

 **840 M**

# SENEBOGEN



**227** kW (Stage IIIa)

**231** kW (Stage V)

**200** kW (Electro)



**53** t



**20** m



**MAX CAB**

# 840E

Mobile material handling machine

Stage V

# 840E 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

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 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 150 sales partners - worldwide and also in your area



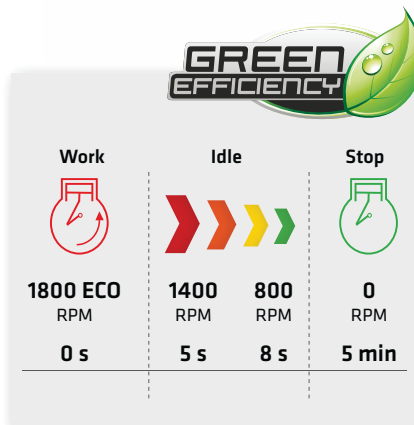




Subject to technical changes. Further options available upon request.



# 840E 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 3

- 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 4

- 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
- Hand rails\* **1**
- 2 cameras to the right and to the rear
- Step grid with railing next to cab sliding door **2**

## Powerful hydraulic system **3**

- 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\*



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
- comfort seat with air suspension
- 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 cool box behind operator's seat, protective covers, seat air conditioning

### 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



# 840E 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



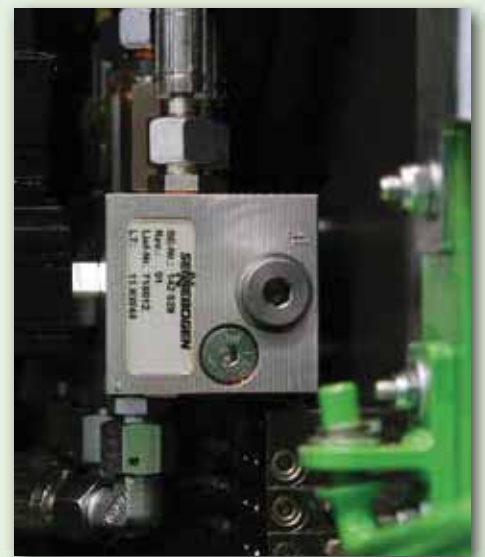
## SENNEBOGEN Hydro Clean\*

- 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






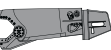
## Clear labeling

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

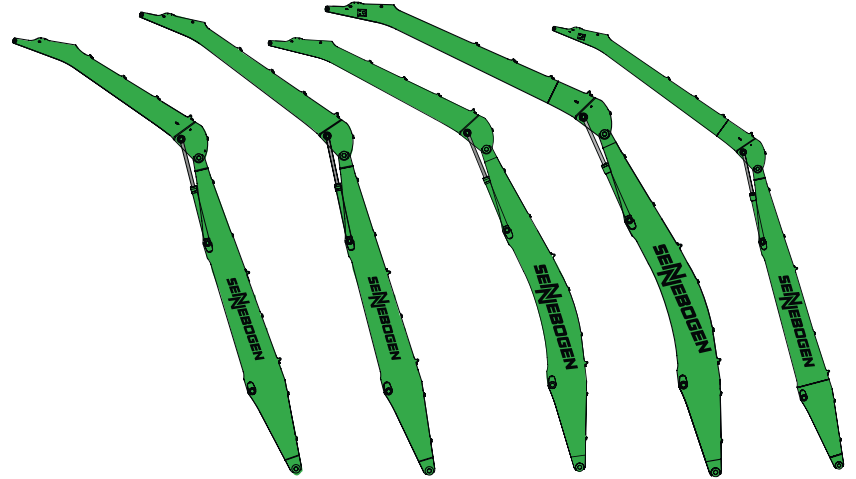
\* Option

# 840E Modular structure - versatile solutions

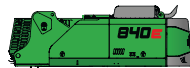
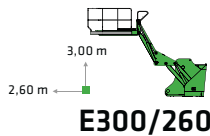
## Attachments

