



90 kW (Electro)

97 kW (Stage IIIa)

104 kW (Stage IV)

119 kW (Type MHD: Stage IIIa/IV)



23.9/25.1 t



9-13 m



MAX CAB

821E

Mobile material handling machine

821E Advanced. The E-Series.



1962: rope-driven S833 with elevated operator cab

What makes up the E-Series

- More than 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 product service life and high value retention

Your top benefits

1

Green Efficiency

Safe 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 usability

Comfortable Maxcab operator cab - relaxed work
SENCON - work program selection made easy



4

Maximum safety

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

5

Maintenance and service made easy

SENNEBOGEN Control System SENCON - easy fault diagnosis
Easy Maintenance - clear labeling

6

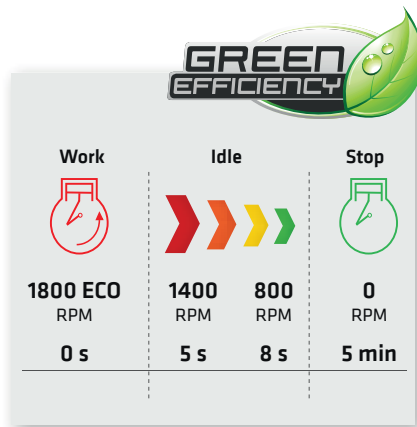
Consultation and support in your area

3 production sites - 2 subsidiaries
more than 130 sales partners - worldwide and also in your area



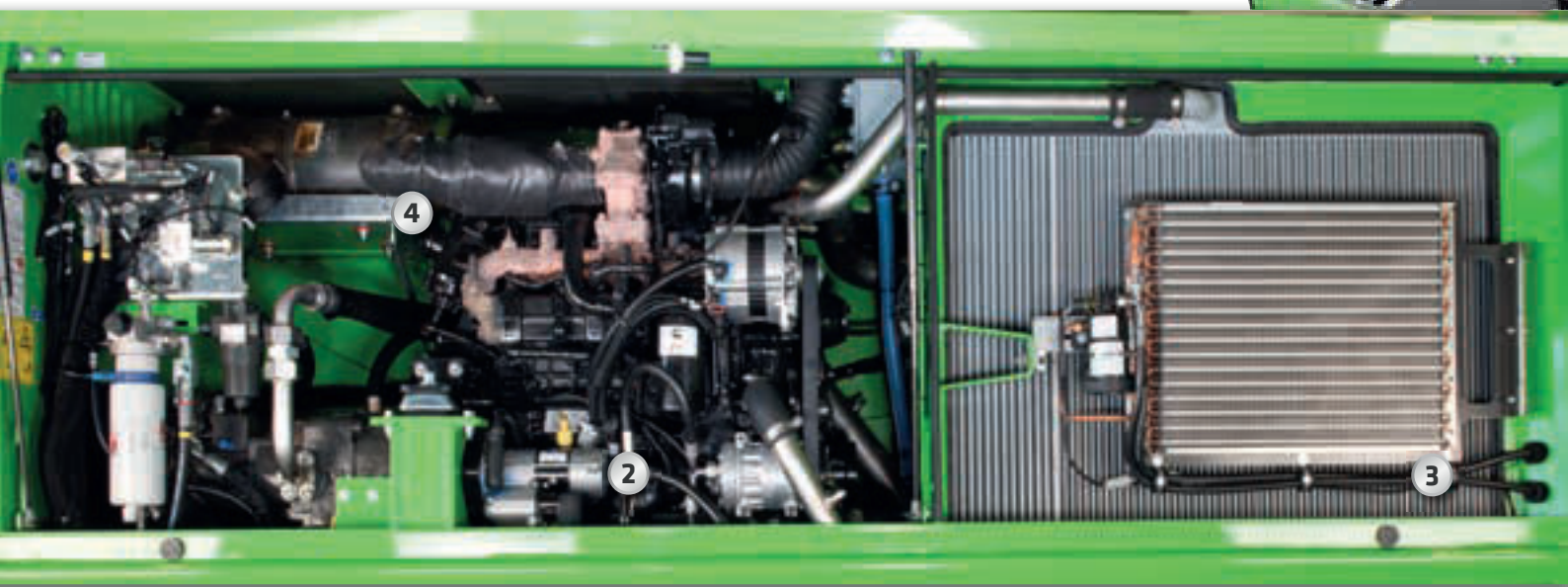


821E The E-Series. At a glance.



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 settings of engine and hydraulics reduces fuel consumption



Quiet operation **2**

- Consistently quiet operation thanks to decoupled engine mounts and soundproofing in the doors
- Soundpower 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 ondemand thermostatic control
- Fan reversal for cleaning in series

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



Maximum safety

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

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*

* Optional



The premium cab.

Panoramic view

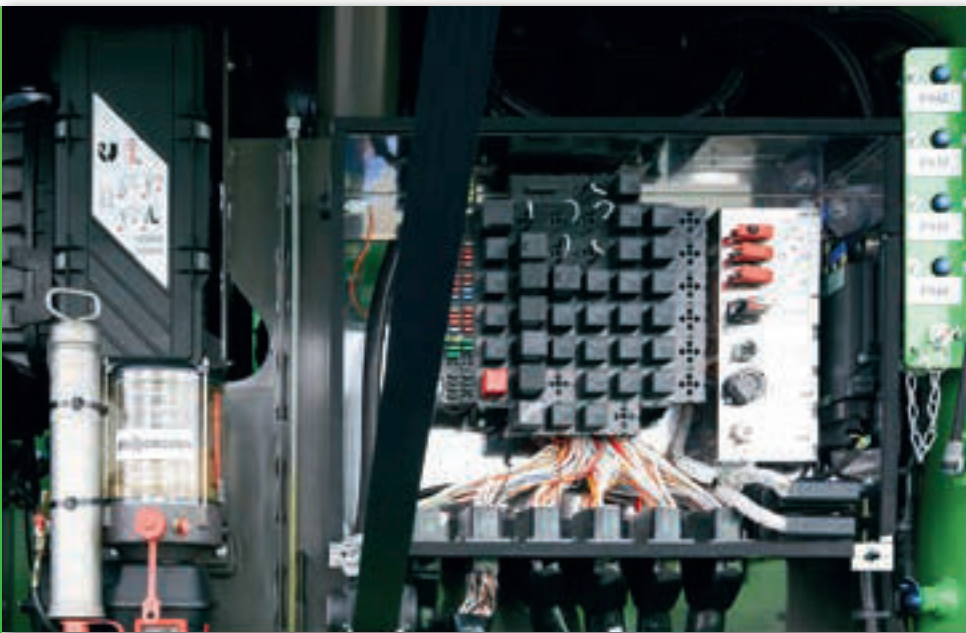
Features

- optimum cab climate with automatic air conditioning system, partial tinted glass
- pleasant and equal temperature dispersion by means of 9 nozzles
- panoramic view
- climatic comfort seat with air suspension and air conditioning*
- very quiet through optimized noise insulation
- Highest safety & comfort with sliding door, wide door opening
- ergonomically arranged operating controls for fatigue-free and relaxed working
- 12 V, 24 V, and USB charging sockets hands-free telephone preparation, document box
- various options: electric cooler behind`s, protective covers, seat air conditioning

Our SENNEBOGEN joysticks

- consoles and ergonomic joysticks that move with the seat
- pleasant grip through ergonomic design
- precise control of all movements through direct and sensitive function activation
- quick access to all operating controls through optimized design of all push-buttons and switches

821E Maintenance and service made easy.



