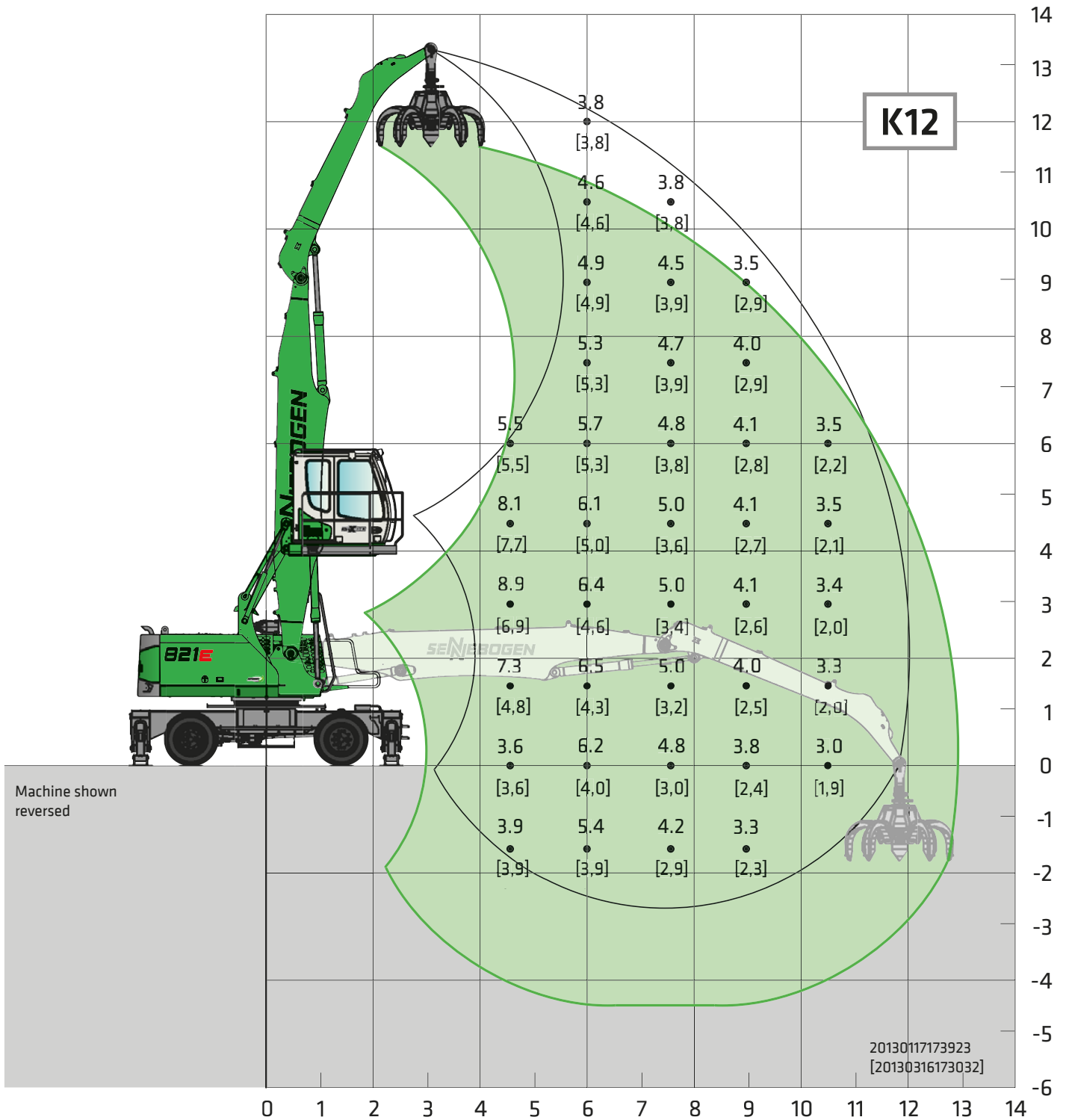
Subject to change.