-  Orange peel grab
-  Clamshell grab
-  Magnet plate
-  Scrap shears

## Equipment (additional equipment on request)



### Cab elevation



### Uppercarriage



Diesel-hydraulic drive



Electro-hydraulic drive

### Options

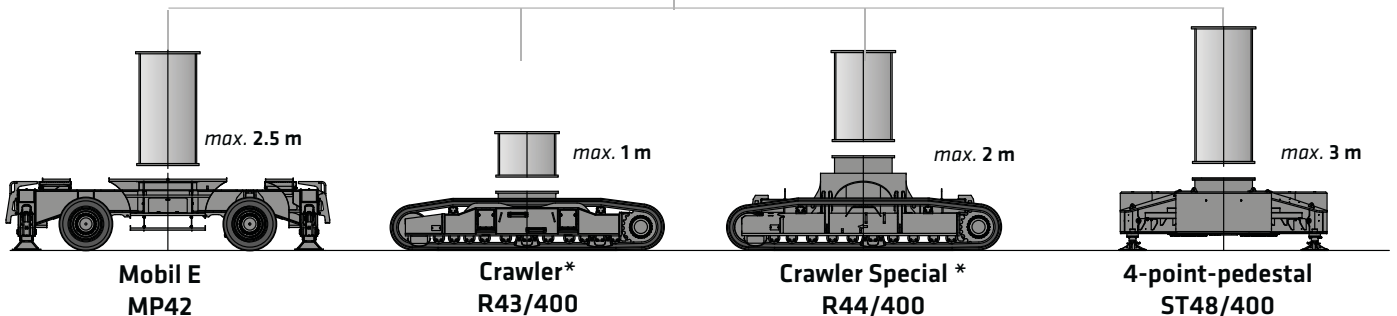


Motorized cable reel



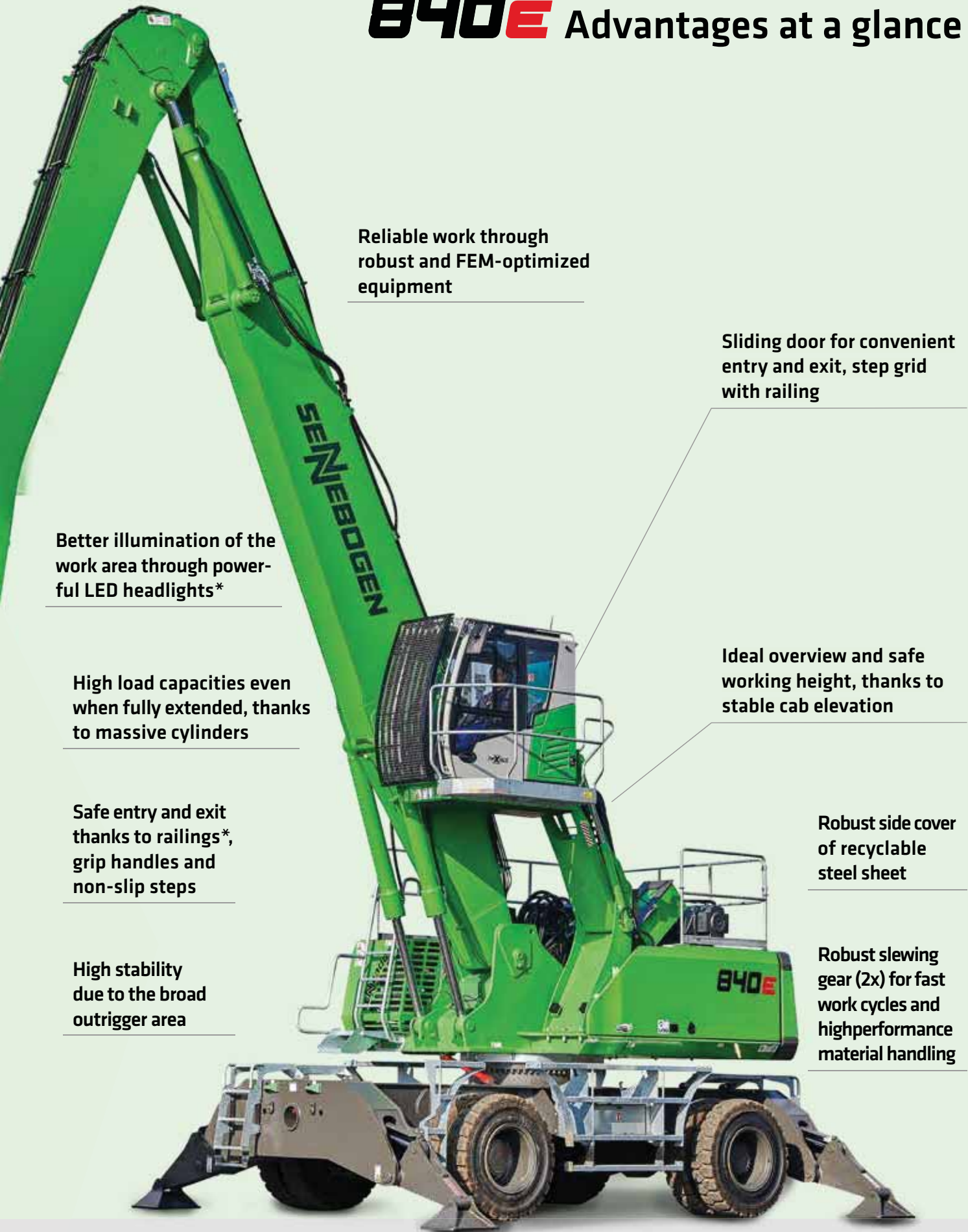
Transformer

## Variants undercarriage





# 840E Advantages at a glance



Reliable work through robust and FEM-optimized equipment

Sliding door for convenient entry and exit, step grid with railing

Better illumination of the work area through powerful LED headlights\*

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

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

Safe entry and exit thanks to railings\*, grip handles and non-slip steps

Robust side cover of recyclable steel sheet

High stability due to the broad outrigger area

Robust slewing gear (2x) for fast work cycles and highperformance material handling

\* Option

# 840E Technical data, equipment

## MACHINE TYPE

Model (type) **840**

## MOTOR

Power	<b>Stage V:</b> Rated Power: 231 kW at 2100 rpm 237 kW at 2000 rpm / 242 kW at 1800 rpm <b>Stage IIIa:</b> Rated Power: 227 kW at 2000 rpm 254 kW at 1800 rpm
Model	<b>Cummins L9</b> Direct injection, turbo charged, charge air cooling, reduced emissions, ECO mode, idle automation, stop automation, fuel pre-warming
Cooling	Water-cooled, direction of rotation changeover of the cooler fan
Diesel filter	With water separator and heater
Air filter	Dry filter with integrated pre-separator, automatic dust discharge, main element and safety element, contamination indicator
Fuel tank	<b>625 l</b>
DEF tank	<b>75 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 pre-warming at temperatures under -20 °C</li> <li>■ Electric fuel pump</li> </ul>

## UPPERCARRIAGE

Design	Torsion-resistant box design, precision crafted, steel bushings for boom bearing arrangement Extremely service-friendly concept, engine installed in the longitudinal direction
Central lubrication	Autom. central lubrication for equipment and slewing ring
Electrical	Central electrical distributor, battery disconnect switch
Cooling system	3-circuit cooling system with high cooling output, thermostatically regulated fan drive for oil cooler and water cooler, fan reversal for cleaning
Options	<ul style="list-style-type: none"> <li>■ Slewing gear brake via foot pedal</li> <li>■ Hand rails at the upper structure</li> <li>■ LED light packages</li> <li>■ Fire extinguisher</li> <li>■ Sea climate resistant coating</li> </ul>

## Options

- Electrical hydraulic tank pre-warming at temperatures under -20 °C Low temperature packages
- Hydraulically-driven magnetic generator 20 kW
- Telematic system SENtrack DS

## HYDRAULIC SYSTEM



Load sensing / LUDV hydraulic system, hydraulic, pilot-controlled work functions, load limit sensing control	
Pump type	Variable-displacement piston pump in swash-plate design, 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	<b>maximum 740 l/min</b>
Operating pressure	<b>to 350 bar</b>
Filtration	High-performance filtration with long-term change interval
Hydraulic tank	<b>500 l</b>
Control system	Proportional, precision hydraulic activation of work movements, 2 hydraulic servo joysticks for work functions, supplemental functions via switches and foot pedals
Safety	Hydraulic circuits with safety valves, secured emergency lowering of the equipment at engine standstill, pipe fracture safety valves for lift cylinder and stick cylinder
Options	<ul style="list-style-type: none"> <li>■ Bio-oil filling ecologically sound</li> <li>■ Tool Control for easy change of attachments</li> <li>■ Supplemental hydraulic circuit for attachment of shears</li> <li>■ Load moment warning with overload shutdown</li> <li>■ Overload safeguard with overload shutdown</li> <li>■ 3 µm micro filter system SENNEBOGEN HydroClean</li> </ul>