Optimized for maintenance

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



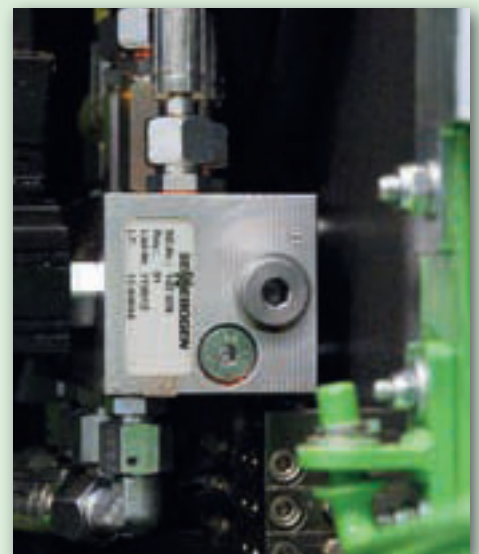
Hydro Clean*

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



Central measuring points

- Easily accessible
- Quickly inspect entire hydraulic system



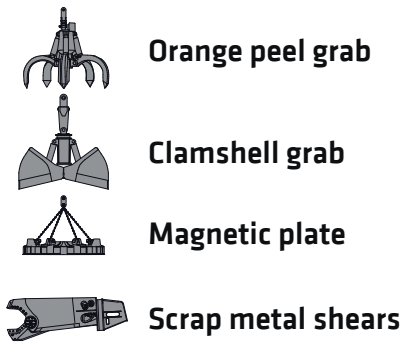
Clear labeling

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

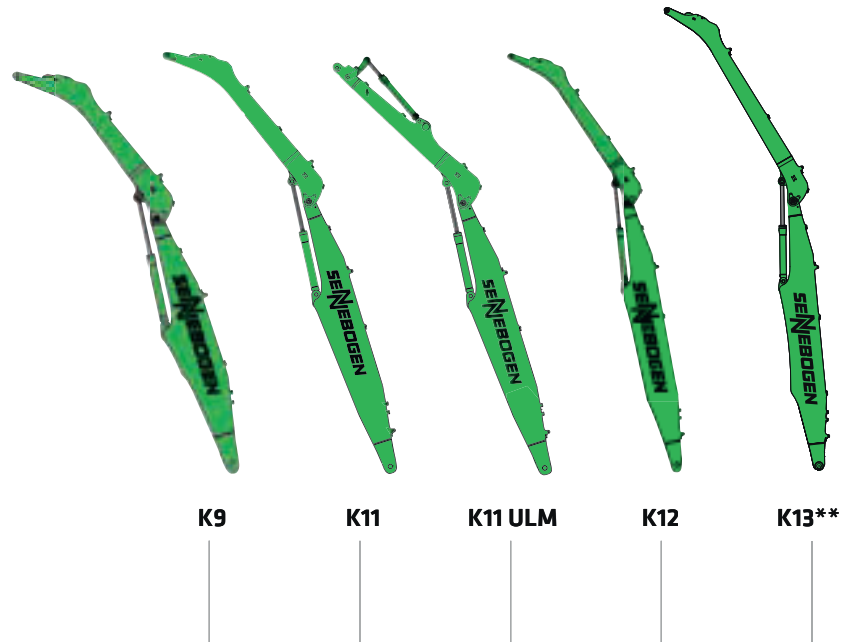
* Option

821E Modular design - versatile solutions

Attachments



Equipment options (others available upon request)