821E Transport dimensions

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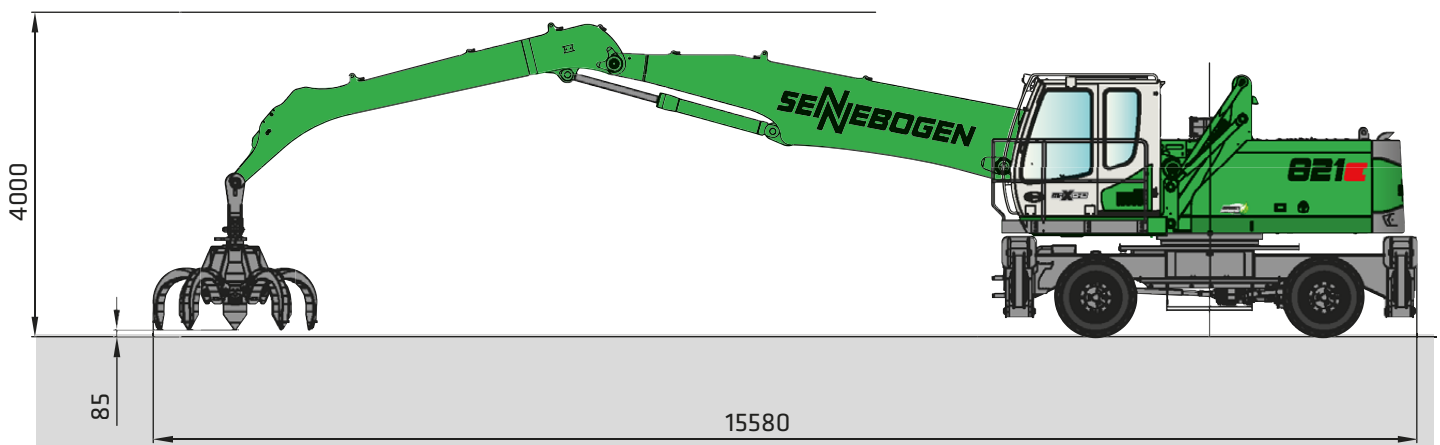
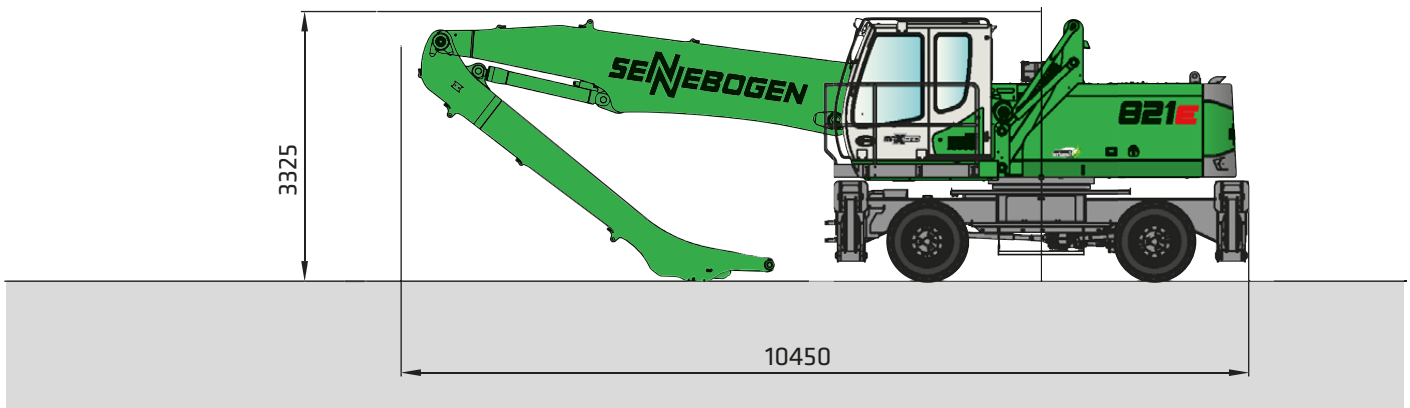
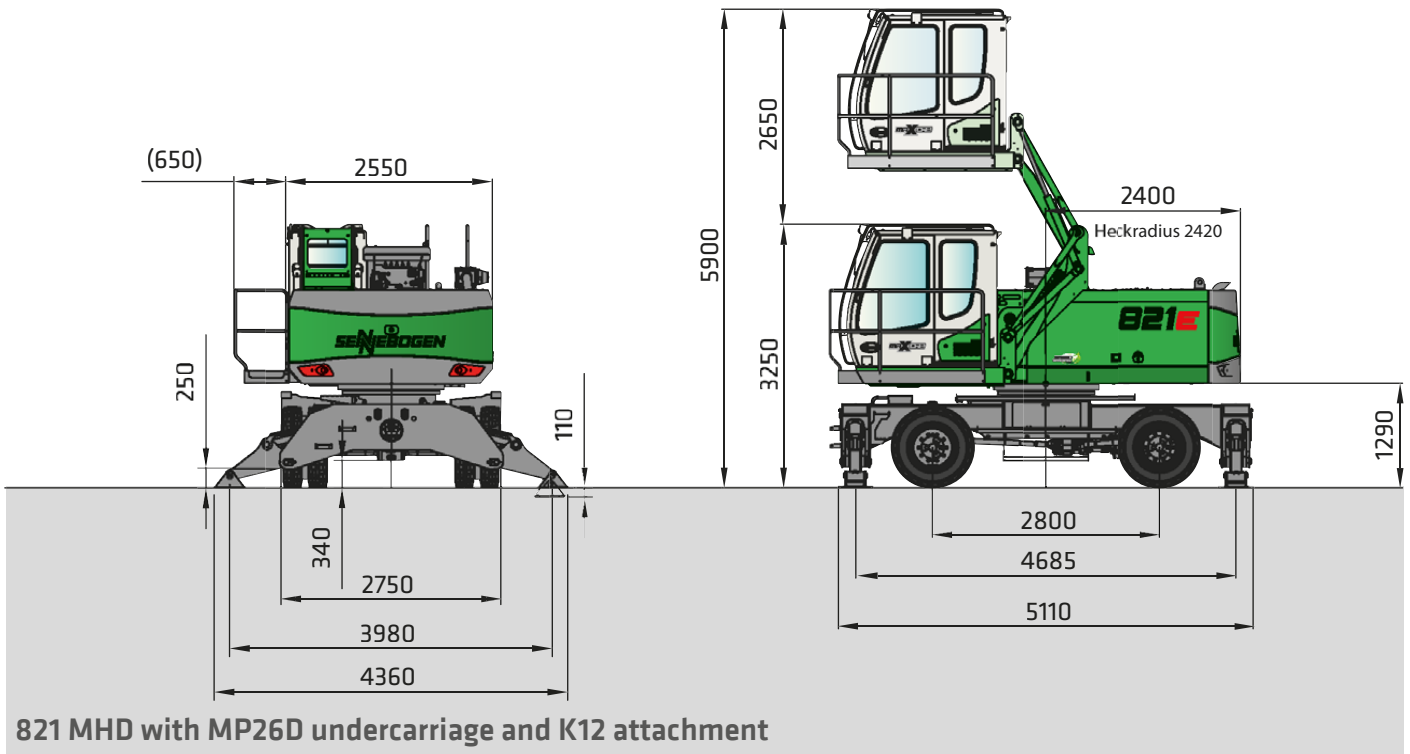


