



-  **268** kW (Stage IIIa)  
**298** kW (Stage V)  
**250** kW (Electro)
-  **68.5** t
-  **21** m
-  **MAX CAB**

# 850E

Crawler material handler

# 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 - 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 labeling

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.

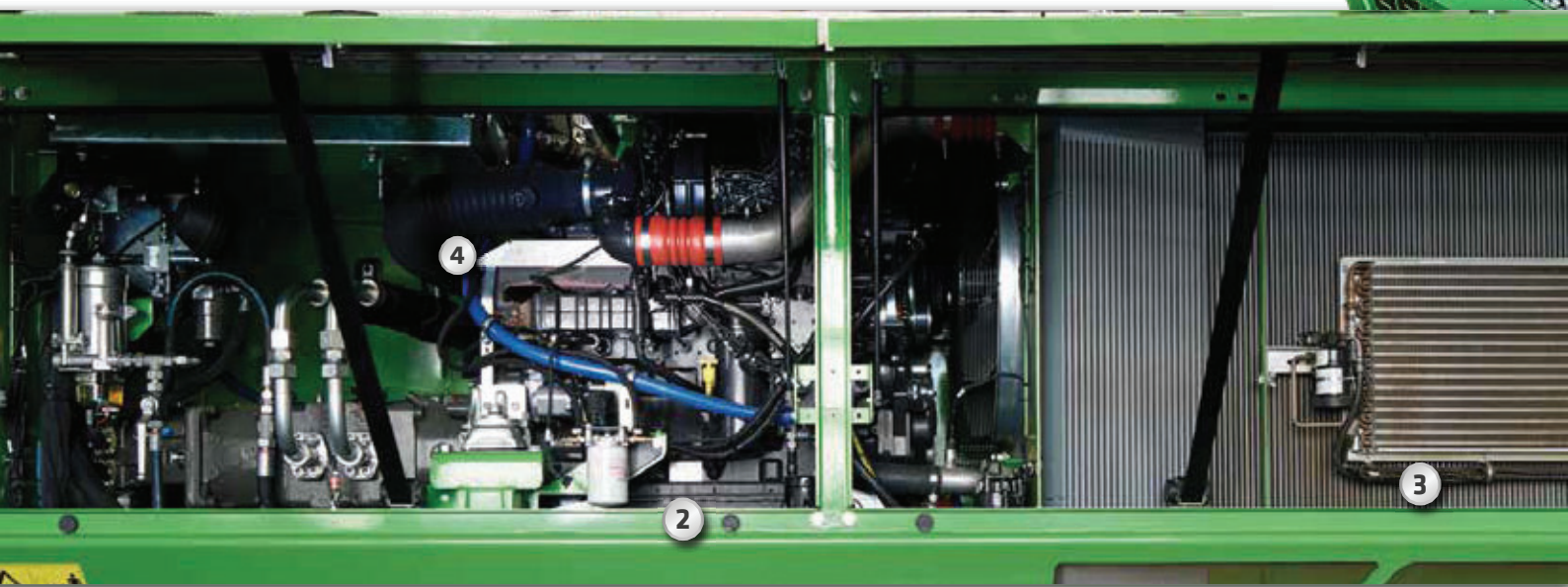


# 850E The E-Series. At a glance.



## 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 sound proofing in the doors
- Sound pressure level in accordance with 2000/14/EC as much as 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





Illustration shows mobile version

## 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 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

\* Option



The premium cab.

## Panoramic view

### Features

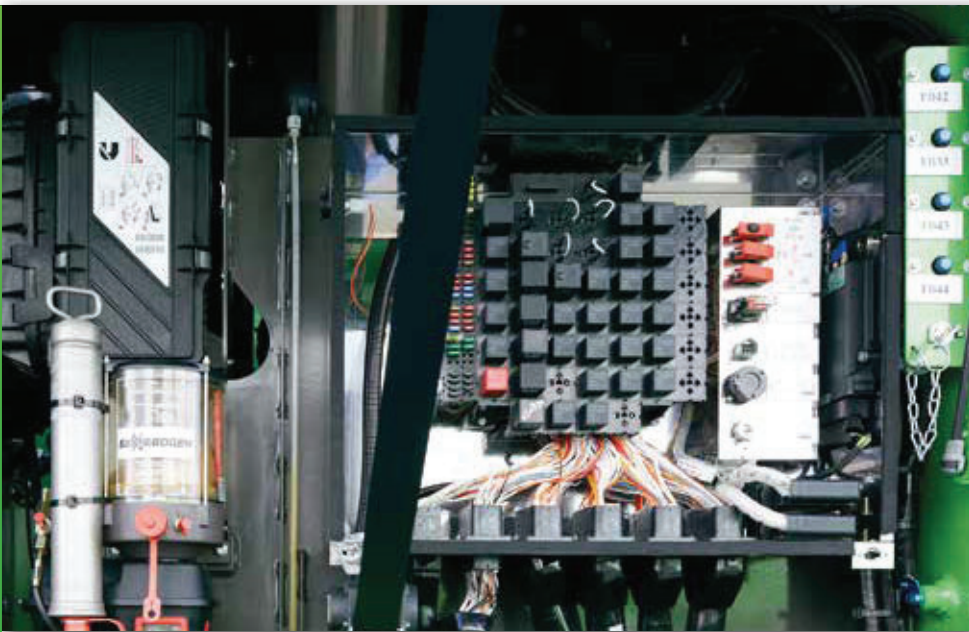
- optimum cab climate with automatic air conditioning system, partial tinted glass
- pleasant and equal temperature dispersion by means of 9 nozzles
- panoramic view
- climatic comfort seat with air suspension and air conditioning\*
- very quiet through optimized noise insulation
- Highest safety & comfort 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



# 850E 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



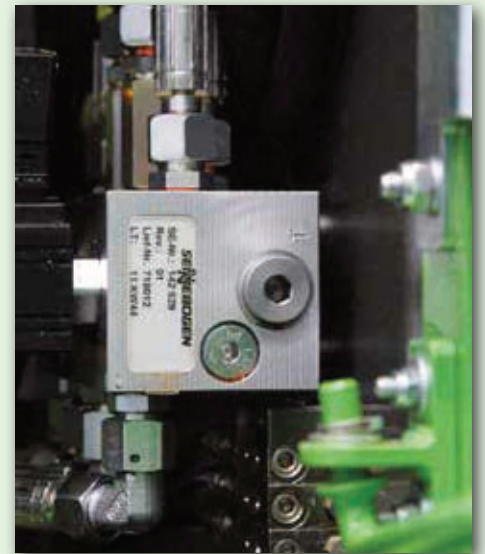
## Hydro Clean\*

- Optimal protection of hydraulic components thanks to 3  $\mu\text{m}$  micro-filter
- Cleaner hydraulic oil, longer service life



## Central measuring points

- Easily accessible
- Quickly inspect entire hydraulic system



## Clear labeling

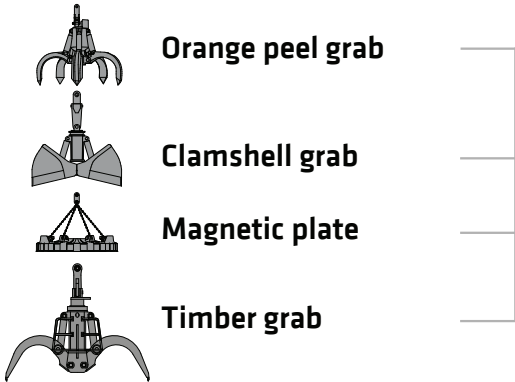
- All parts labeled with a unique part number
- Easy and reliable spare parts ordering

\* Option

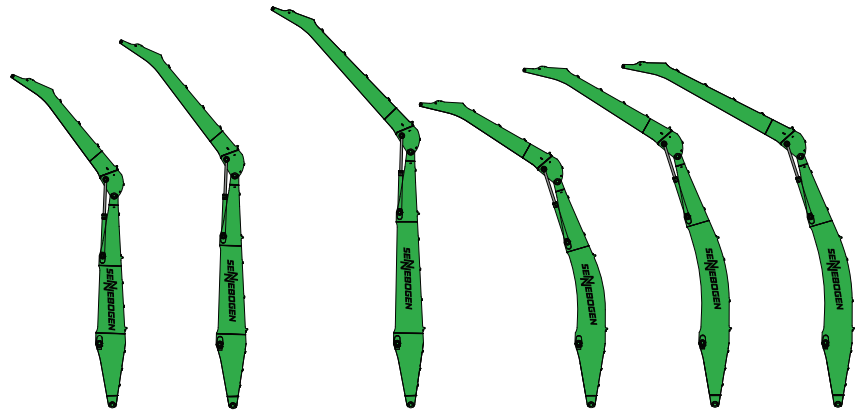


# 850E Modular design - versatile solutions

## Attachments



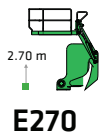
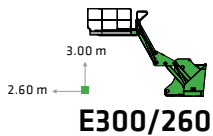
## Equipment options (others available upon request)