Cab

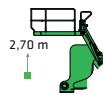


Maxcab



Maxcab Industry

Cab elevation



E270

Uppercarriage



Diesel-hydraulic drive



Electrohydraulic drive

Options



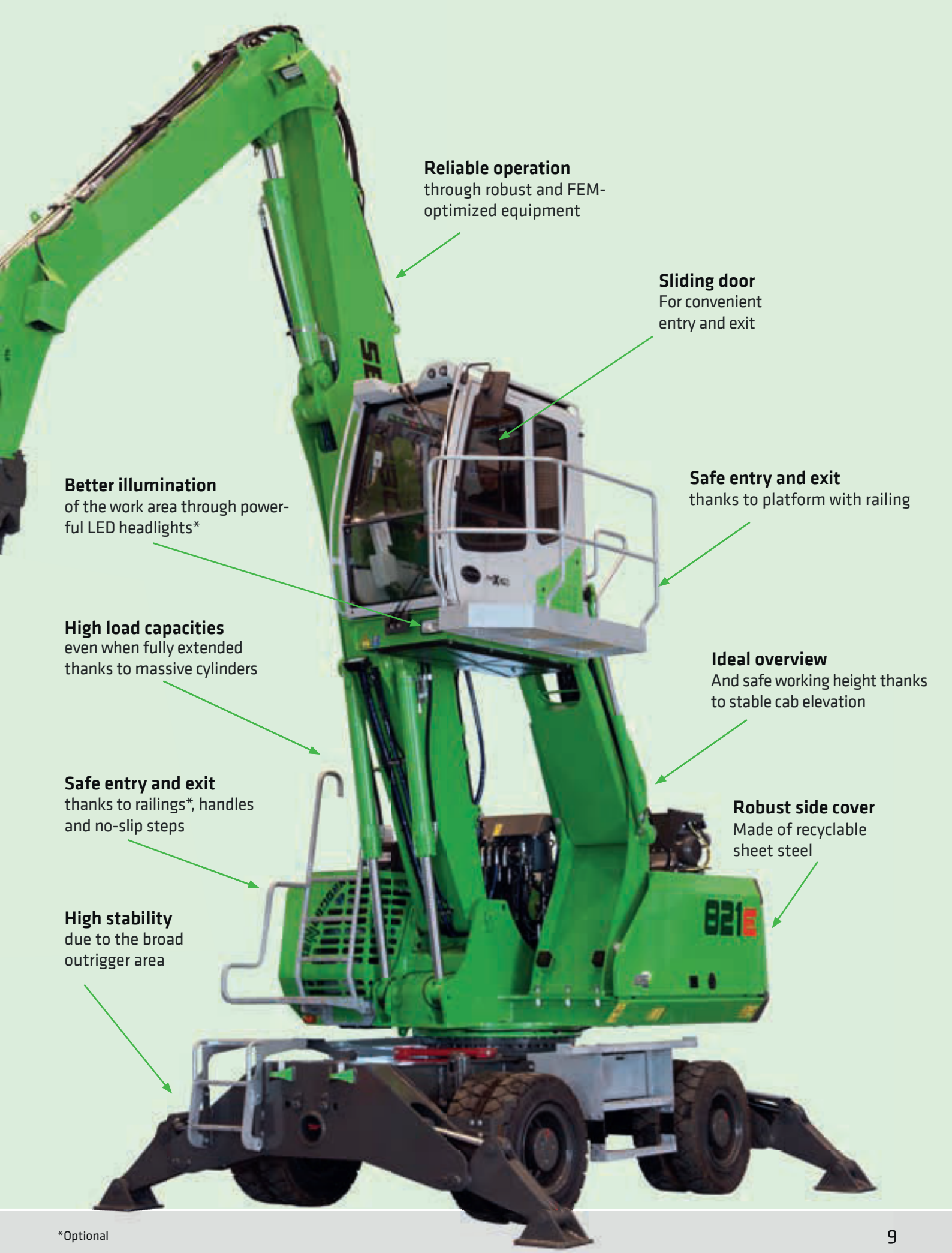
Motorized cable reel



Transformer

Undercarriage variants





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 at 2200 rpm (IIIa) 104 kW at 2200 rpm (IV) MHD: 119 kW at 2200 rpm (IIIa/IV) |
| Model | Cummins QSB 4,5 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 | 300 l |
| DEF tank | 30 l (Stage IV) |
| Electrical system | 24 V |
| Batteries | 2 x cold-start high-performance batteries |
| Options | <ul style="list-style-type: none"> ■ 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 | <ul style="list-style-type: none"> ■ Swing bearing brake ■ Hand rails at the upper structure for additional safety ■ LED lighting packages ■ Fire extinguisher ■ Sea climate resistant coating ■ Electric hydraulic tank preheater with uppercarriage power socket ■ Low-temperature packages (oils, battery heater, hydraulic oil preheater, cab preheater, motor preheater) ■ Hydraulically driven 9 kW/15 kW magnetic generator ■ Telematic system SENtrack DS |



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 |
| Delivery rate | 310 l/min |
| 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 | <ul style="list-style-type: none"> ■ 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  | |
|--|--|
| 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 Industry cab with single-piece armored windshield ■ Radio |

|  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 outriggers and stabilizer blade (front or rear) ■ Protection for travel drive/shunting coupling |

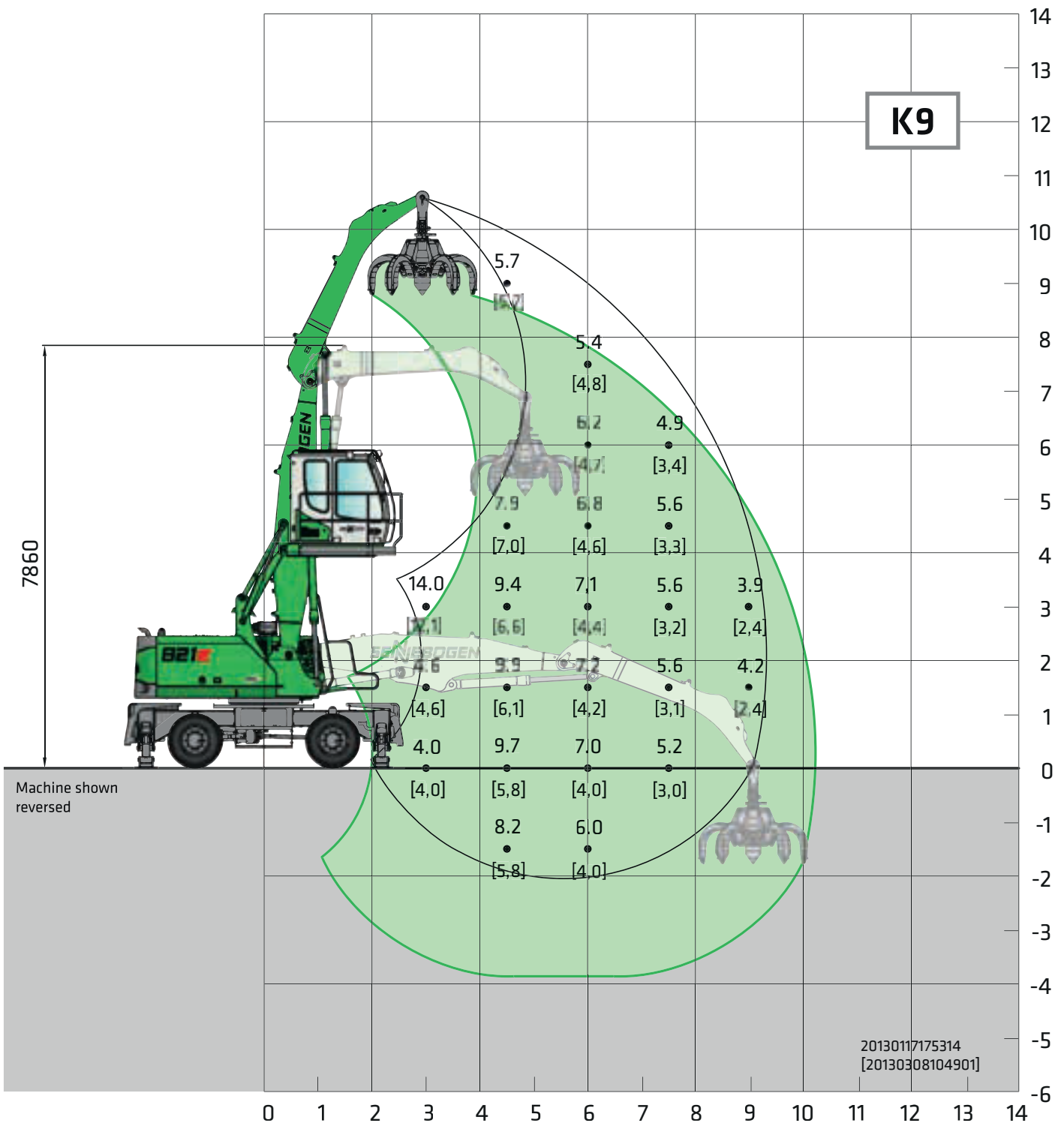
|  EQUIPMENT | |
|--|---|
| Design | Sealed and soiling-protected box design with oversized bearing points for long service life. Oversized bearing points with low-maintenance, sealed special bushings, precision-crafted |
| Cylinder | Special hydraulic cylinder with hydraulic end position damping, optimized 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 |