	Load boom	Grapple stick	Transport length (L)	Transport height (H)
K9	5.1 m	4.0 m	8.5 m	3.25 m
K11	6.3 m	4.6 m	9.65 m	3.25 m
K11 ULM	6.3 m	4.2 m ULM	9.7 m	3.25 m
K12	7.0 m	4.9 m	10.4 m	3.25 m



Undercarriage	MP26D	Compact boom Dipperstick	7.0 m 4.9 m	Cab	E270 Maxcab, hydraulically elevating
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821E Recommended grapples

SGM orange-peel grapple (4 shells)



Design/size	Grapple capacity	Weight ¹		Max. load capacity
		Shell		
		HO	G	
SGM	l	kg	kg	t
400.30-4	400	1275	1385	4.0
600.30-4	600	1300	1435	
800.30-4	800	1345	1510	

SGM orange-peel grapple (5 shells)



Design/size	Grapple capacity	Weight ¹		Max. load capacity
		Shell ²		
		HO	G	
SGM	l	kg	kg	t
400.30-5	400	1465	1528	4.0
600.30-5	600	1490	1580	
800.30-5	800	1540	1650	

SGZ double-shell grapple



Design/size	Grapple capacity	Weight ¹	Max. load capacity
		kg	
1000.40	1000	1270	4.0
1200.40	1200	1360	
1400.40	1400	1420	
1600.40	1600	1530	

Magnetic plates



Type series/model	Power	Deadweight	Breakaway force	Load capacity in kg
WOKO	kW	kg	kN	Slab (safety factor 2)
S-RSL 13	10.5	1300	260	13000
S-RLB 10	4.8	730	190	9500
S-RLB 11.5	5.5	1060	240	12000
S-RLB 12.5	8.8	1310	280	14000
S-RLB 13.5	10.0	1700	300	15000
Recommended magnetic generator: 9 kW/15 kW				

*) Available upon request

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

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

821E



This catalog describes machine models, what equipment comes with individual models, and configuration options (standard equipment and optional equipment) of the machines delivered by SENNEBOGEN Maschinenfabrik. Machine illustrations may contain optional and additional equipment. Actual equipment may vary depending on the country to which the machines are delivered, especially in regard to standard and optional equipment.

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