## Cabs

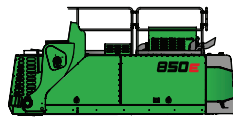


### Cab elevation



K17    K19    K21    B17    B19    B20

## Uppercarriage



Diesel-hydraulic drive



Electrohydraulic drive

### Options

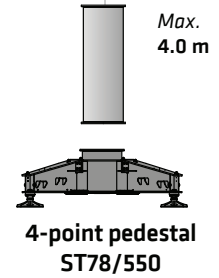
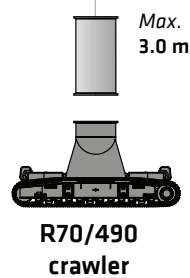
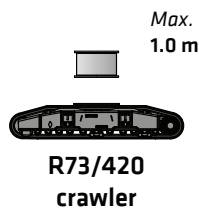
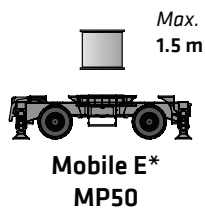


Motorized cable reel



Transformer

## Undercarriage variants



# 850E Advantages at a glance

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

Various attachments available (page 25)

Ideal overview and safe working height thanks to stable cab elevation

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

Extensive lighting concept

Easy accessibility to all service points of the machine

\* Option

## MACHINE TYPE

Model (type) **850**

## ENGINE

|                |   |
|----------------|---|
| Power          | <b>268 kW at 1800 rpm (Stage IIIa)</b><br><b>298 kW at 1800 rpm (Stage V)</b>   |
| Model          | <b>Cummins QSM 11 - Stage IIIa</b><br><b>Cummins X 12 - Stage V</b><br>Direct injection, turbo charged, intercooling, reduced-emission, ECO mode, idle automation |
| Cooling        | Water-cooled  |
| Air filter     | Dry filter with pre-separator, automatic dust discharge, main element and safety element, contamination indicator   |
| Fuel tank      | <b>810 l</b>  |
| DEF tank       | <b>110 l</b>  |
| Electr. system | <b>24 V</b>   |
| Batteries      | <b>2 x 150 Ah</b> , battery disconnect switch   |
| Options        | <ul style="list-style-type: none"> <li>■ Engine block heater</li> <li>■ Electric fuel pump</li> </ul>   |

## UPPERCARRIAGE

|                     |   |
|---------------------|---|
| Design              | Torsion-resistant box design, crafted, steel bushings for boom bearings.<br>Clear, service-friendly concept, engine installed in the longitudinal direction   |
| Central lubrication | Automatic central lubrication system  |
| Electrical system   | Central electrical distributor, battery disconnect switch   |
| Cooling system      | Compact 3-circuit cooler unit with high cooling output, thermostatically controlled fan drive to reduce energy consumption and noise emissions  |
| Options             | <ul style="list-style-type: none"> <li>■ Slewing gear brake via foot pedal</li> <li>■ Hand rail at the upper structure</li> <li>■ LED lighting packages</li> <li>■ Fire extinguisher</li> <li>■ Sea climate resistant coating as corrosion protection</li> <li>■ Electric heater for hydraulic tank</li> <li>■ Low temperature packages</li> <li>■ Hydraulically-driven magnetic generator 20 kW / 25 kW</li> <li>■ Telematic system SENtrack DS</li> </ul> |



## HYDRAULIC SYSTEM


|   |  |
|---|--|
| Load-sensing/ LUDV hydraulic system for work and travel systems |  |
| Pump type   | Swash plate-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 limiting, sensing control   |
| Operating pressure  | <b>330 bar</b>   |
| Filtration  | High-performance filtration with long change interval, optional SENNEBOGEN HydroClean micro-filter water separation system   |
| Hydraulic tank  | <b>700 l</b>   |
| Flow rate max.  | 2 x 450 l/min; up to 280 l/min for rotary drive in the closed circuit  |
| Control system  | Proportional, precision hydraulic actuation of work movements, 2 hydraulic servo joysticks for the work functions, additional functions via switches and foot pedals   |
| Cooling   | Very oversized cooler unit with thermostatically controlled fan drive  |
| 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"> <li>■ Bio-oil - environmentally friendly</li> <li>■ Tool Control for programming pressure/rate of up to 10 tools</li> <li>■ Supplemental hydraulic circuit for shear attachment</li> <li>■ Load torque warning with capacity display</li> <li>■ Overload safeguard with shutdown</li> <li>■ 60 µm pressure filter for attachments</li> <li>■ 3 µm hydraulic micro-filter - SENNEBOGEN HydroClean</li> </ul> |


## SLEWING DRIVE

|               |  |
|---------------|--|
| Gearbox       | 2-part compact planetary gear with slant-axis hydraulic motor in a closed hydraulic circuit ensures powerful rotary drive. |
| Parking brake | Spring-loaded multi-disk brake   |
| Slewing ring  | Very strong slewing ring sealed with pinion lubrication  |
| Slewing speed | 0-6 min <sup>-1</sup> , variable   |






|  <b>CAB</b>  |   |
|--|---|
| Cab type   | E270 hydraulically elevating cab  |
| Cab equipment  | Sliding door incl. 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  | <ul style="list-style-type: none"> <li>■ Active seat climate control</li> <li>■ Auxiliary heating system with timer</li> <li>■ Active carbon filter for cabs</li> <li>■ Bullet proof windshield</li> <li>■ Bullet proof skylight</li> <li>■ Safety side window and rear window</li> <li>■ Sun protection for skylight and windshield</li> <li>■ Protective roof grating</li> <li>■ FOPS protective roof grating</li> <li>■ Protective front grating</li> <li>■ Radio with speakers</li> <li>■ Maxcab Industry with continuous bullet proof windshield</li> <li>■ Electric cooler box</li> </ul> |

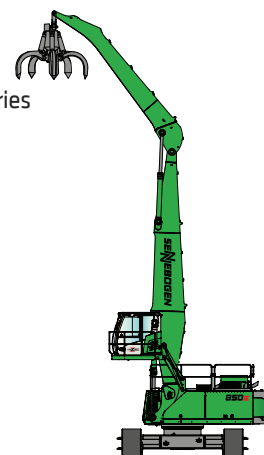
|  <b>EQUIPMENT</b> |   |
|--|---|
| Design   | Decades of experience and the latest computer simulations guarantee the greatest degree of stability and life-span. Oversized bearing points with low-maintenance, sealed special bushings, precision-crafted.  |
| Cylinders  | Hydraulic cylinders with high-quality sealing and guide elements, end position damping, sealed bearing points   |
| Options  | <ul style="list-style-type: none"> <li>■ Ball valves in the hydraulic lines for quick and easy grab switching</li> <li>■ Sea climate resistant coating</li> <li>■ Sea climate resistant coating of all cylinders, nickel-plated and chrome-plated</li> <li>■ Float position of the equipment</li> <li>■ Hoisting limiter / stick limitation adjustable for stop settings, e.g. in the hall</li> </ul> |

|  <b>UNDERCARRIAGE</b> |   |
|--|---|
| Design   | Wide-gauge crawler undercarriage in stable, torsionally rigid box construction  |
| Drive  | Hydraulic travel drive, integrated in the traveling gear frame for each traveling gear side through an axial piston motor via compact planetary gear. |

|                |  |
|----------------|--|
| Parking brake  | Spring-loaded, hydraulically ventilated disk brakes. Hydraulic brake valves protect the drive engines when moving downhill.  |
| Traveling gear | R73-420 telescopic crawler undercarriage with 2.65 – 4.2 m mechanical track adjustment and maintenance-free B7 crawler track (64 links, 6,650 mm long) with canted 800 mm triple grouser track shoes |
| Speed          | <b>0 - 1.6 km/h</b> Stage I, <b>0 - 3 km/h</b> Stage II  |
| Options        | <ul style="list-style-type: none"> <li>■ R70-490 special undercarriage with integrated 2 m pylon</li> <li>■ Maintenance-free B7 crawler track with 900 mm flat track shoes</li> </ul>                |