|  ELECTRIC DRIVE  | |
|---|---|
| Option | <ul style="list-style-type: none"> ■ Power: 90 kW, 400 V, 50 Hz Total connected load 200 kVA, machine side fusing 200 A (alternatively 250 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 |

|  OPERATING WEIGHT | |
|---|---|
| Mass | <p>821 M with 4-point outrigger, K11 compact loading attachment and 600-l orange peel grab Approx. 23,950 kg</p> <p>821 MHD with 4-point outrigger, K12 compact loading attachment and 600-l orange peel grab Approx. 25,100 kg</p> |
| Note | Operating weight varies by model and equipment. |

821E Load ratings

M



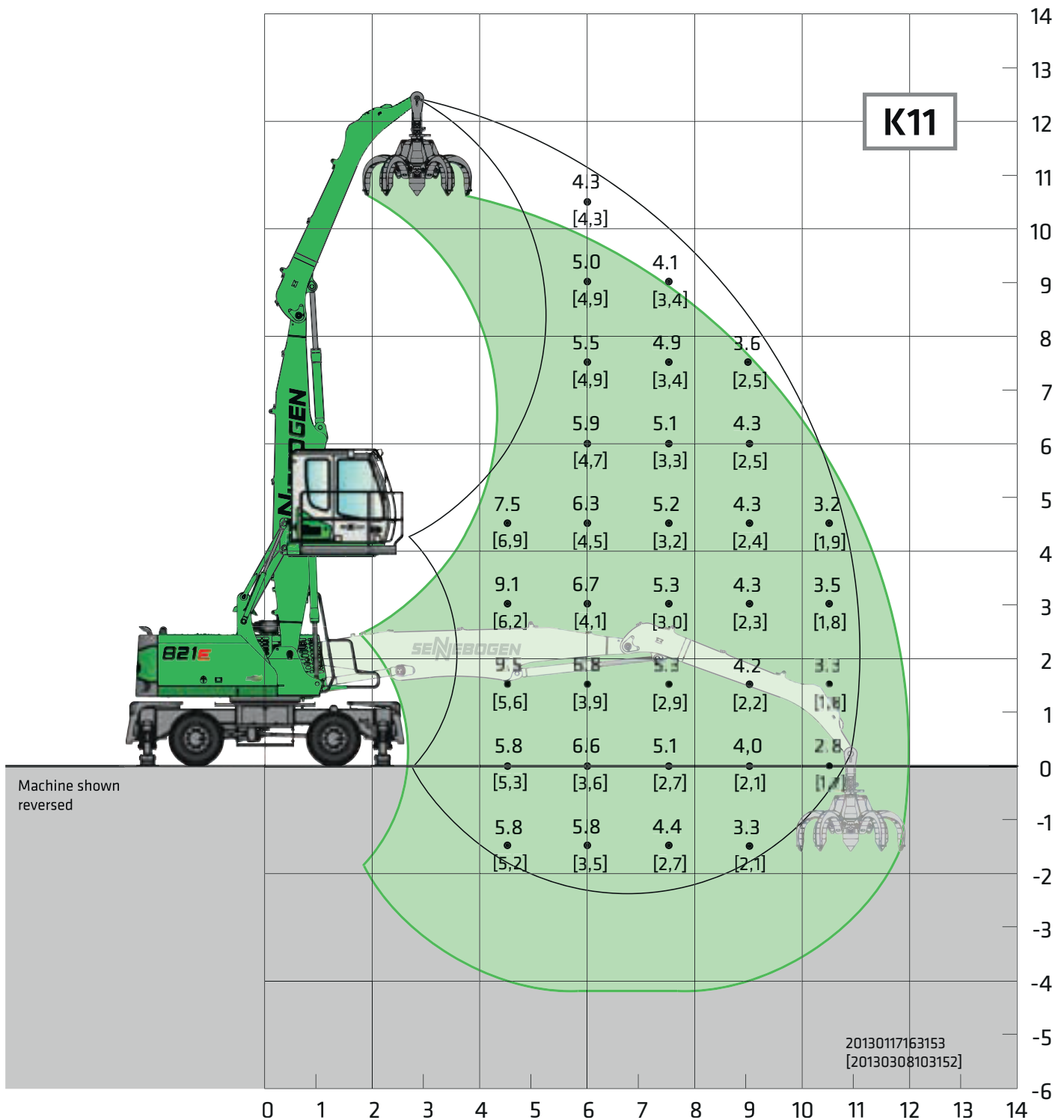
| | | | | | |
|----------------------|-------------|---------------------|--------------|------------|--------------------------------|
| Undercarriage | MP21 | Compact boom | 5.1 m | Cab | E270 Maxcab, |
| | | Grab stick | 4.0 m | | hydraulically elevating |

