

SENEBOGEN



224 kW



45,5 t



18 m



MAXCAB

835 E

Mobile material handling machine

TIER IVf

835E Further developed. The E-Series.



1962: Rope-driven S833 with elevated operator cab

The characteristics of the E-Series

- 60 years of experience in the design and construction of hydraulic material handling machines
- Uncompromising high-performance in all areas: Focus on material handling
- Technology that can be mastered: High-quality components and avoidance of over-engineering
- Long product service life and high value retention

Your most important advantages:

1

Green Efficiency

Save fuel - lower operating costs
Calm work - easy on the operator and on the environment



2

Performance at the highest level

Robust mechanical engineering - parts subject to load are optimized
High speeds - high safe working loads

3

Maximum operating comfort

Maxcab comfort cab - relaxed work
SENCON - SENNEBOGEN Control System



4

Maximum safety

Safe entry and exit - non-slip step surfaces
Modern cameras - the entire work area is in view

5

Maintenance and service made easy

Easy fault diagnosis - central measuring points
Easy maintenance - clear markings

6

Consultation and support

3 production locations - 2 subsidiaries
120 Sales Partners - more than 300 service support points





More performance, nevertheless:

- 25% Fuel consumption*

- 90% Nitrogen oxides / TIER 4f

- 90% Soot particles / TIER 4f

*Up to 25% depending on work implementation as compared to the D-Series

835E The E-Series. At a glance.



Arbeiten	Leerlauf		Stopp
1800 ECO min ⁻¹	1400 min ⁻¹	800 min ⁻¹	0 min ⁻¹
0 s	5 s	8 s	5 min

Save fuel 4 times

- Up to 20% savings: Working in Eco Mode with reduced speed
- Idle automation lowers RPM to 40% of working RPM
- Stop automation switches the engine off, when there is no demand for power
- Optimized engine settings, specific fuel consumption lowered, modern exhaust gas aftertreatment



Quiet work

- Uniformly quiet working machine, thanks to decoupled engine suspension and acoustic insulation mats in the doors
- Sound pressure level reduced by as much as 4.5 dB; sound power level in accordance with 2000/14/EC as much as 2 dB lower than required

High-capacity cooling

- Constant, reliable performance due to large-dimensioned and highly-resistant fans and coolers
- Water coolers and oil coolers with optimal efficiency thanks to control via axial piston pump and motor thermostatic regulation on-demand
- Charge air cooler with mechanical drive



Maximum safety

- Non-slip work surfaces
- Perimeter railing (optional) **1**
- 2 cameras to the right and to the rear
- Step grid with railing sliding door of the cab **2**



Intelligent cooler technology

- Standard equipment: Automatic, fast and strong fan reversal for blowing out the coolers and continuous cooling capacity **5**
- Side-by-side coolers, easily accessible and clean cooler technology **6**
- Fuel savings through optimized fan operation

Powerful hydraulic system

- Strong pumps with power reserves
- Highest levels of efficiency thanks to large-dimensioned hydraulic valves and lines
- Extremely long change intervals of 4,000 op.hrs through initial filling with HVLPD oil with extended oil service life when used with SENNEBOGEN HydroClean* **7**

* Option, see page 7

835E The E-Series. Comfort pure.

Comfort cab Maxcab

- Air-suspension comfort seat, with seat heater
- Convenient joystick control,
- Hinged front window
- Sliding door, step grid in front of cab
- Color monitor for camera images to the right and to the rear
- SENNEBOGEN Optimode: Different modes for optimization of performance



Step grid with railing

- Safety when entering and exiting the cab
- Sliding door facilitates entering and exiting



Air conditioning automation

- Work climate is always pleasant, thanks to 10 uniformly distributed fan nozzles
- Easy control via central operating elements



SENCN

- Clear menu
- Determine actual values without additional measurement devices
- Fast troubleshooting thanks to detailed messages

835E Maintenance and service made easy



Maintenance-optimized

- Fast and easy fault diagnostics through the effectively designed and clearly labeled electrical distributor
- Easy accessibility to all service points of the machine
- Automatic central lubrication for equipment and slewing ring raceway



HydroClean*

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



Central measuring points

- Easy access, central measuring points
- Fast inspection of the entire hydraulic system