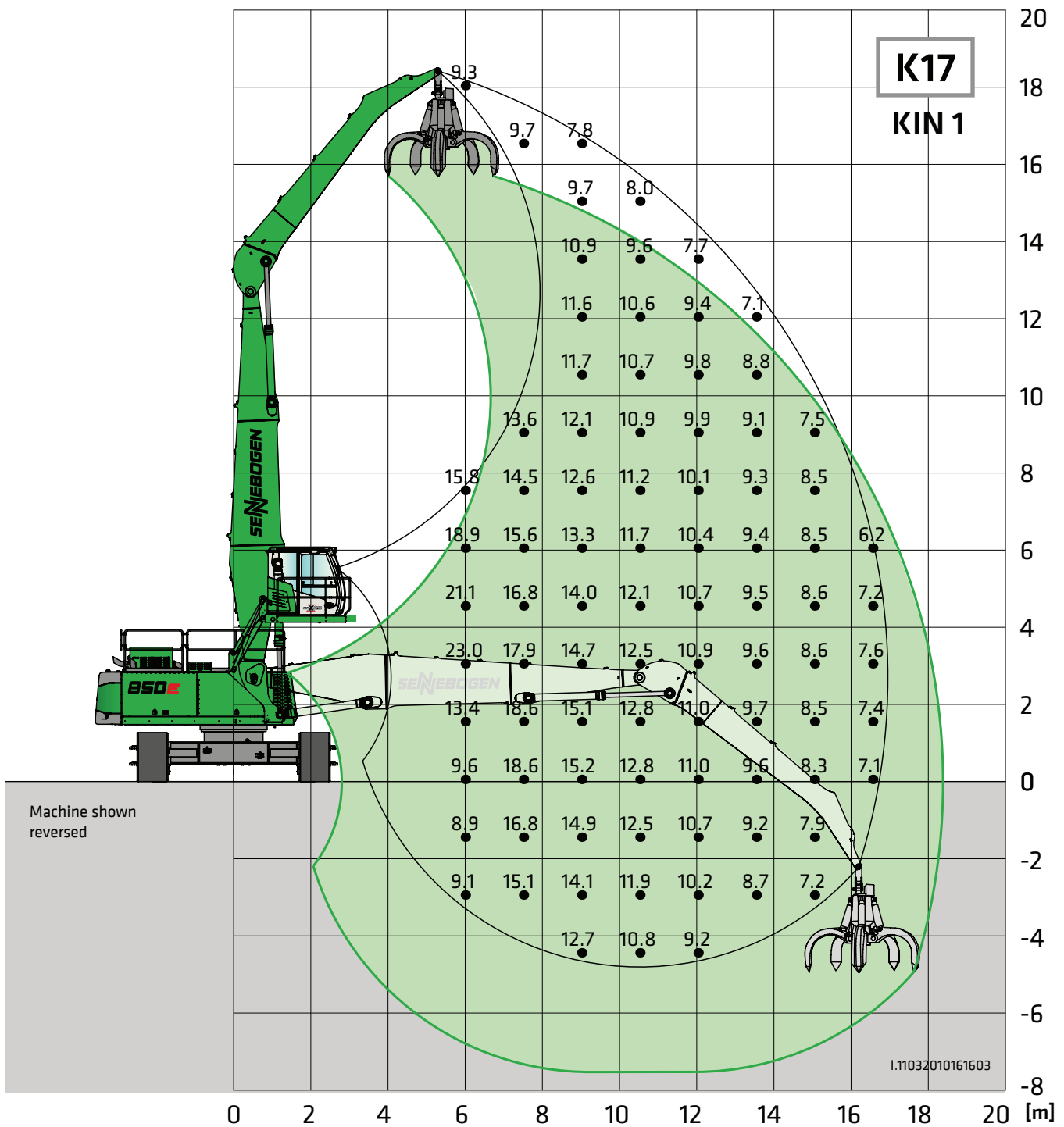
|  <b>ELECTRIC DRIVE</b>  |   |
|---|---|
| Option  | <ul style="list-style-type: none"> <li>■ Power: <b>250 kW / 400 V / 50 Hz</b><br/>Total connected load 410 kVA, machine side fuse 500 A (alternatively 630 A with magnet system) for 400 V - star-delta connection motor start</li> <li>■ Advantages: lowest operating costs, low-noise and virtually vibration-free work, long service life of the hydraulic components</li> </ul> |

|  <b>OPERATING WEIGHT</b> |   |
|---|---|
| Mass  | <b>approx. 68,500 kg</b><br>basic 850 R machine with R73/420 undercarriage, K17 with grab |
| Note  | Operating weight varies by model and equipment.   |



# 850E Load ratings

# R



**Undercarriage:** R73/420

**Compact boom:** 10 m

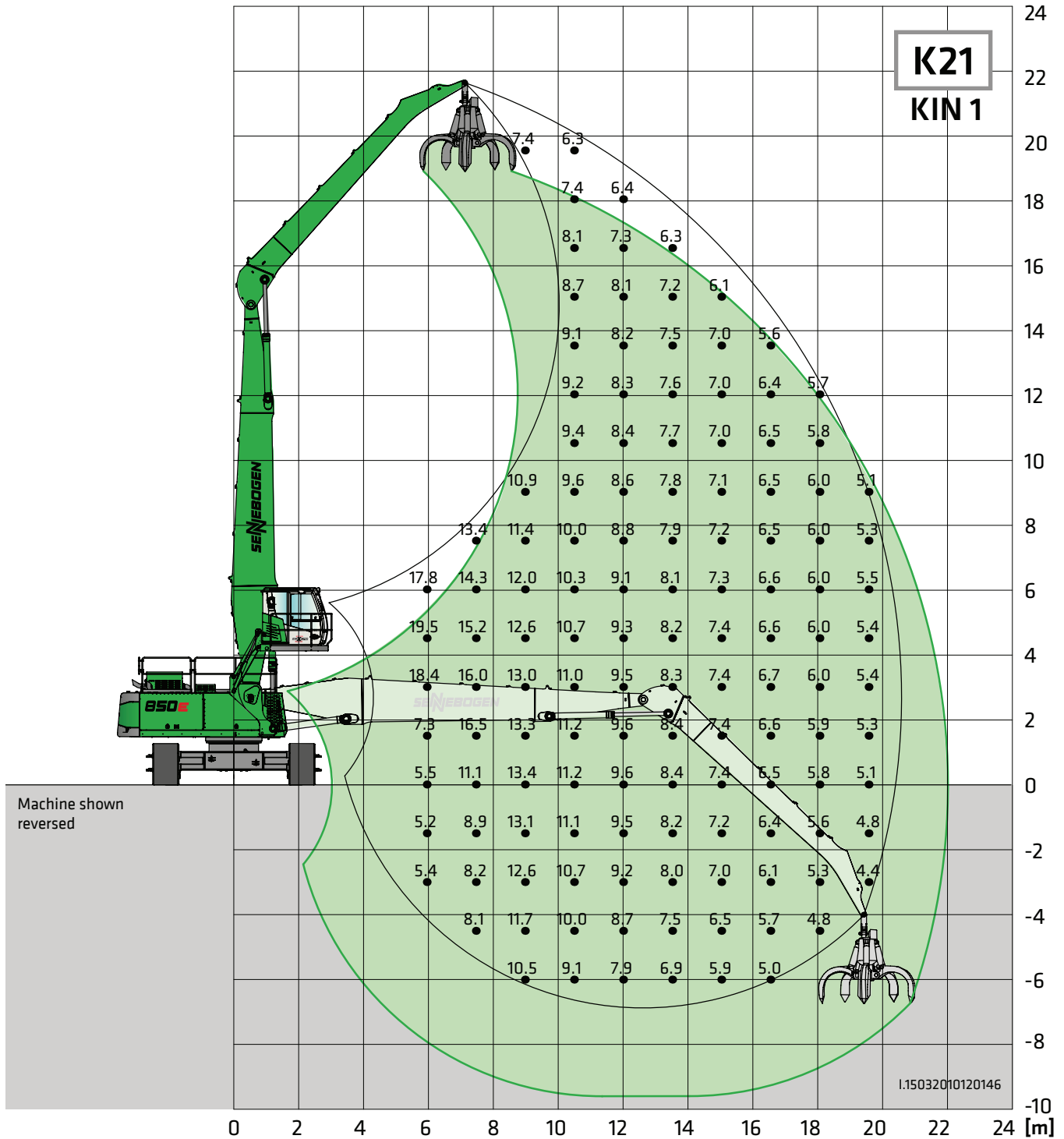
**Cab:** Maxcab E270,  
can be elevated hydraulically