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



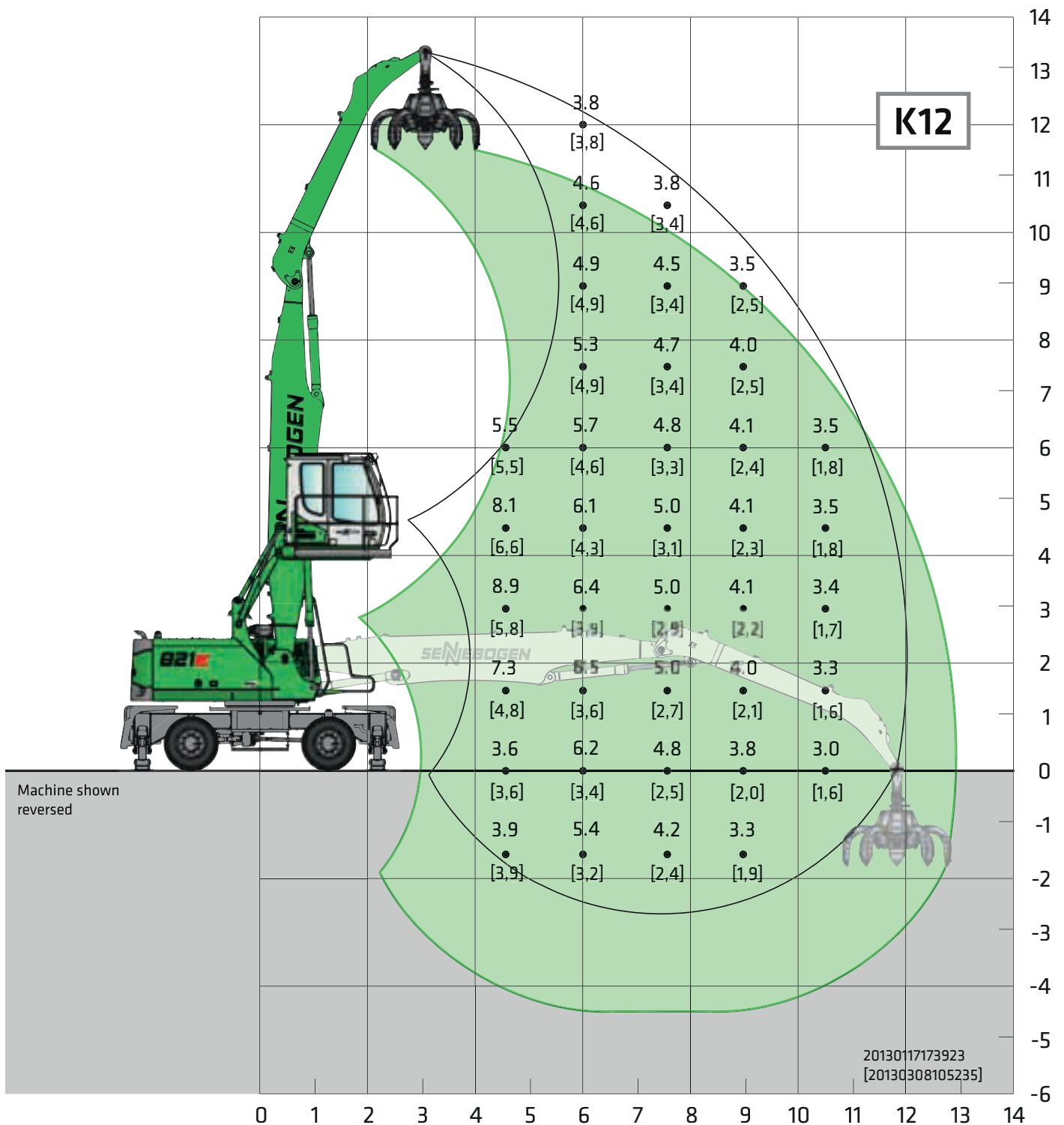
| | | | | | |
|----------------------|-------------|---------------------|--------------|------------|--------------------------------|
| Undercarriage | MP21 | Compact boom | 6.3 m | Cab | E270 Maxcab, |
| | | Grab stick | 4.6 m | | hydraulically elevating |

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.

Subject to change.

821E Load ratings

M

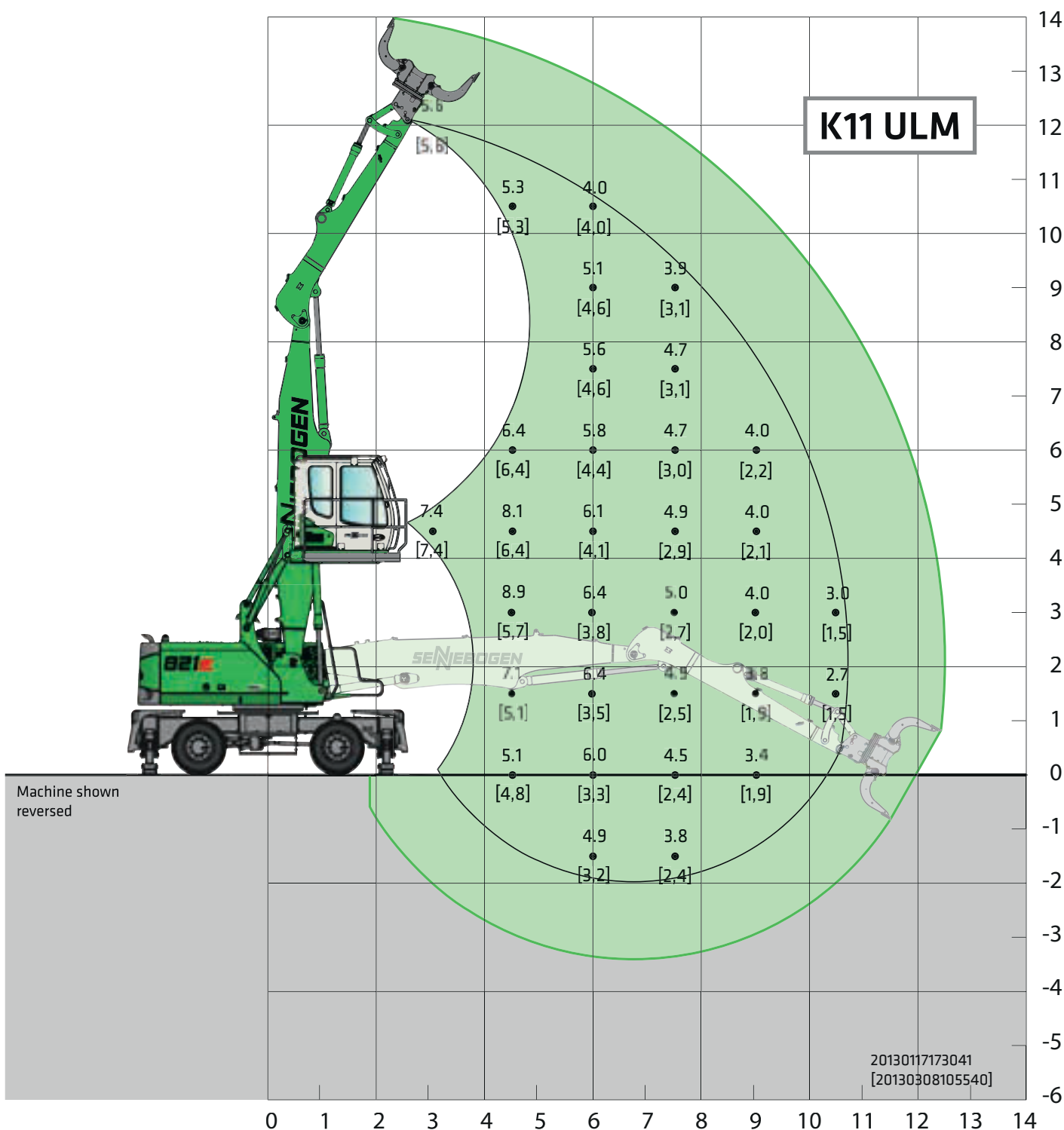


| | | | | | |
|----------------------|-------------|---------------------|--------------|------------|--------------------------------|
| Undercarriage | MP21 | Compact boom | 7.0 m | Cab | E270 Maxcab, |
| | | Grab stick | 4.9 m | | hydraulically elevating |

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.