## SLEWING DRIVE


Gearbox	Compact planetary gear with bent-axis hydraulic motor, integrated brake valves
Parking brake	Spring-loaded disk brake
Slewing ring	External gear slewing ring with 360° protection and pinion tooth lubrication
Slewing speed	0-8 RPM, stepless






# 840E Technical data, equipment

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

 <b>EQUIPMENT</b>	
Design	Decades of experience, state-of-the-art computer simulation, highest level stability, longest service life, large-dimensioned bearing points, sealed special bearing bushes, precision-crafted, quick-release couplings on the grab connections - open/closed/rotate
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 on the hydraulic lines grab open, closed, rotate</li> <li>■ Kinematic position II for greater working depth</li> <li>■ Sea climate resistant coating</li> <li>■ Float position for equipment</li> <li>■ Lift limitation / stick limitation adjustable for the stop settings, for example in the hall</li> </ul>

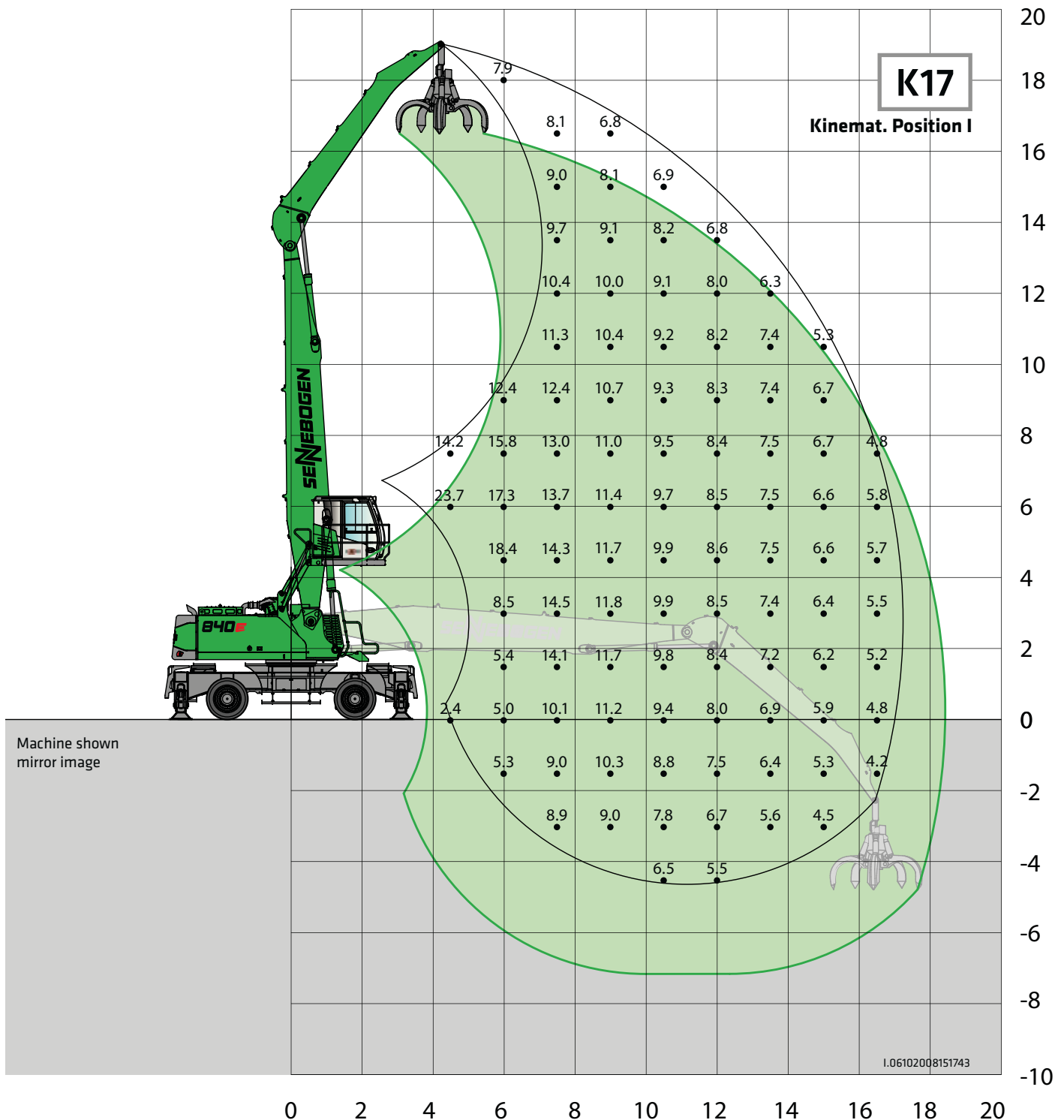
 <b>UNDERCARRIAGE</b>	
Design	Mobile undercarriage with integrated 4-point outrigger, steering axle as hydraulically locking pendulum axle, pendulum axle cylinder with pipe fracture safety valves, type MP42
Drive	All-wheel drive powered by a variable-displacement hydraulic motor with direct-mounted, automatically actuated brake valve and planetary axles with integrated steering cylinders, service brake in 2-circuit system
Parking brake	Spring-loaded disk brake
Tires	<b>12.00-24</b> , 8x, option: <b>14.00-24</b> , 8x
Speed	<b>0-14 km/h</b> , stepless
Options	<ul style="list-style-type: none"> <li>■ Individual activation of the outriggers for firm stance on uneven substrate</li> <li>■ Protection for travel drive</li> <li>■ Shunting coupling</li> </ul>

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

 <b>OPERATING WEIGHT</b>	
Mass	<b>approx: 53,000 kg</b> Basic machine 840 M with attachment K18 and 600 l orange peel grab
Note	The operating weight varies depending on the design.