**Grab stick:** 7.5 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

# R



**Undercarriage:** R73/420

**Compact boom:** 12.1 m

**Cab:** Maxcab E270,  
can be elevated hydraulically

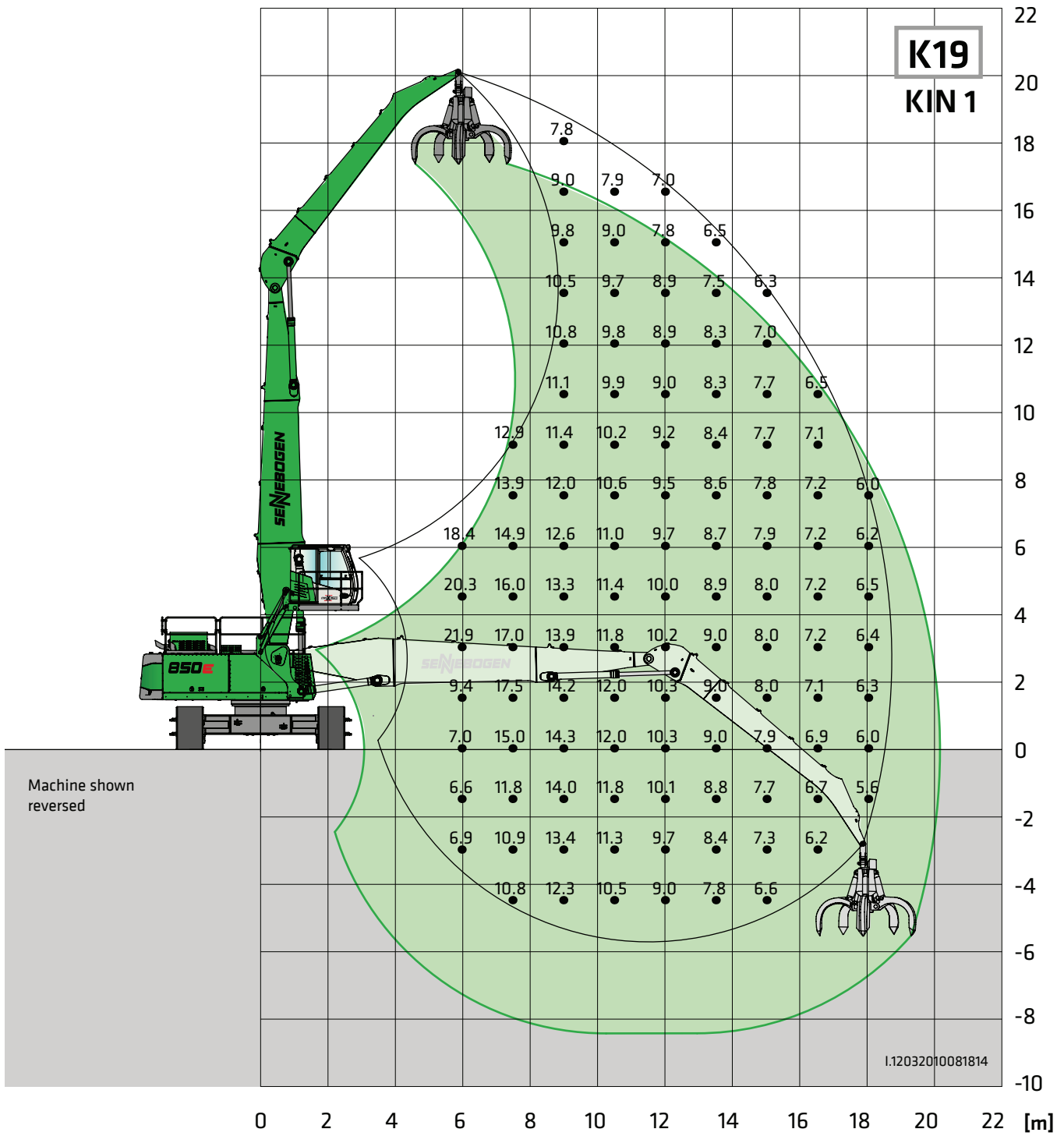
**Grab stick:** 9.5 m

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

# R



**Undercarriage:** R73/420

**Compact boom:** 11 m

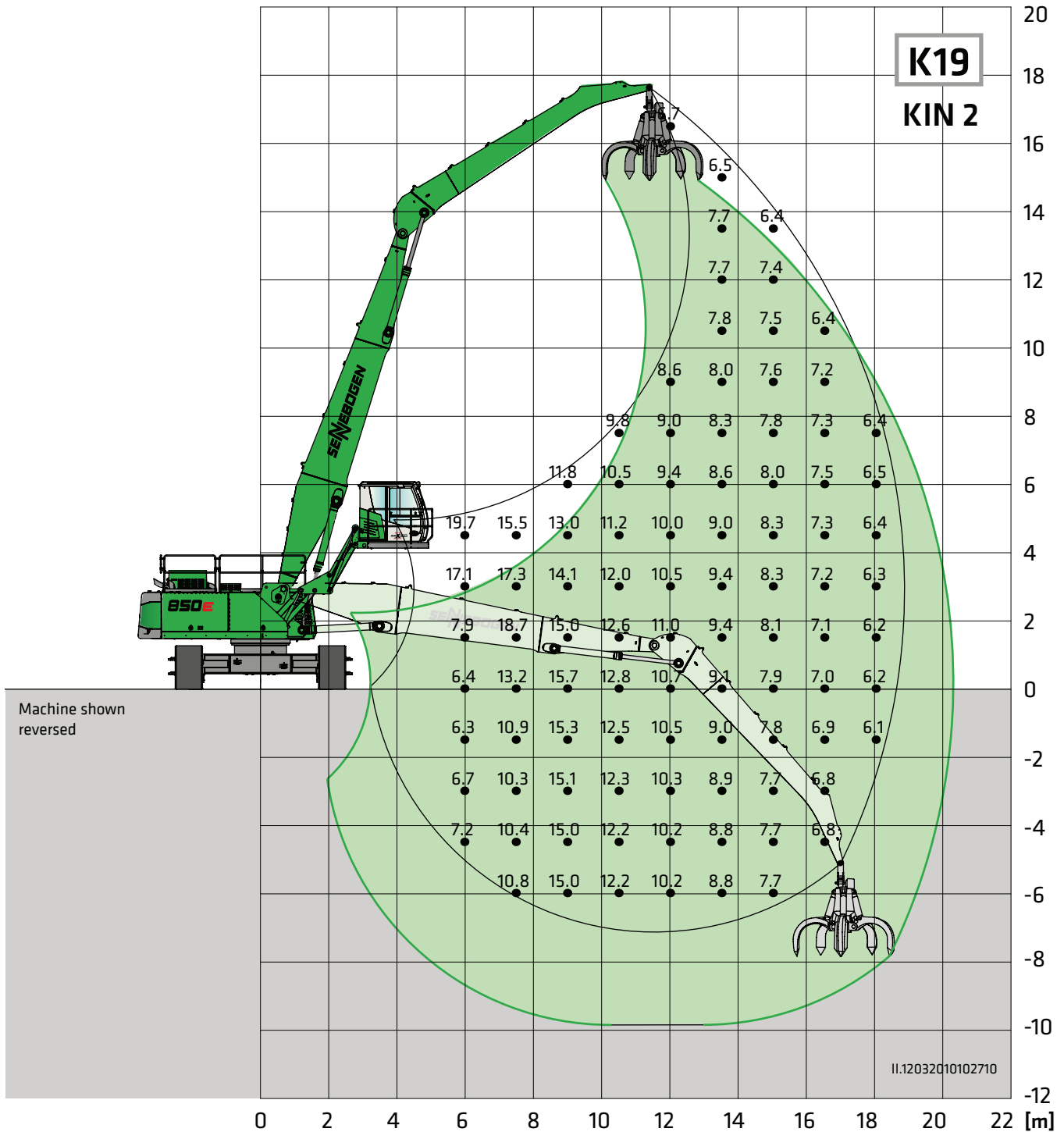
**Cab:** Maxcab E270,  
can be elevated hydraulically