Subject to change.





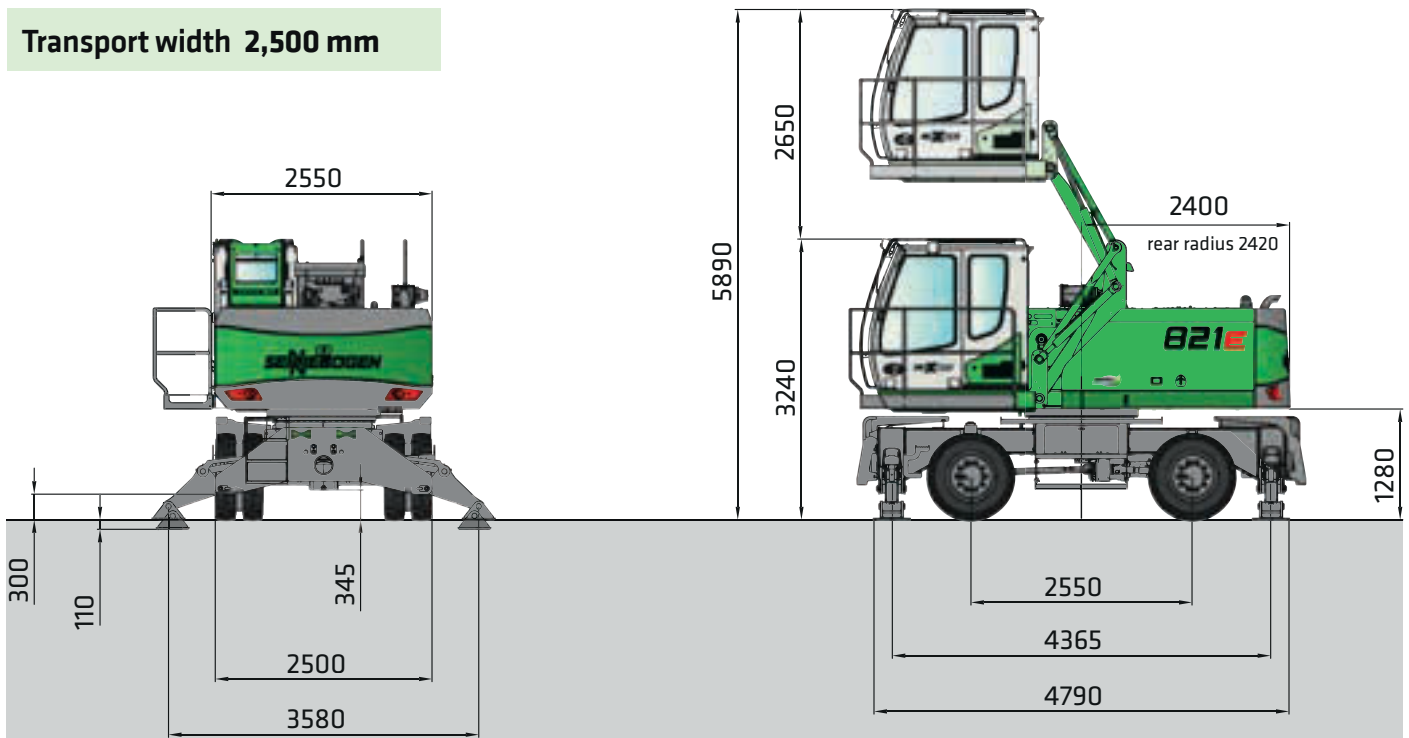
| | | | | | |
|----------------------|-------------|---------------------|--------------|------------|--------------------------------|
| Undercarriage | MP21 | Compact boom | 6.3 m | Cab | E270 Maxcab, |
| | | Grab stick | 4.2 m | | hydraulically elevating |

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.