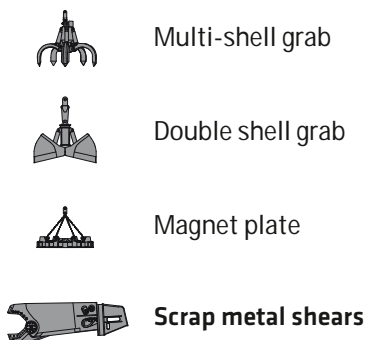
Clear labeling

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

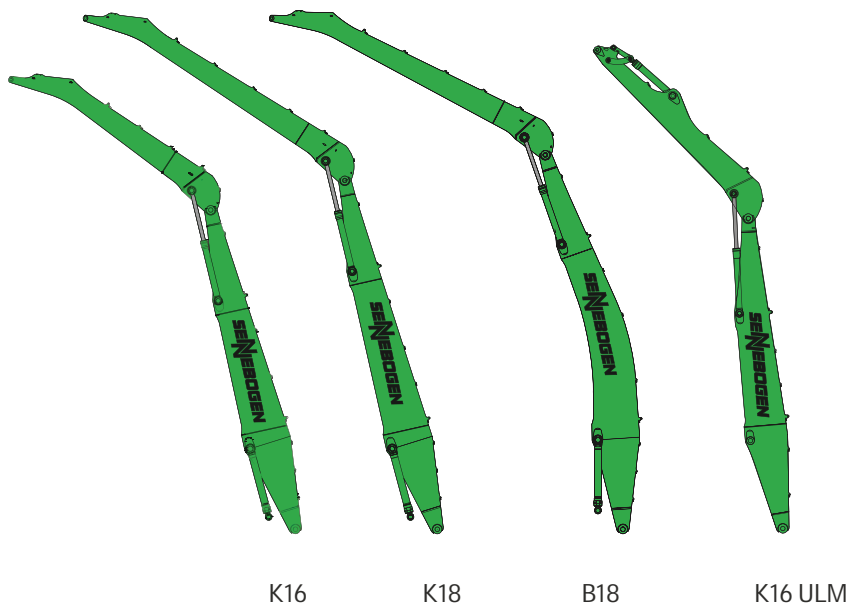
* optional

835E Modular structure - versatile solutions

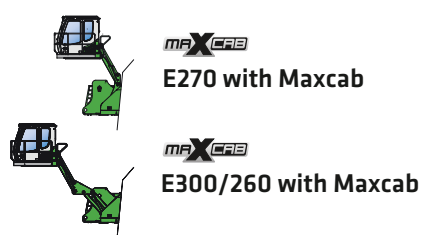
Attachments



Equipment (additional equipment on request)



Cab elevation



Uppercarriage



Diesel-hydraulic drive

Electro-hydraulic drive

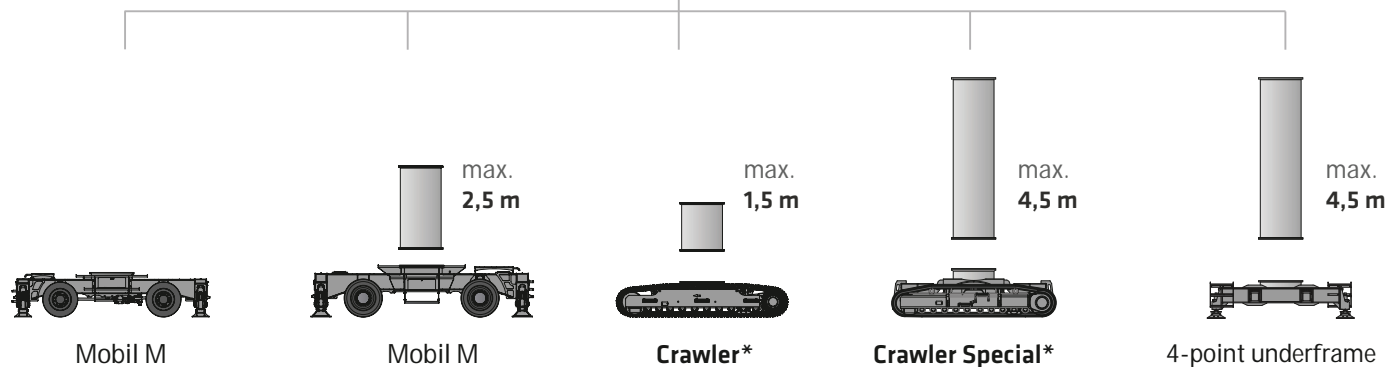
Magnetic generator

Options

Engine line drum

Transformer

Variants - undercarriage





Reliable work
through robust and FEM-
optimized equipment

Sliding door
for convenient
entry and exit

Robust slewing gear (2x)
for fast work cycles and high-
performance material handling