**Grab 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

# R

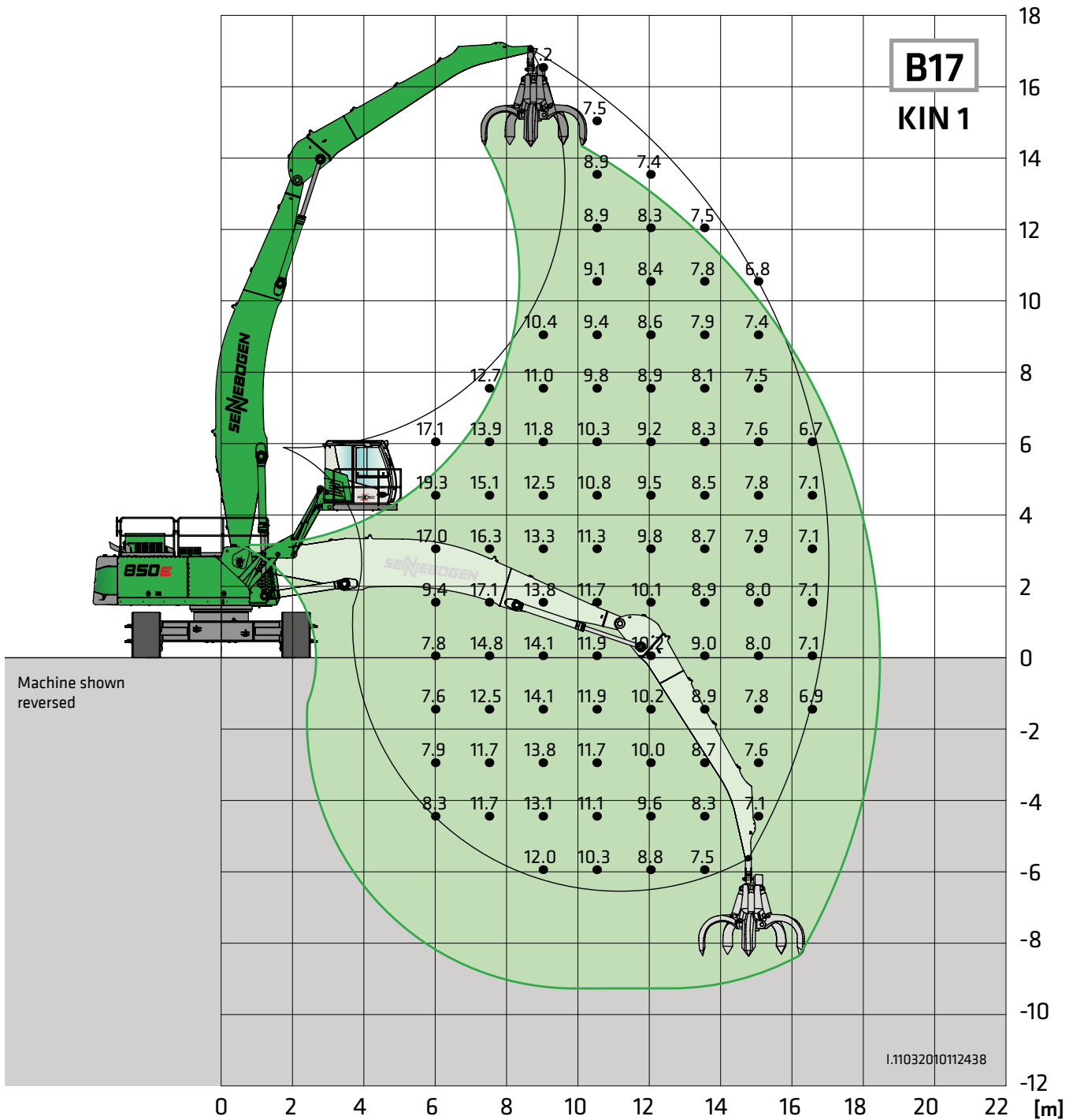


**Undercarriage:** R73/420      **Compact boom:** 11 m      **Cab:** Maxcab E300/260, can be elevated and moved forward hydraulically  
**Grab stick:** 8.4 m