# 840E Lift capacities

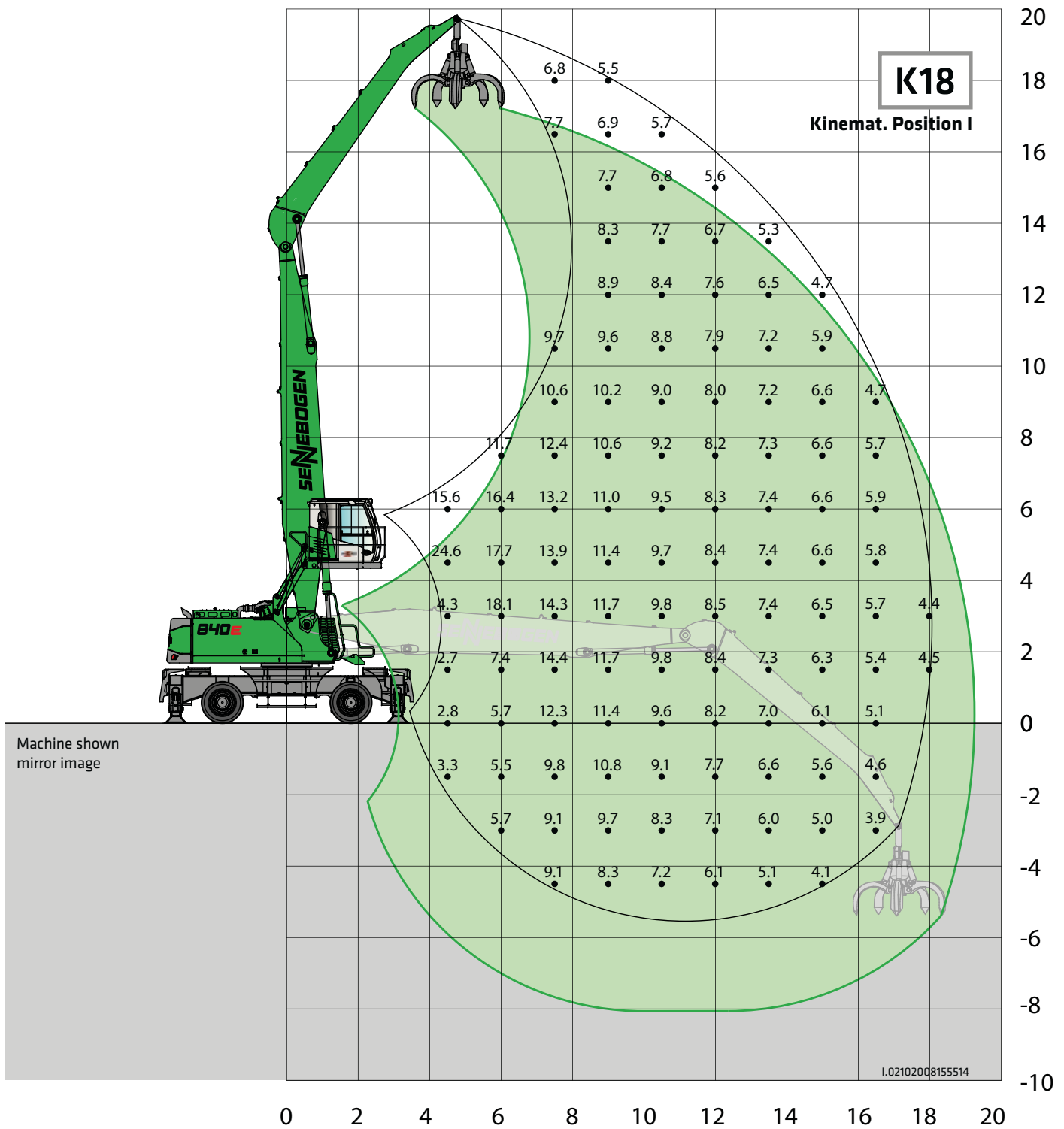


<b>Undercarriage</b>	<b>MP42E</b>	<b>Compact boom</b>	<b>10.6 m</b>	<b>Cab</b>	<b>Maxcab E270,</b>
		<b>Grab stick</b>	<b>7.1 m</b>		<b>hydraulically elevating</b>

All load ratings are specified in tons (t) and apply at the end of the stick, without attachment, on solid, level ground. Attachments such as grabs, magnets, load hooks, etc. are part of the specified load ratings. The specified values are 75 % of the static tipping load or 87 % of the hydraulic lifting force in accordance with ISO10567. In accordance with EU standard EN 474/5, hydraulic material handling machines used for hoisting must be equipped with pipe fracture safety devices on the hoist and stick cylinders and an overload warning device. Load ratings apply to a machine with deployed 4-point outrigger support and 360° slewing.