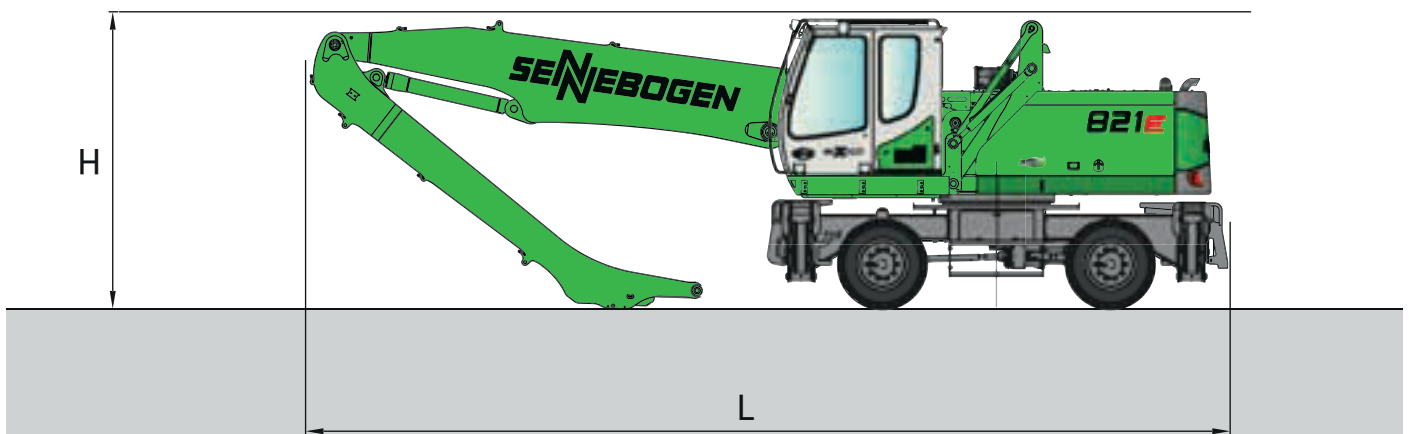
821E Transport dimensions

M

Transport width 2,500 mm



821 M with MP21 undercarriage and E270 hydraulically elevating cab

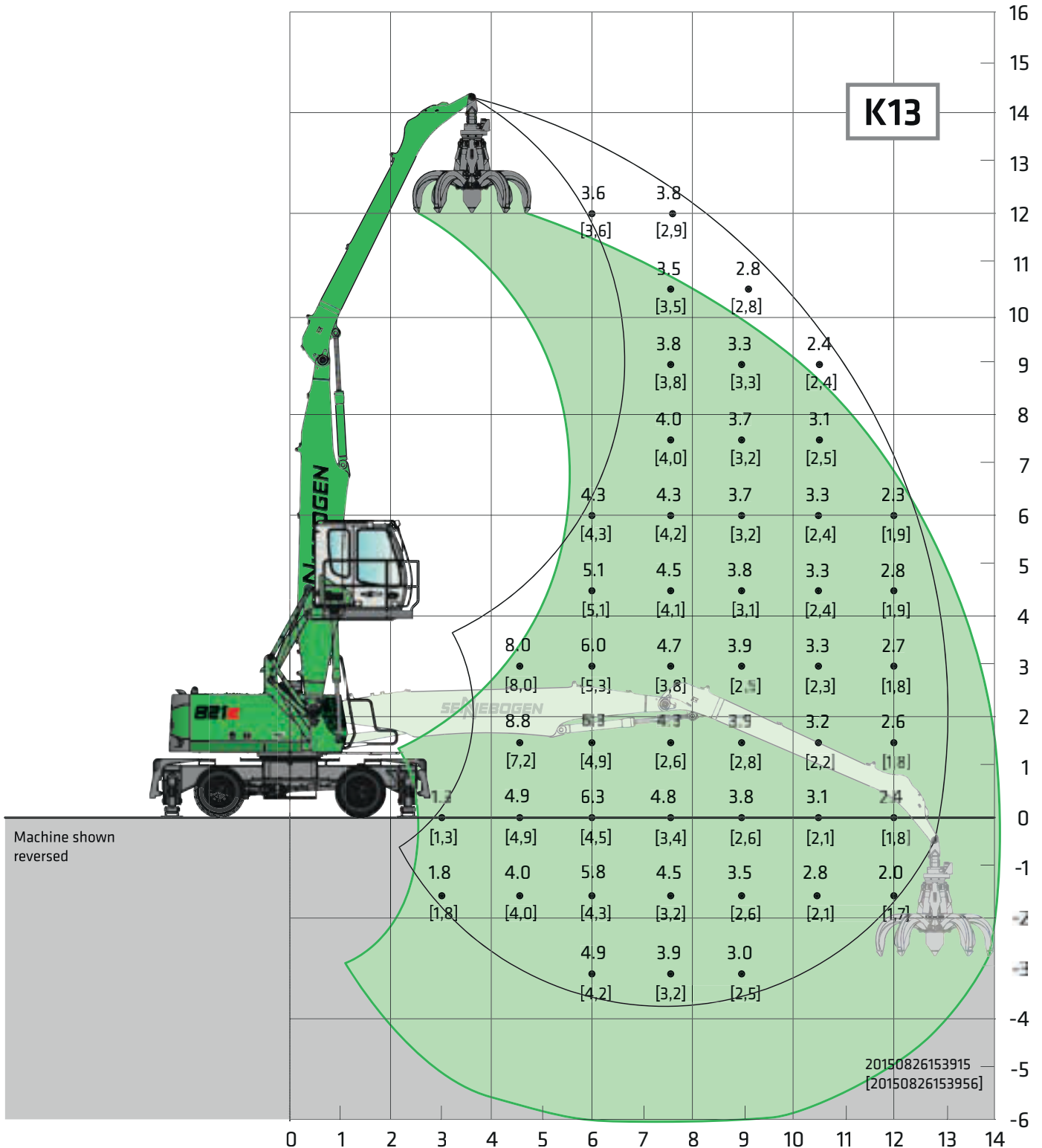


821 M with MP21 undercarriage

| | Load boom | Grab 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 |

821E Load ratings

MHD



| | | | | | |
|----------------------|-------------|---------------------|--------------|------------|--------------------------------|
| Undercarriage | MP26 | Compact boom | 7.0 m | Cab | E270 Maxcab, |
| | | Grab stick | 4.9 m | | hydraulically elevating |