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

R



**Undercarriage:** R73/420

**Compact boom:**

10.8 m Banana

**Cab:**

Maxcab E300/260,

can be elevated and moved forward hydraulically

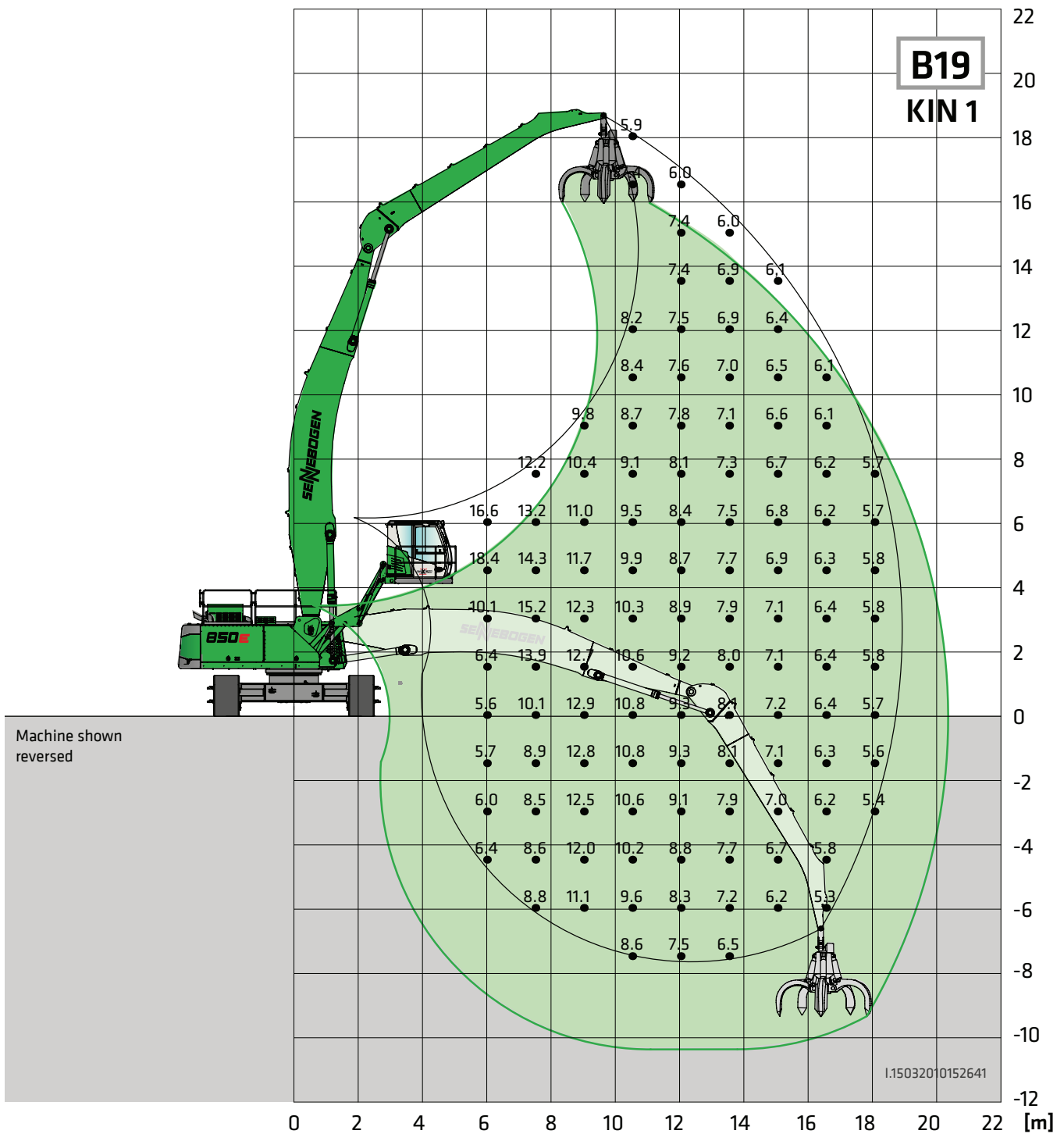
**Grab stick:**

7.5 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

# R



**Undercarriage:** R73/420

**Compact boom:**

12 m Banana

**Cab:**

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

**Grab stick:**

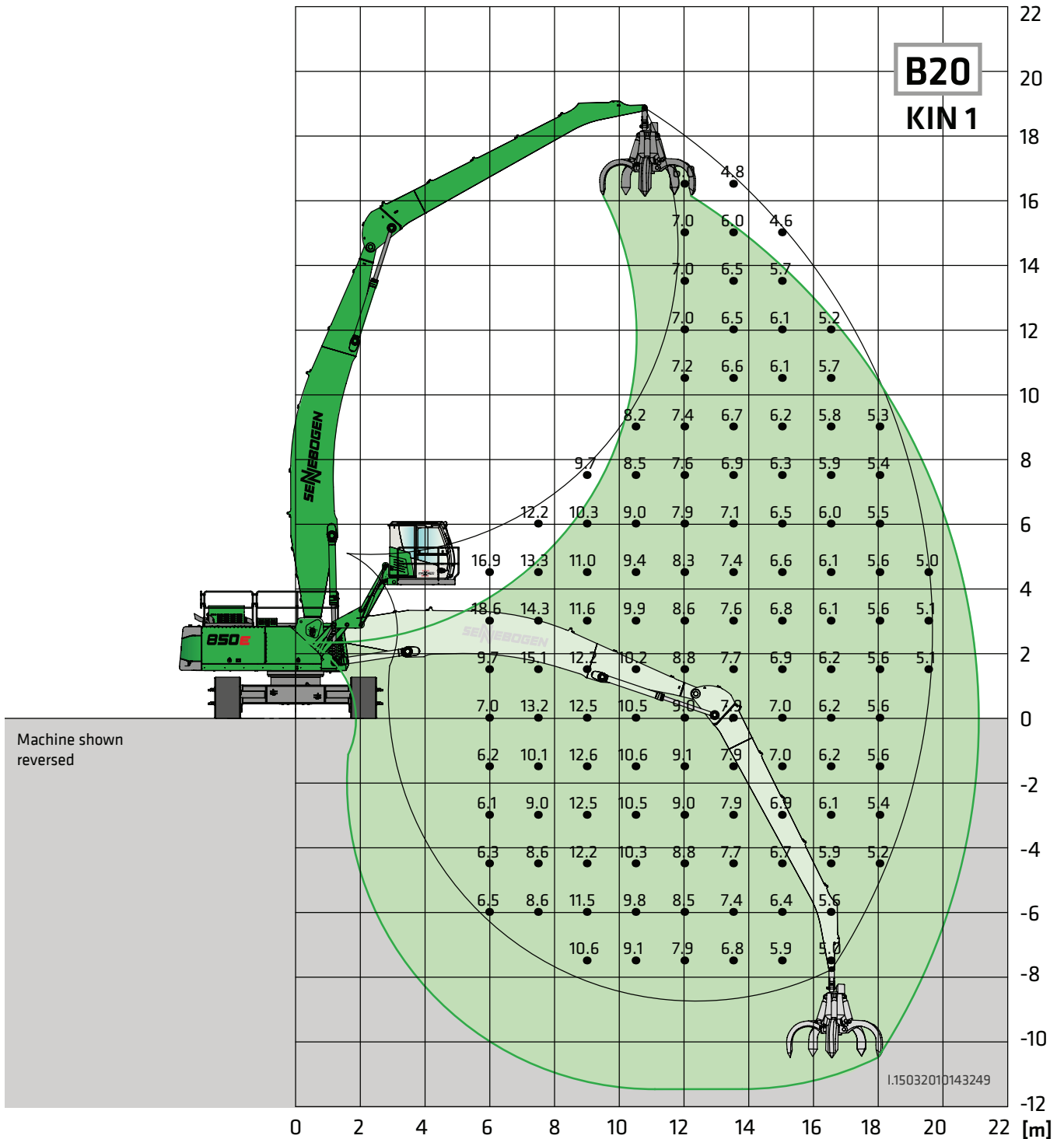
8.4 m

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

# R



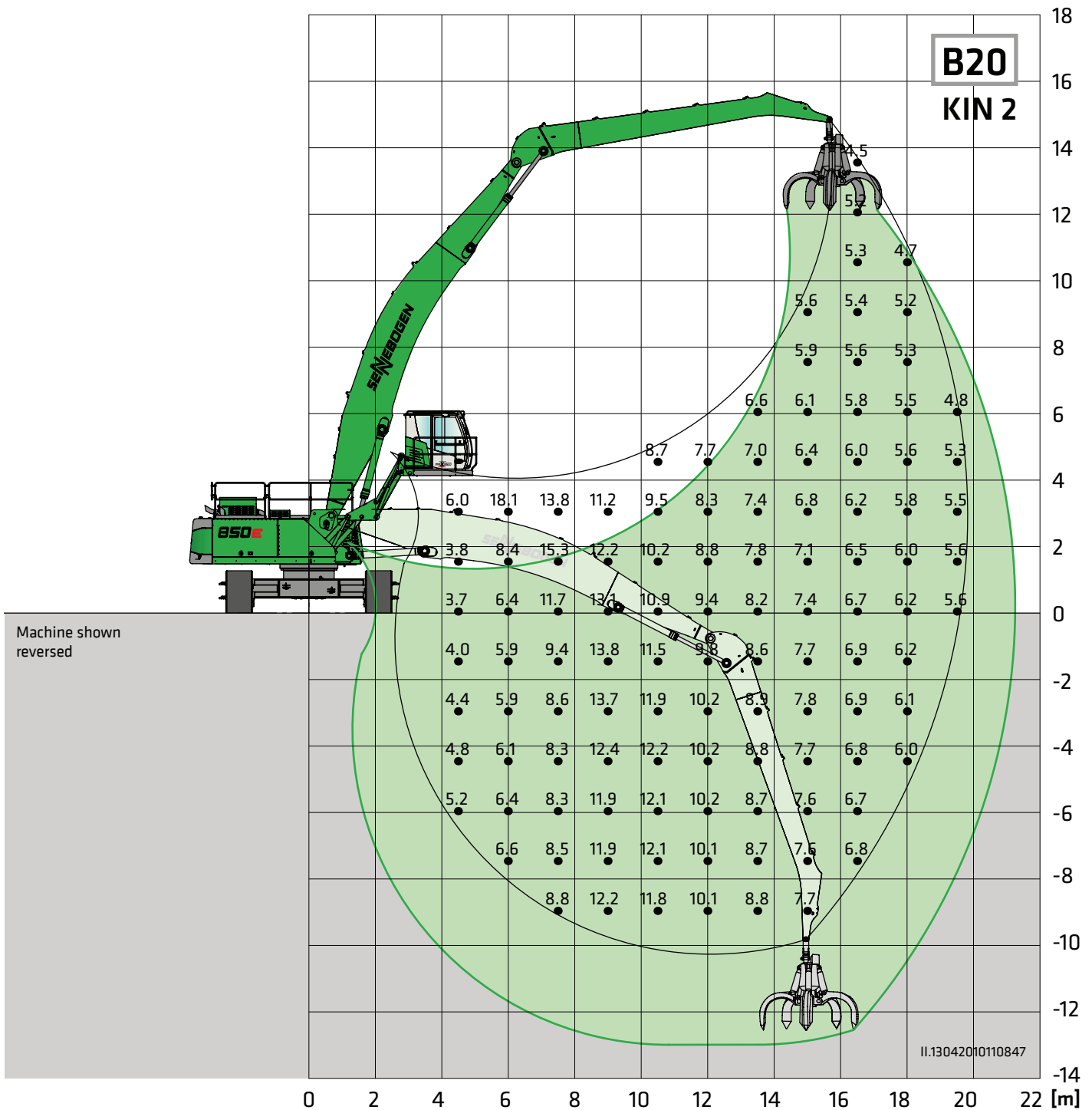
**Undercarriage:** R73/420

**Compact boom:** 12 m Banana

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

**Grab 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.

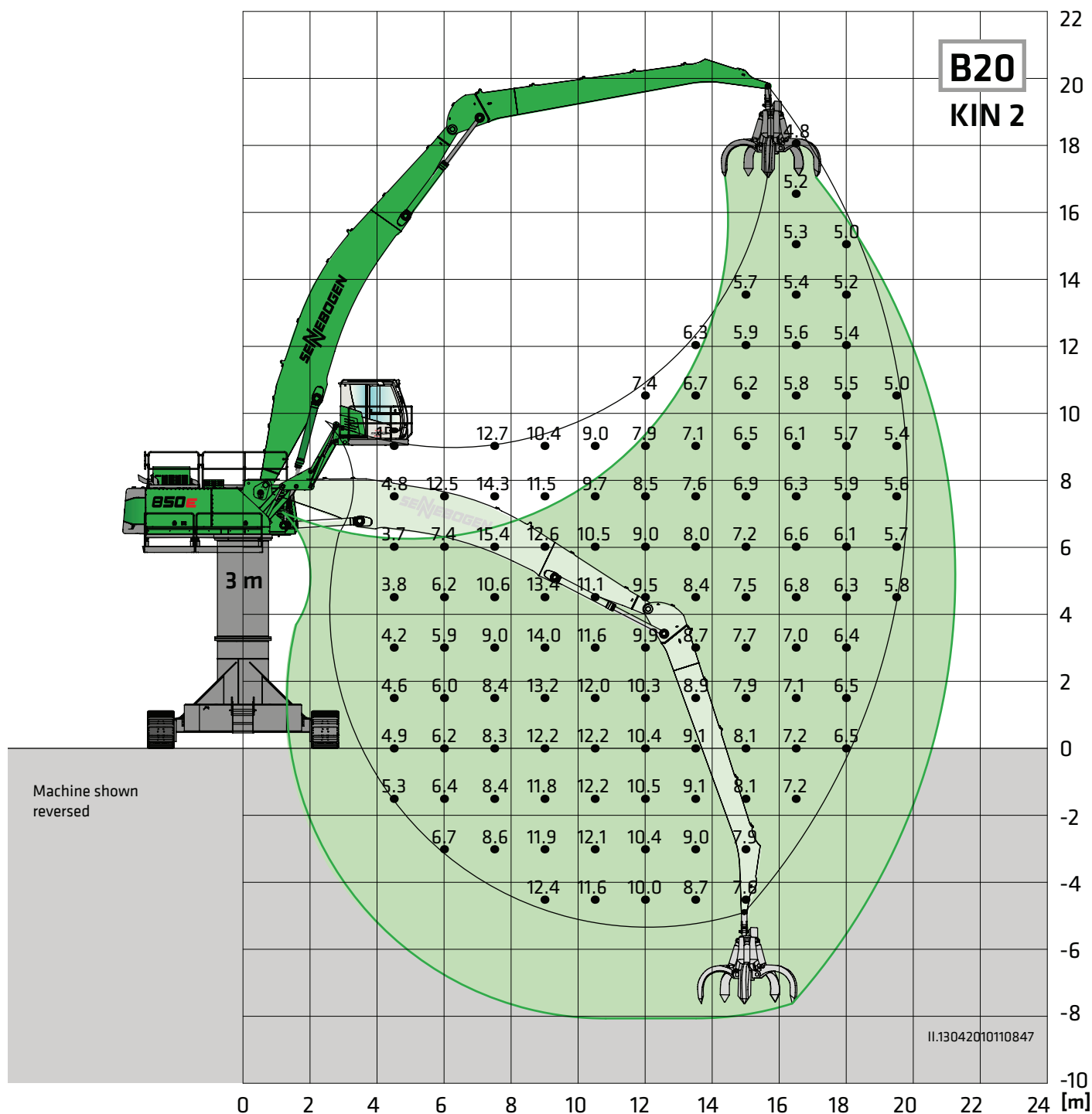


**Undercarriage:** R73/420    **Compact boom:** 12 m Banana    **Cab:** Maxcab E300/260, can be elevated and moved forward hydraulically  
**Pylon:** 1.5 m    **Grab stick:** 9.5 m

All 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.