Better illumination
of the work area through
powerful LED headlights*

Safe entry and exit
via the step grid with railing

High safe working loads
even at maximum extension,
due to massive cylinders

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

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

Robust side cover
of recyclable sheet steel

High stability
due to the broad
outrigger area

* Option

835E Technical data, equipment

MACHINE TYPE

Model (Type) 835

ENGINE

Power	224 kW / 304 hp at 2000 RPM
Model	Cummins QSL 9-C300 TIER IVf Direct injection, turbo charged, charge air cooler, 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	625 l
Electr. system	24 V
Batteries	2 x 150 Ah, battery disconnect switch
Options	<ul style="list-style-type: none"> ■ Engine block pre-warming at temperatures under -20°C ■ Electric fuel pump

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	Automatic central lubrication for equipment and slewing gear raceway
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"> ■ Slewing gear brake via foot pedal ■ Perimeter uppercarriage railing for additional safety ■ Light package with LED ■ Fire extinguisher ■ Maritime paint finish as corrosion protection ■ Electrical hydraulic tank pre-warming at temperatures under -20° ■ Low-temperature package for work deployments at temperatures under -20°C ■ Hydraulically-driven magnetic generator 15 kW / 20 kW

HYDRAULIC SYSTEM

Load sensing / LUDV hydraulic system, hydraulic, pilot-controlled work functions, load limit sensing control	
Pump type	Variable-displacement piston pump in swashplate 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	maximum 740 l/min
Operating pressure	to 350 bar
Filtration	High-performance filtration with long-term change interval
Hydraulic tank	500 l
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"> ■ Bio-oil filling - ecologically worthwhile ■ Tool Control for programming up to 10 tools in pressure / rate ■ Supplemental hydraulic circuit for shear attachment ■ Load moment warning with capacity utilization indicator ■ Overload safeguard with overload shut-down ■ 60 µm pressure filter for attachments ■ 3 µm hydraulic micro-filter - SENNEBOGEN HydroClean

SLEWING DRIVE

Gearbox	Compact planetary gear with slant 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

835E Technical data, equipment

SENNEBOGEN **MAX** CRB

Cab type	Hydraulically elevating cab E270
Cab equipment	Sliding door, 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"> ■ Cab E300/260 can be elevated 300 cm, and moved forward 260 mm hydraulically ■ Rigid cab elevation 1.00 m ■ Auxiliary heating system with timer ■ Cab active-charcoal filter inside air/outside air, ideal for waste recycling applications ■ Steering wheel steering with adjustable steering column ■ Sliding window in the operator door ■ Armored glass windshield, additional safety ■ Armored glass roof window, additional safety ■ Safety side window ■ Floor window for a better view ■ Sunblind for roof window ■ Protective roof grating ■ FOPS protective roof grating, protection against falling objects ■ Front protective grating ■ Radio and CD player with speakers ■ Enlarged industrial cab with undivided armored glass windshield

ATTACHMENTS

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 grapple connections - open/close/rotate
Cylinders	Hydraulic cylinders with high-quality sealing and guide elements, end position damping, sealed bearing points
Options	<ul style="list-style-type: none"> ■ Ball valves on the hydraulic lines grapple open, close, rotate ■ Kinematic position II for greater working depth ■ Maritime paint ■ Maritime coating of all cylinders, nickel-plated and chrome-plated ■ Float position for equipment via hoist cylinder ■ Lift limitation / stick limitation adjustable for the stop settings, for example in the hall

UNDERCARRIAGE

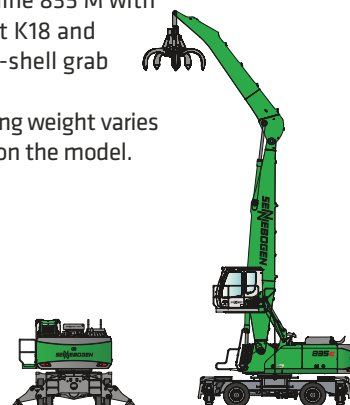
Design	Mobile undercarriage with integrated 4-point suspension, steering axle as hydraulically locking pendulum axle, pendulum axle cylinder with pipe fracture safety valves, type MP41 E
Drive	All-wheel drive powered by a variable-displacement hydraulic motor with direct-mounted, automatically actuated brake valve and 2-stage power shift transmission Planetary axles with integrated steering cylinders, service brake in 2-circuit system
Parking brake	Spring-loaded disk brake
Tires	12.00-20, 8x, option: 12.00-24, 8x
Speed	0-5.4 km/h stage I, 0-20 km/h stage II
Options	<ul style="list-style-type: none"> ■ Individual activation of the outriggers for firm stance on uneven substrate ■ Protection for travel drive ■ Maneuvering coupling