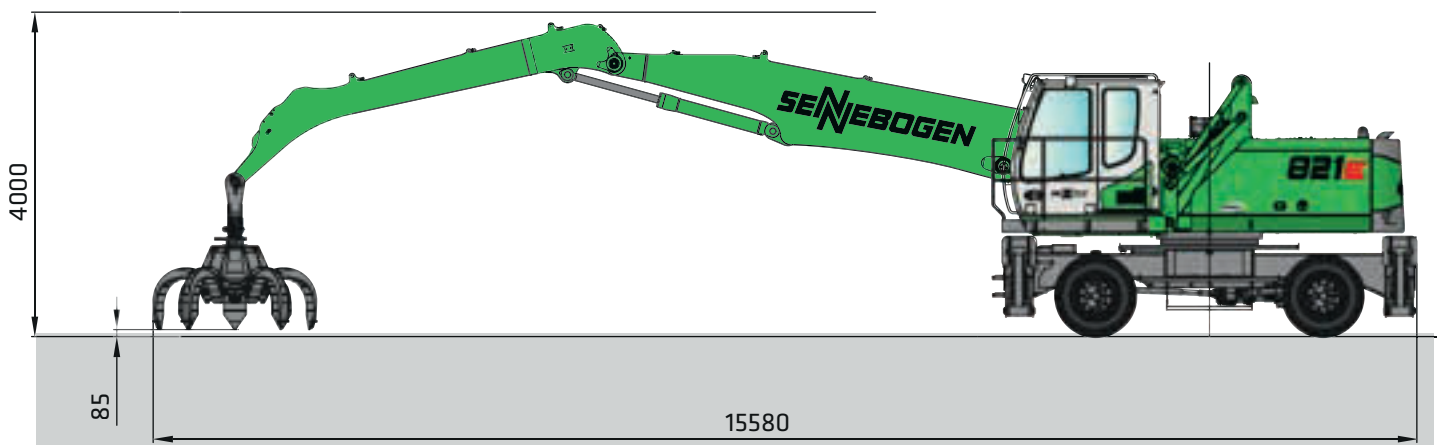
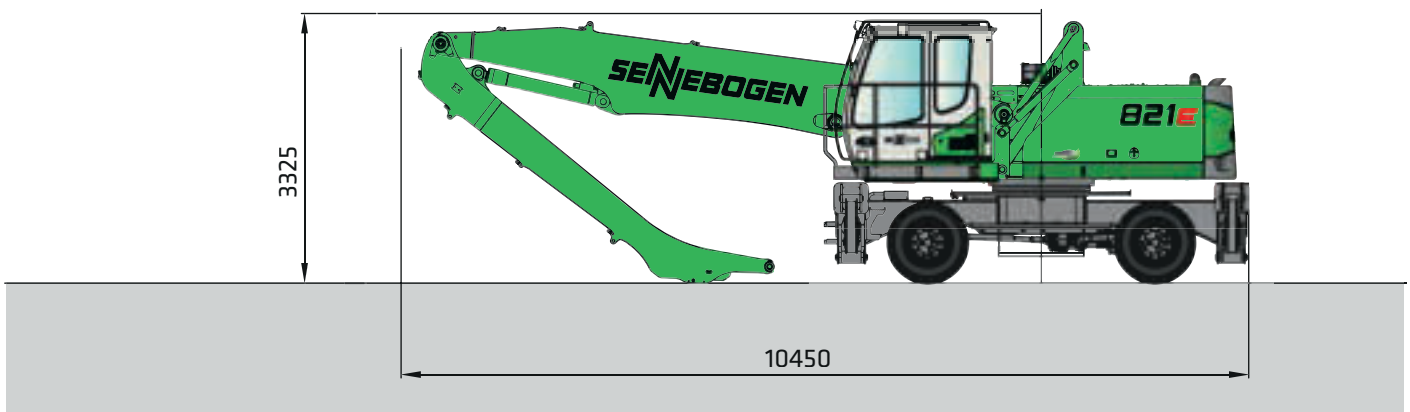
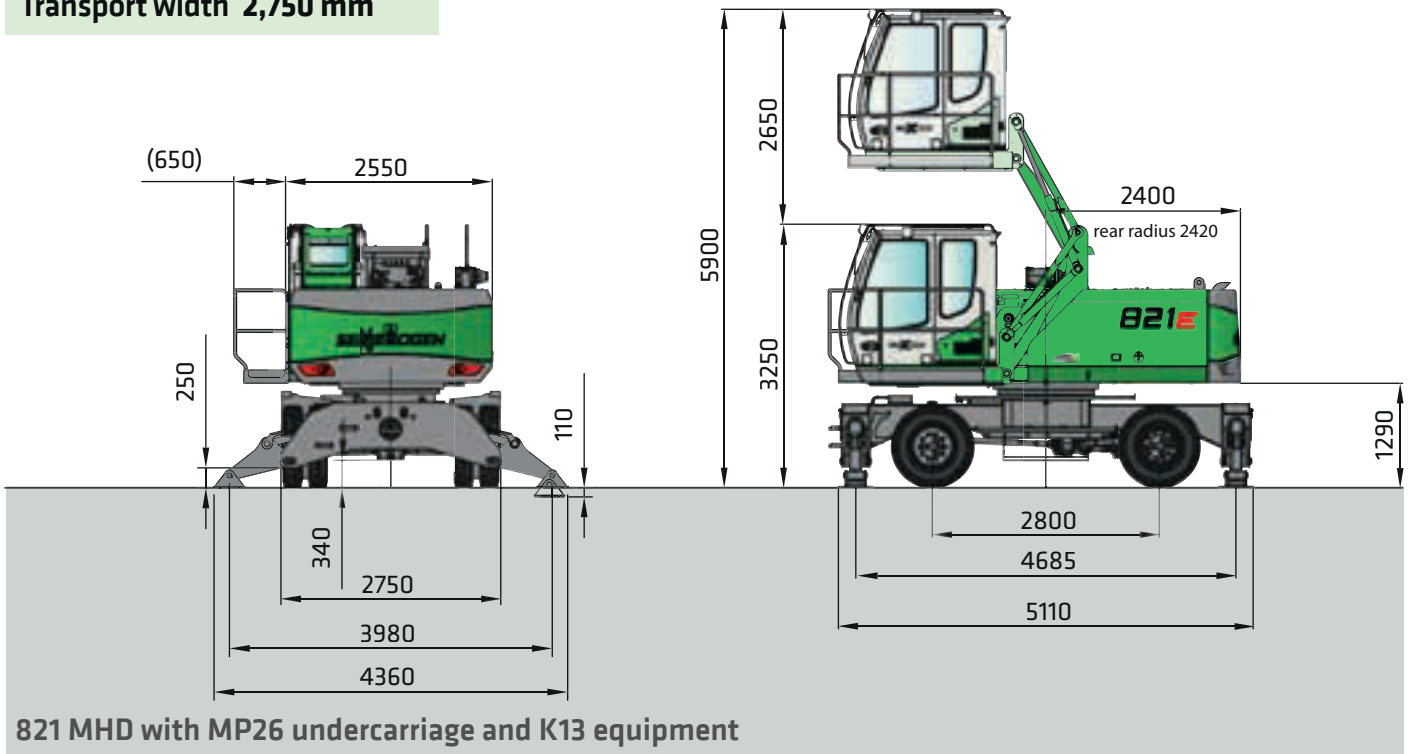
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Subject to change.

821E Transport dimensions

MHD

Transport width 2,750 mm



821E Recommended grabs

SGM Orange peel grab (4 shells)



| Design / size | Grab capacity | Weight ¹ | | Max. piled density |
|---------------|---------------|---------------------|------|--------------------|
| | | Shell shape | | |
| | | HO | G | |
| | | kg | kg | t/m ³ |
| SGM | I | | | |
| 600.30-4 | 600 | 1280 | 1410 | 2.0 |
| 800.30-4 | 800 | 1320 | 1510 | |

SGM Orange peel grab (5 shells)



| Design / size | Grab capacity | Weight ¹ | | Max. piled density |
|---------------|---------------|---------------------|------|--------------------|
| | | Shell shape | | |
| | | HO | G | |
| | | kg | kg | t/m ³ |
| SGM | I | | | |
| 600.30 | 600 | 1430 | 1550 | 2.0 |
| 800.30 | 800 | 1460 | 1600 | |

Clamshell grab SGZ



| Design / size | Grab capacity | Weight ¹ | Max. piled density |
|---------------|---------------|---------------------|--------------------|
| | | kg | |
| 1000.40 | 1000 | 1270 | 2.0 |
| 1200.40 | 1200 | 1360 | |
| 1400.40 | 1400 | 1420 | |
| 1600.40 | 1600 | 1530 | |

Sorting grab SGR



| Design / size | Grab capacity | Weight ¹ |
|---------------|---------------|---------------------|
| | | kg |
| SGR | I | |
| 800.30 L | 380 | 1035 |
| 1000.30 L | 450 | 1050 |
| 1200.30 L | 520 | 1060 |

Magnetic plates



| Type series / model | Power | Weight | Pull-off strength | Load-bearing capacity in kg |
|--|-------|--------|-------------------|-----------------------------|
| WOKO | kW | kg | kN | Slab (safety factor 2) |
| S-RLB 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 wide for 1250 l capacity and higher

821E



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

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