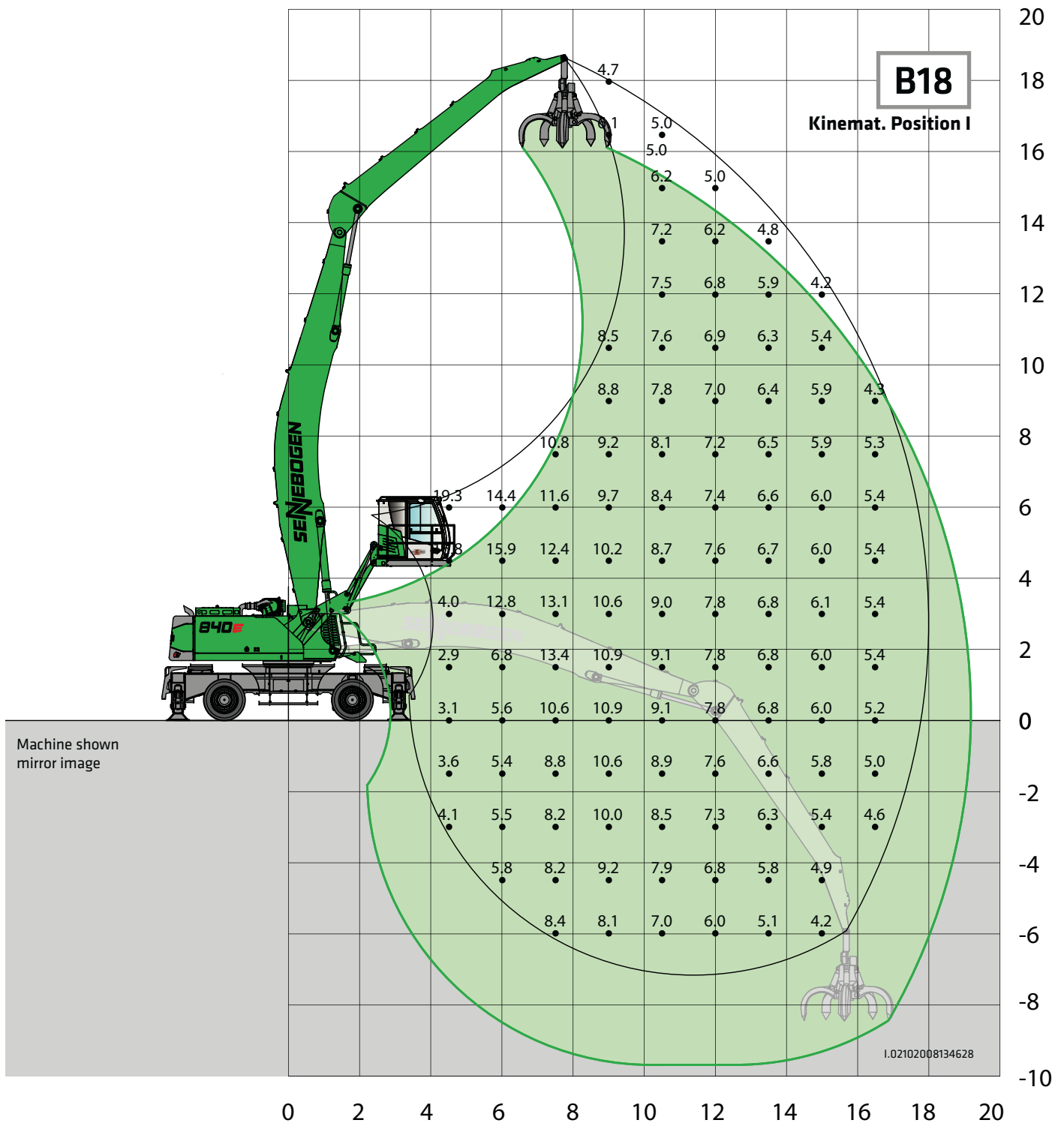
# 840E Lift capacities



<b>Undercarriage</b>	<b>MP42E</b>	<b>Compact boom</b>	<b>10.6 m</b>	<b>Cab</b>	<b>Maxcab E270,</b>
		<b>Grab stick</b>	<b>8.0 m</b>		<b>hydraulically elevating</b>

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# 840E Lift capacities

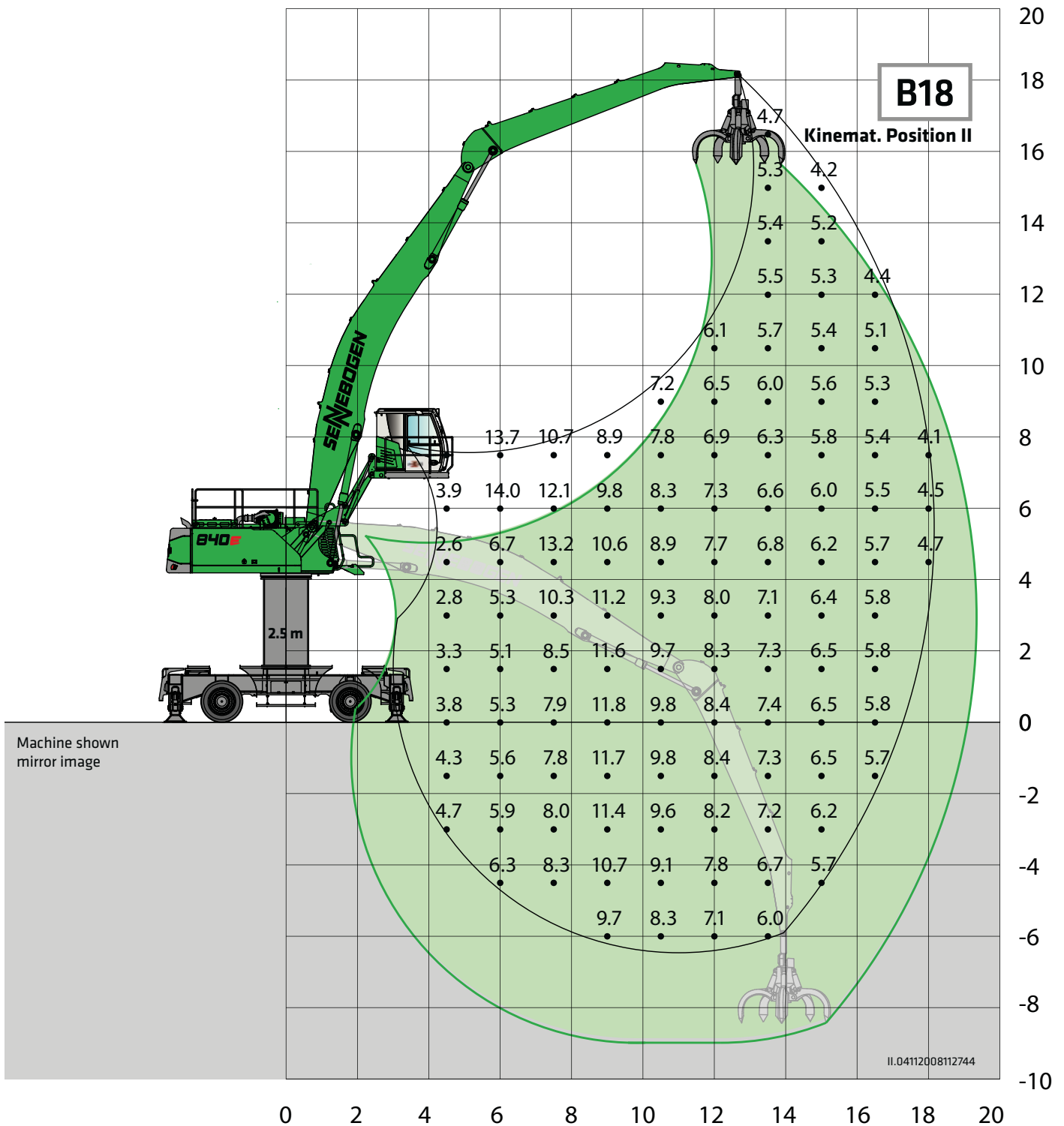


**Undercarriage**    **MP42E**    **Compact boom**    **11.0 m Banana**    **Cab**    **Maxcab E300/260, hydraulic elevating and forward moving (option)**  
**Grab stick**    **8.0 m**

All load ratings are specified in tons (t) and apply at the end of the stick, without attachment, on solid, level ground. Attachments such as grabs, magnets, load hooks, etc. are part of the specified load ratings. The specified values are 75 % of the static tipping load or 87 % of the hydraulic lifting force in accordance with ISO10567. In accordance with EU standard EN 474/5, hydraulic material handling machines used for hoisting must be equipped with pipe fracture safety devices on the hoist and stick cylinders and an overload warning device. Load ratings apply to a machine with deployed 4-point outrigger support and 360° slewing.