ELECTRIC DRIVE **eGREEN**

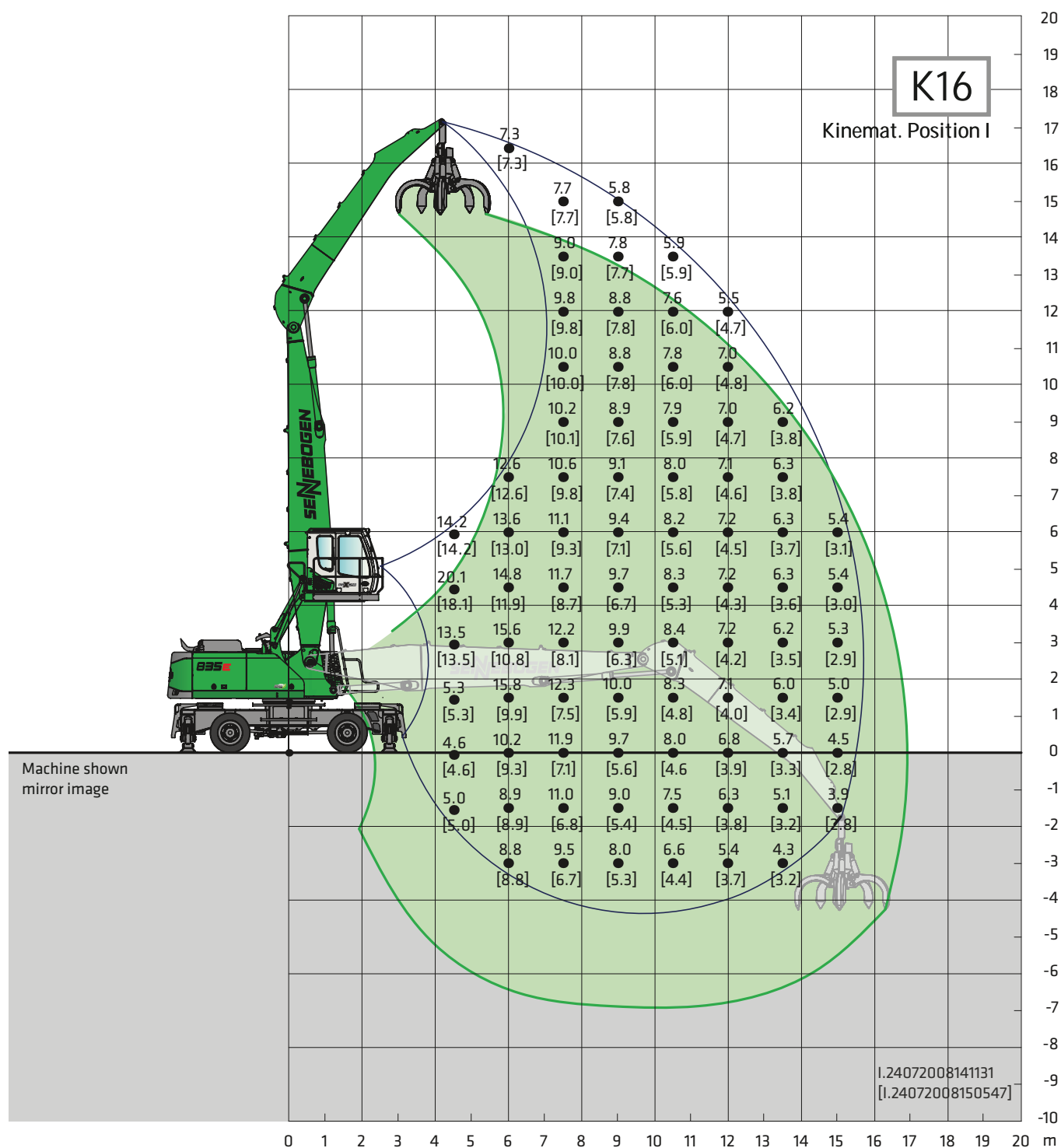
Option	<ul style="list-style-type: none"> ■ Power: 160 kW / 400 volt / 50 Hz Total connected load 270 kVA, customer-provided fusing 355 A at 400 V - motor start-up via star-delta circuit ■ Power: 200 kW / 400 volt / 50 Hz Total connected load 340 kVA, customer-provided fusing 425 A at 500 V - motor start-up via star-delta circuit ■ Advantages: Lowest operating costs, low-noise and virtually vibration-free work, long service life of the hydraulic components
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OPERATING WEIGHT

Mass	approximately 45,500 kg Basic machine 835 M with attachment K18 and 600 l multi-shell grab
Note	The operating weight varies depending on the model.