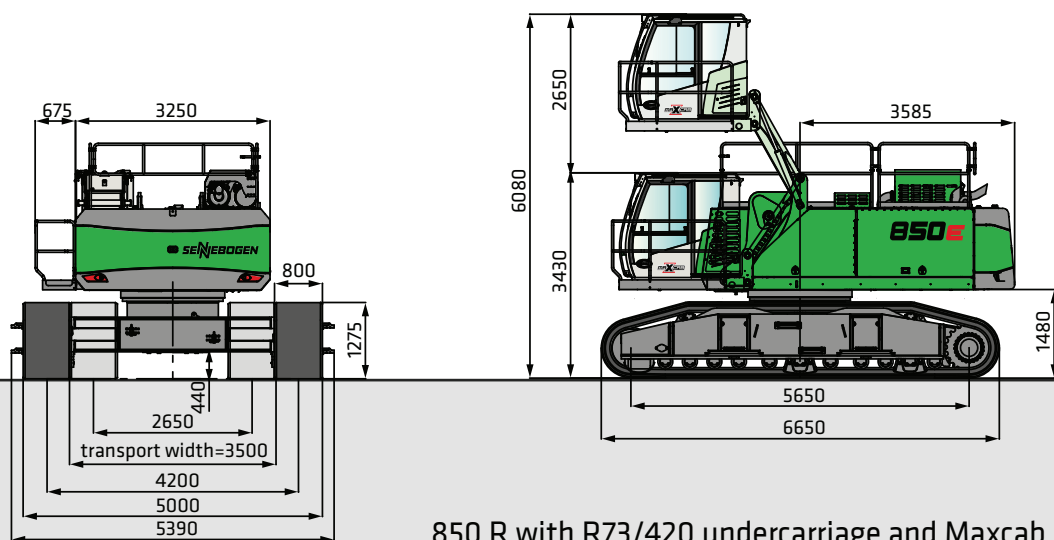
# 850E Load ratings

R

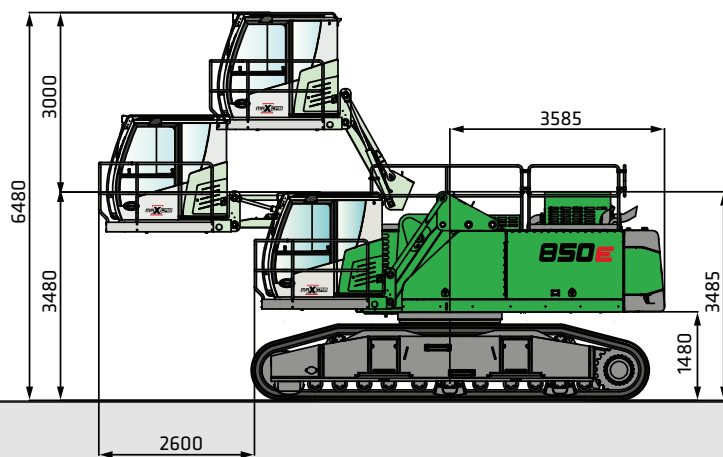


**Undercarriage:** R70/490    **Compact boom:** 12 m Banana    **Cab:** Maxcab E300/260, can be elevated and moved forward hydraulically  
**Pylon:** 3 m    **Grab stick:** 9.5 m

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.