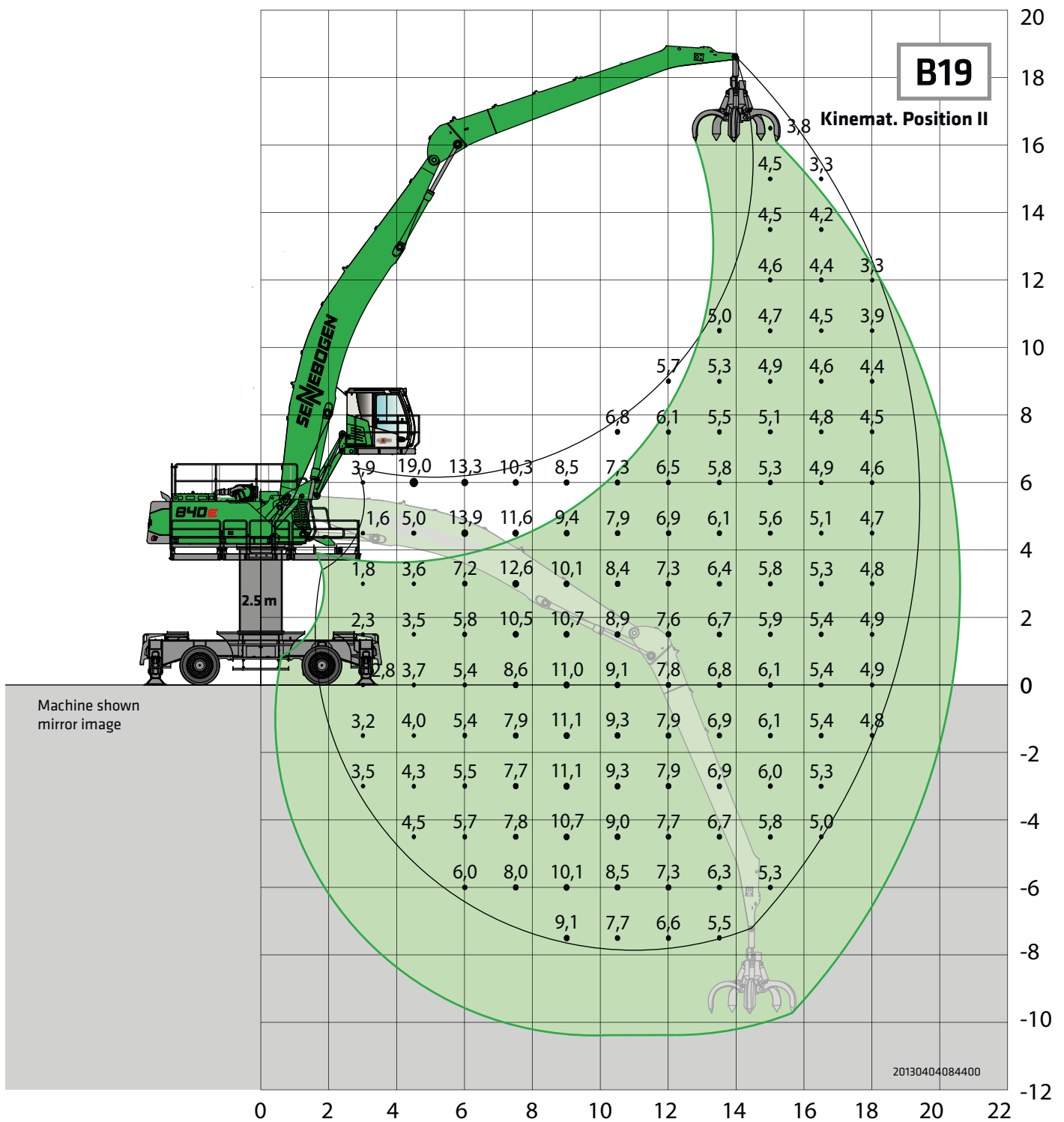
# 840E Lift capacities



<b>Undercarriage Pylon</b>	<b>MP42E 2.5 m</b>	<b>Compact boom Grab stick</b>	<b>11.0 m Banana 8.0 m</b>	<b>Cab</b>	<b>Maxcab E300/260, hydraulic elevating and forward moving(option)</b>
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# 840E Lift capacities