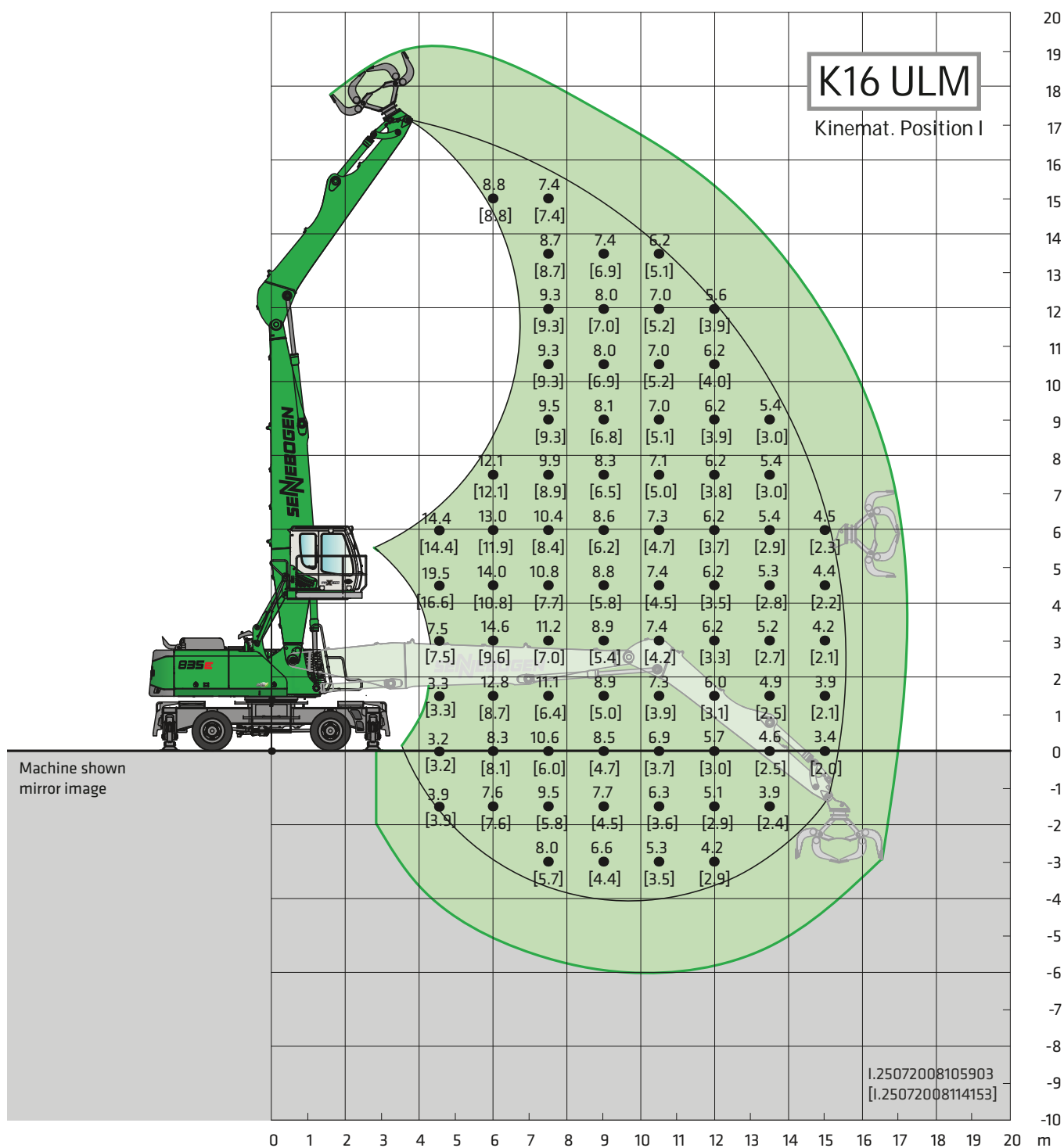
B35E Lift capacities



Undercarriage	MP41E	Compact boom Loading Stick	9,1 m 6,9 m	Cab	maXcab E270, hydraulically elevating
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All load ratings are specified in tons (t) and apply at the end of the stick, without attachment, on a solid, level substrate. Attachments, such as grapple, magnet, load hook, et cetera 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 ISO 10567. In accordance with the EU standard, EN 474-5, material handling machines in hoist operation must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device. The specified load ratings apply for the machine supported with 4-point claw support and slewable 360°. The specified load ratings in square brackets [] apply with blocked pendulum axle, unsupported, free standing, slewable 360°.