850 R with R73/420 undercarriage and Maxcab E270, can be elevated hydraulically

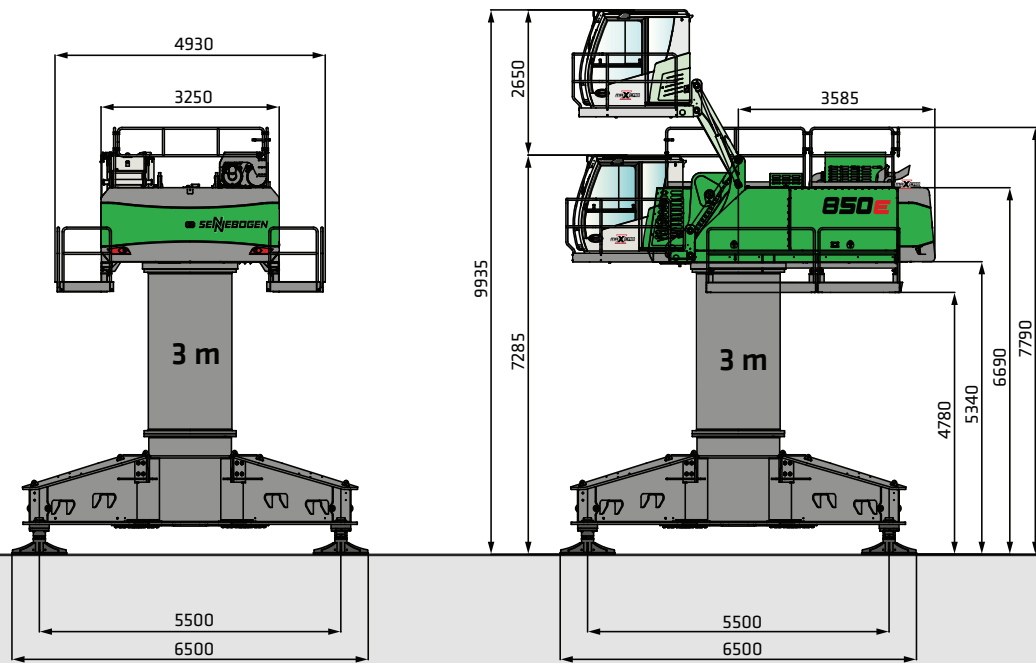


850 R with R73/420 undercarriage and Maxcab E300/260, can be elevated and moved forward hydraulically

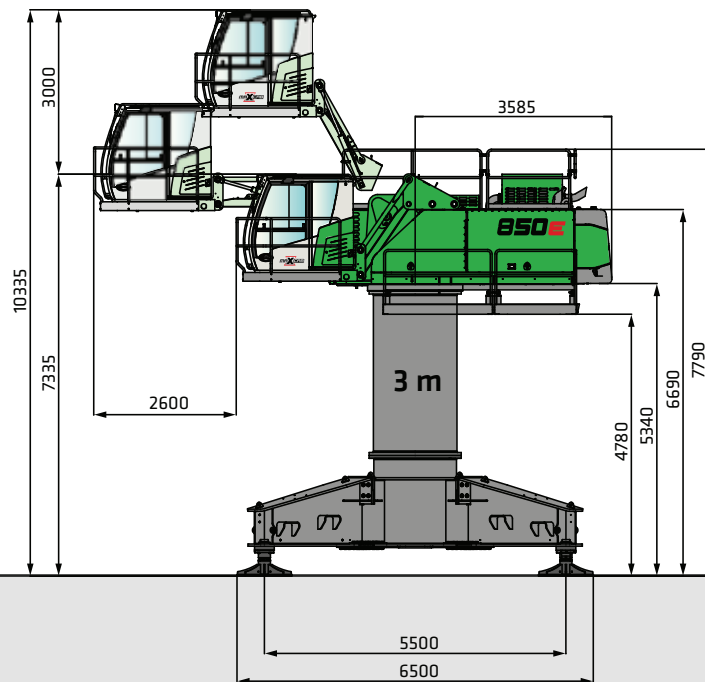


# 850E Dimensions

R



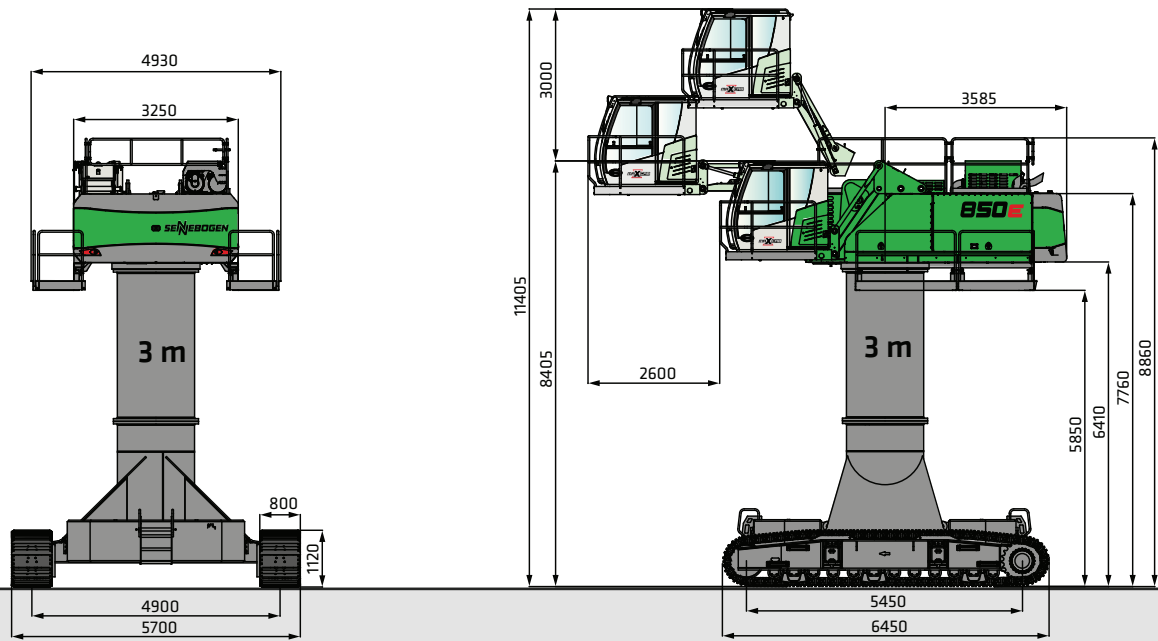
850 special with 4-point ST78/550 pedestal and 3.0 m pylon, Maxcab E270 can be elevated hydraulically



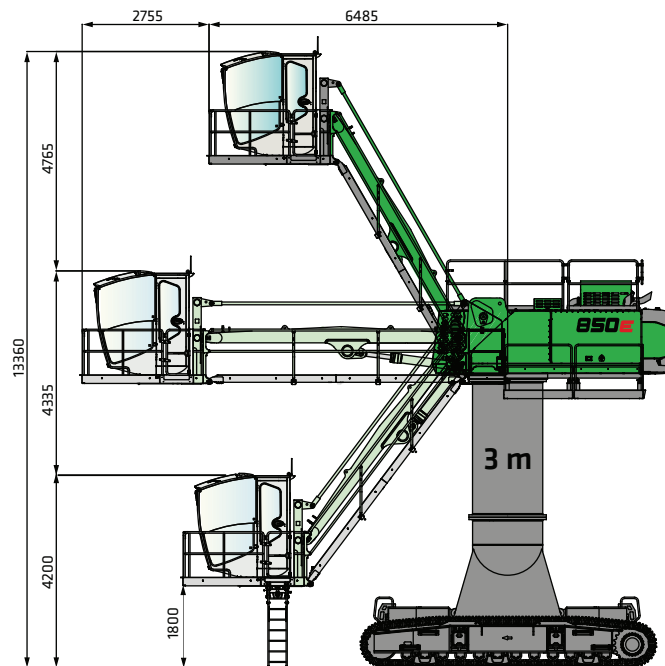
850 special with 4-point ST78/550 pedestal and 3.0 m pylon, Maxcab E300/260 can be elevated and moved forward hydraulically

# 850E Dimensions

R



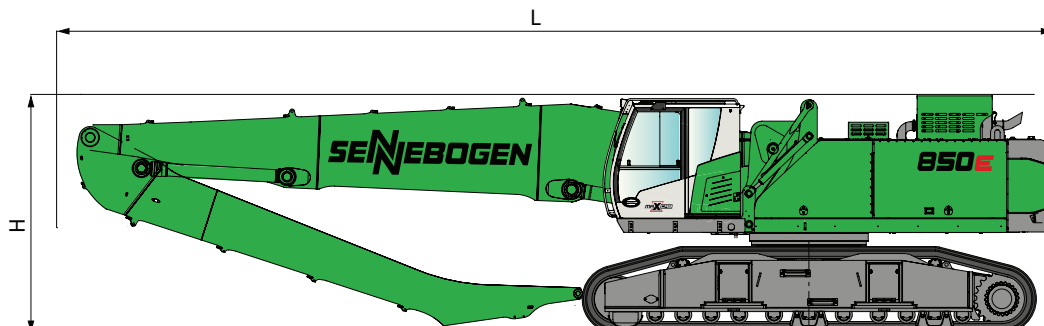
850 R special with R70/490 undercarriage and 3.0 m pylon,  
Maxcab E300/260 can be elevated and moved forward hydraulically



850 R special with R70/490 undercarriage and 3.0 m pylon,  
Mastercab Skylift 900 can be elevated hydraulically

# 850E Transport dimensions

R



|     | 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, scope of equipment of individual models, and configuration options (standard equipment and optional equipment) of the machines delivered 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 <sup>1</sup> |      | max. piled density |
|-------------|---------------|---------------------|------|--------------------|
|             |               | Shell               |      |                    |
|             |               | HO                  | G    |                    |
| SGM         | l             | kg                  | kg   | t / m <sup>3</sup> |
| 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 <sup>1</sup>      |      | max. piled density |
|-------------|---------------|--------------------------|------|--------------------|
|             |               | Shell shape <sup>2</sup> |      |                    |
|             |               | HO                       | G    |                    |
| SGM         | l             | kg                       | kg   | t / m <sup>3</sup> |
| 800.50      | 800           | 2580                     | 2740 | 2.0                |
| 1000.50     | 1000          | 2710                     | 2870 |                    |
| 1500.50     | 1500          | 2860                     | 3100 |                    |
| 2000.50     | 2000          | 3060                     | 3615 |                    |
| 2500.50     | 2500          | 3130                     | 3615 |                    |
| 3000.50     | 3000          | 3250                     | 3875 |                    |
| 3500.50     | 3500          | 3420                     | 4140 |                    |

## SGZ clamshell grab



| Design/size | Grab capacity | Weight <sup>1</sup> | max. piled density |
|-------------|---------------|---------------------|--------------------|
|             | l             | kg                  | t / m <sup>3</sup> |
| SGZ         |               |                     |                    |
| 1500.50     | 1500          | 1950                | 2.6                |
| 2000.50     | 2000          | 2200                |                    |
| 2500.50     | 2500          | 2300                | 2.0                |
| 3000.50     | 3000          | 2490                |                    |
| 4000.50     | 4000          | 2800                | 1.6                |

## Magnetic plates



| Type series/model                          | Power | Dead weight | Pull-off strength | Load-bearing 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    <sup>1)</sup> Weight information without grab suspension, stick bolts, hose system

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



850 M - with orange peel grab - scrap handling; Austria



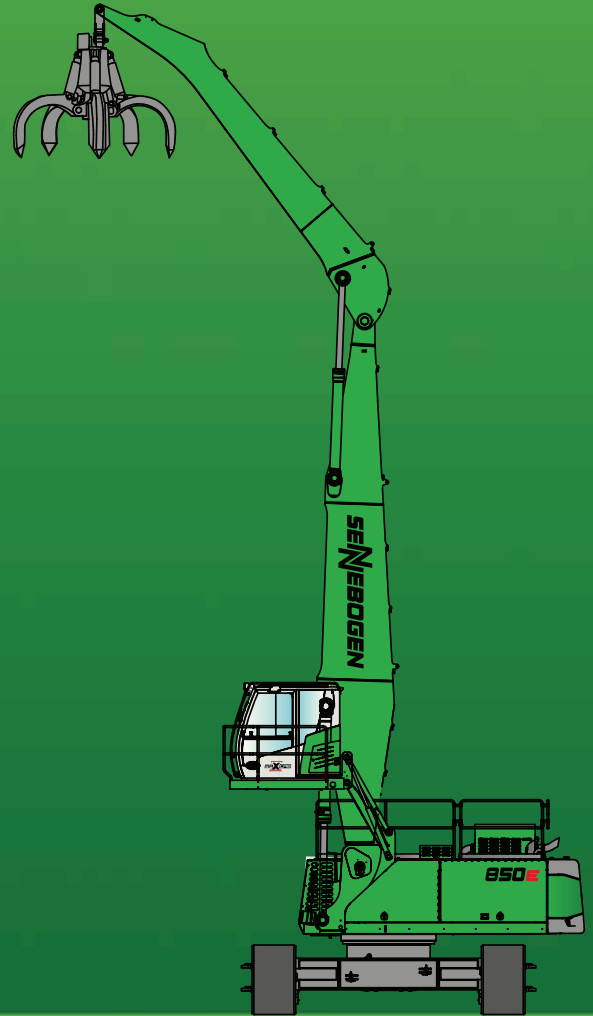
26 850 M - with magnet plate - truck loading; USA





850 R special electro - with orange peel grab - loading of a scrap shear; France

# 850E R



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