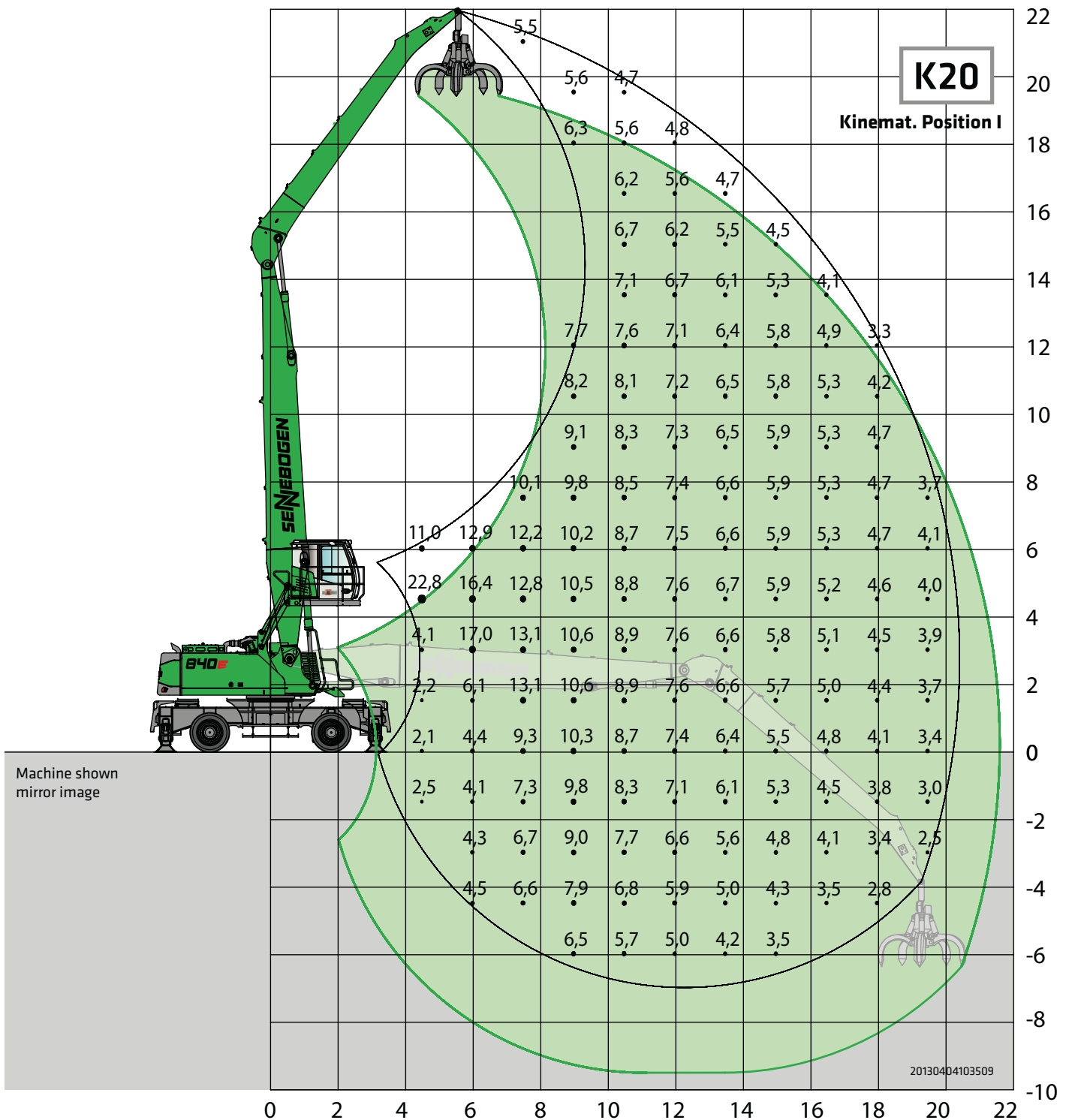


**Undercarriage Pylon**    **MP42E 2.5 m**    **Compact boom Grab stick**    **11.0 m Banana 9.4 m**    **Cab**    **Maxcab E300/260, hydraulic elevating and forward moving (option)**

All load ratings are specified in tons (t) and apply at the end of the stick, without attachment, on solid, level ground. Attachments such as grabs, magnets, load hooks, etc. are part of the specified load ratings. The specified values are 75 % of the static tipping load or 87 % of the hydraulic lifting force in accordance with ISO10567. In accordance with EU standard EN 474/5, hydraulic material handling machines used for hoisting must be equipped with pipe fracture safety devices on the hoist and stick cylinders and an overload warning device. Load ratings apply to a machine with deployed 4-point outrigger support and 360° slewing.



# 840E Lift capacities



<b>Undercarriage</b>	<b>MP42E</b>	<b>Compact boom Grab stick</b>	<b>11.7 m 9.4 m</b>	<b>Cab</b>	<b>Maxcab E270, hydraulically elevating</b>
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All load ratings are specified in tons (t) and apply at the end of the stick, without attachment, on solid, level ground. Attachments such as grabs, magnets, load hooks, etc. are part of the specified load ratings. The specified values are 75 % of the static tipping load or 87 % of the hydraulic lifting force in accordance with ISO10567. In accordance with EU standard EN 474/5, hydraulic material handling machines used for hoisting must be equipped with pipe fracture safety devices on the hoist and stick cylinders and an overload warning device. Load ratings apply to a machine with deployed 4-point outrigger support and 360° slewing.

# 840E Grab recommendation

## Orange peel grab SGM (4 shells)



Design / size	Grab content	Weight <sup>1</sup>		max. piled density
		Shell shape		
		HO	G	
SGM	l	kg	kg	t/m <sup>3</sup>
400.40-4	400	1570	1720	2.0
600.40-4	600	1600	1790	
800.40-4	800	1685	1930	
1000.40-4	1000	1755	2085	
1250.40-4	1250	1850	2200	
800.50-4	800	2245	2490	
1000.50-4	1000	2345	2585	
1500.50-4	1500	2475	2830	
2000.50-4	2000	2660	3075	

## Orange peel grab SGM (5 shells)



Design / size	Grab content	Weight <sup>1</sup>		max. piled density
		Shell shape <sup>2</sup>		
		HO	G	
SGM	l	kg	kg	t/m <sup>3</sup>
400.40	400	1820	1920	2.0
600.40	600	1910	2035	
800.40	800	1960	2140	
1000.40	1000	2040	2290	
1250.40	1250	2180	2415	
800.50	800	2420	2610	
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	

## Clamshell grab SGZ



Design / size	Grab content	Weight <sup>1</sup>	max. piled density
SGZ	l	kg	t/m <sup>3</sup>
1500.50	1500	1950	2.6
2000.50	2000	2200	
2500.50	2500	2300	2.0
3000.50	3000	2490	
4000.50	4000	2880	1.6

## Magnetic plates



Type series / model	Power	Deadweight	Pull-off strength	Load-bearing capacity in kg
WOKO	kW	kg	kN	Bramme (safety factor 2)
S-RSL 15	12.2	1950	360	18000
S-RSL 17	17.0	2500	460	23000
S-RLB 13,5	10.0	1700	300	15000
S-RLB 15	11.7	2400	380	19000
S-RLB 17	17.8	3300	640	32000

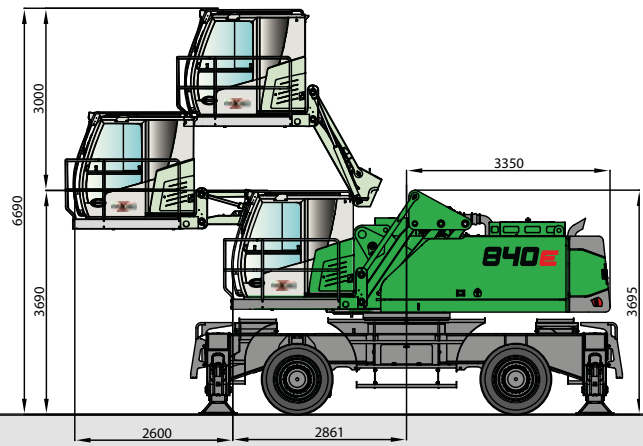
**Recommended magnetic generator 20 kW**