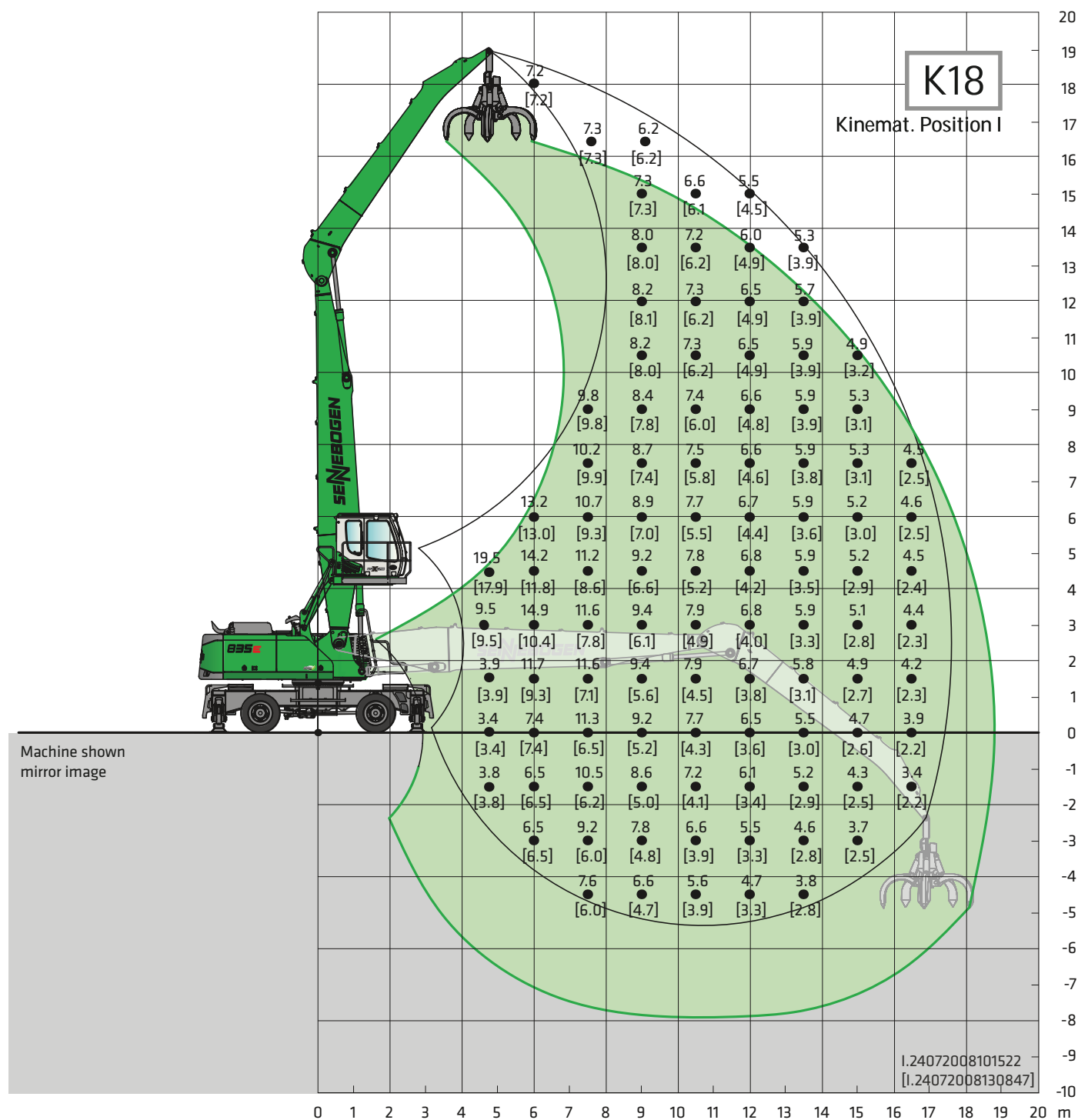
835E Lift capacities



Undercarriage	MP41E	Compact boom Loading stick	9,1 m 6,6 m ULM	Cab	maXcab E270, hydraulically elevating
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B35E Lift capacities