\*) On request

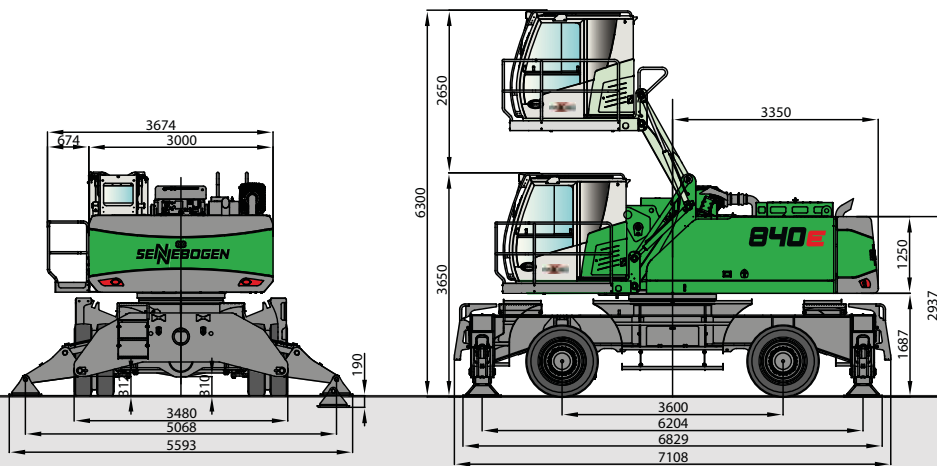
<sup>1</sup>) Weight information without grab suspension, stick bolts, hose system

<sup>2</sup>) Half-open shells: Shell sheet steel 400 mm wide, from content 1250 l shell sheet steel 500 mm wide

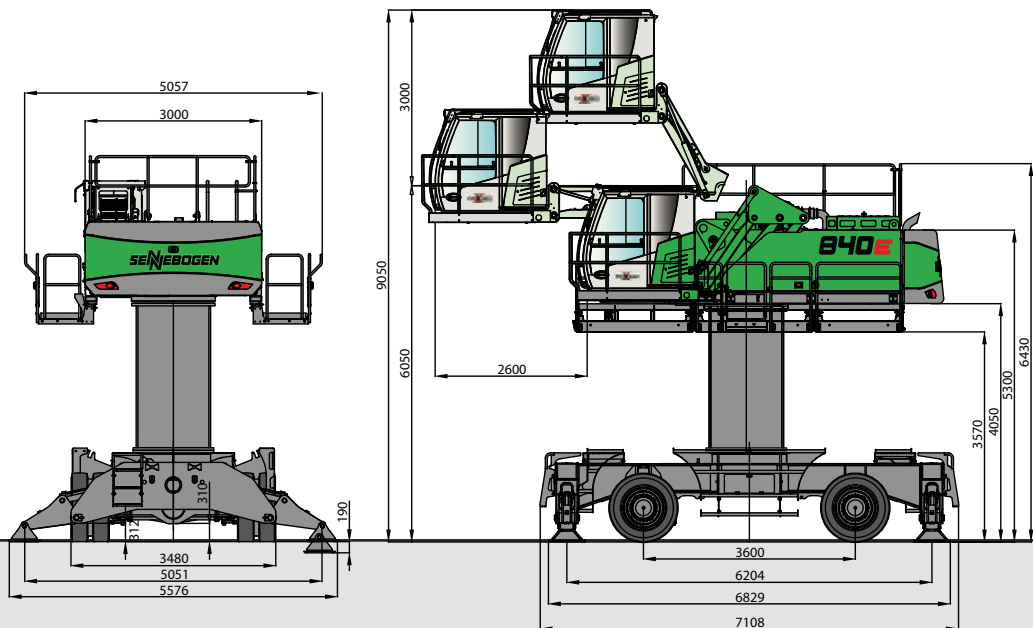
# 840E Dimensions



840 M with cab type E300/260, can be elevated and moved forward hydraulically



840 M with hydraulically elevating cab type E270, transport width 3500 mm

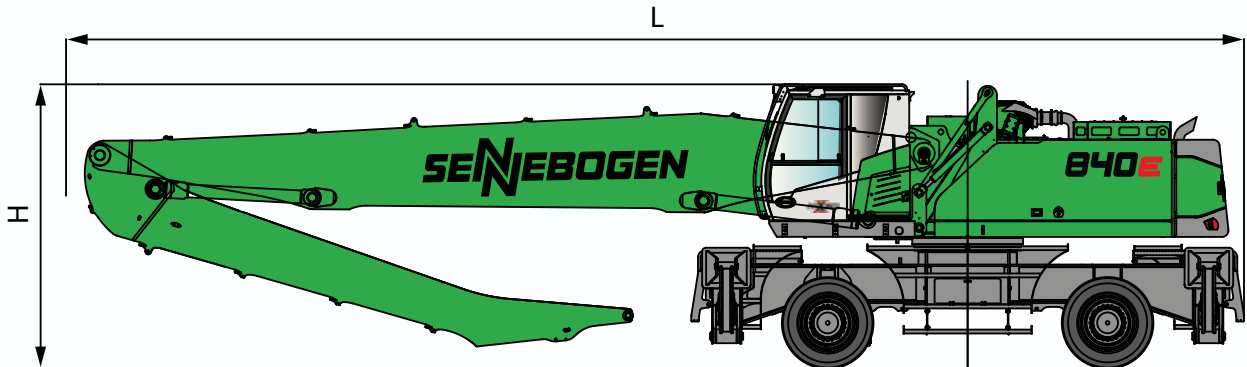


840 M with cab type E300/260, hydraulic elevating and forward moving



# 840E

# M



## Transport dimensions 840 M with undercarriage type MP42E

	Load boom	Grab stick	Transport length (L)	Transport height (H)
<b>K17</b>	10.6 m	7.1 m	15.2 m	3.65 m
<b>K18</b>	10.6 m	8.0 m	15.2 m	3.65 m
<b>B18</b>	11.0 m banana	8.0 m	15.5 m	3.7 m
<b>B19</b>	11.0 m banana	9.4 m	15.5 m	3.65 m*
<b>K20</b>	11.7 m	9.4 m	16.2 m	4.2 m (3.65 m*)

\* Stick is dismounted

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 in a tolerance range depending on the country to which the machines are delivered, especially in regard to standard and optional equipment

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