Undercarriage

MP41E

**Compact boom
Loading stick**

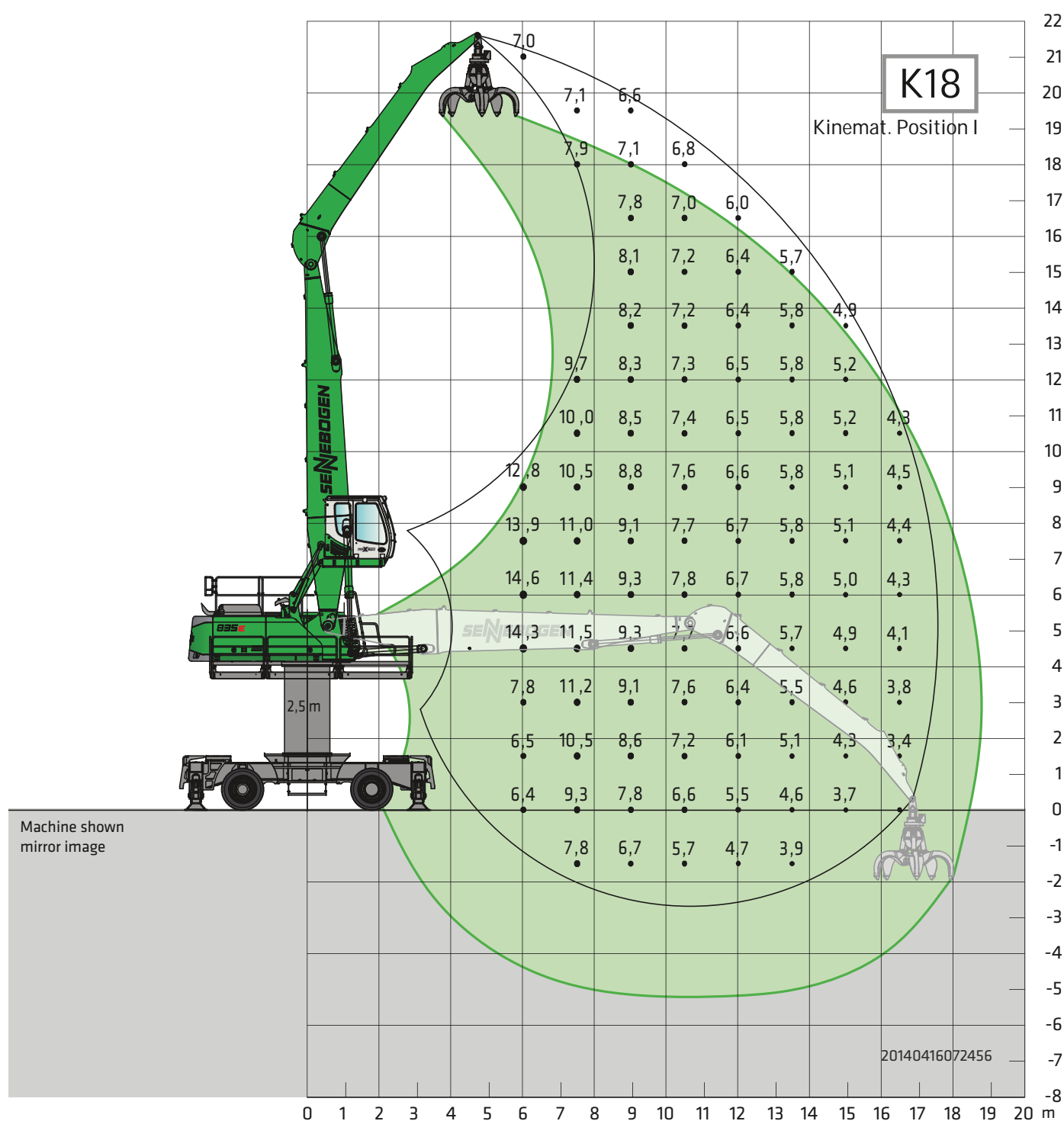
10,1 m
7,9 m

Cab

maXcab E270,
hydraulically elevating

All load ratings are specified in tons (t) and apply at the end of the stick, without attachment, on a solid, level substrate. Attachments, such as grapple, magnet, load hook, et cetera 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 ISO 10567. In accordance with the EU standard, EN 474-5, material handling machines in hoist operation must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device. The specified load ratings apply for the machine supported with 4-point claw support and slewable 360°. The specified load ratings in square brackets [] apply with blocked pendulum axle, unsupported, free standing, slewable 360°.

B35E Lift capacities



Undercarriage
Pylon

MP42E
2,5 m

Compact boom
Loading stick

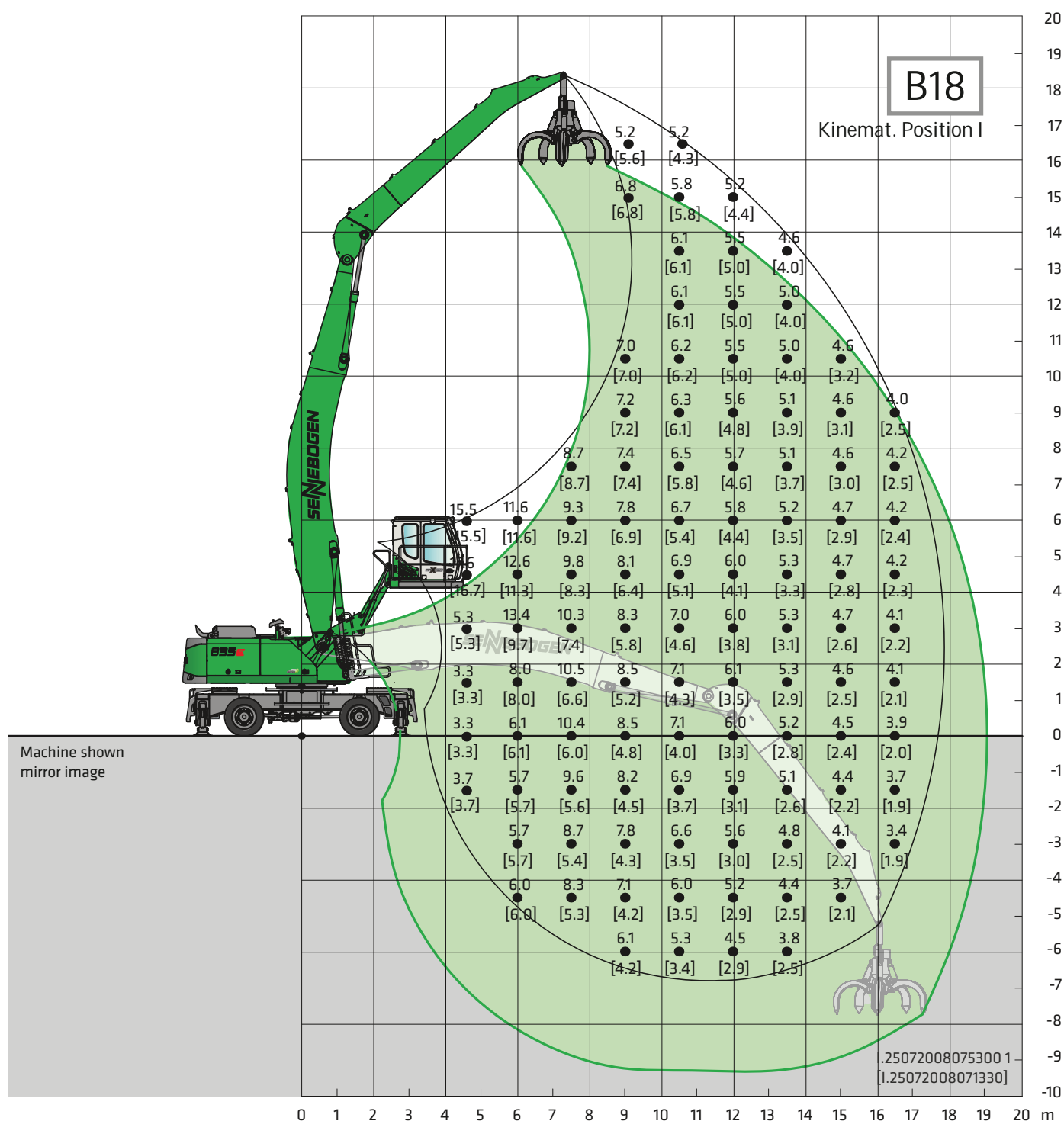
10,1 m
7,9 m

Cab

maXcab E270,
hydraulisch hochfahrbar

All load ratings are specified in tons (t) and apply at the end of the stick, without attachment, on a solid, level substrate. Attachments, such as grapple, magnet, load hook, et cetera 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 ISO 10567. In accordance with the EU standard, EN 474-5, material handling machines in hoist operation must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device. The specified load ratings apply for the machine supported with 4-point claw support and slewable 360°. The specified load ratings in square brackets [] apply with blocked pendulum axle, unsupported, free standing, slewable 360°.

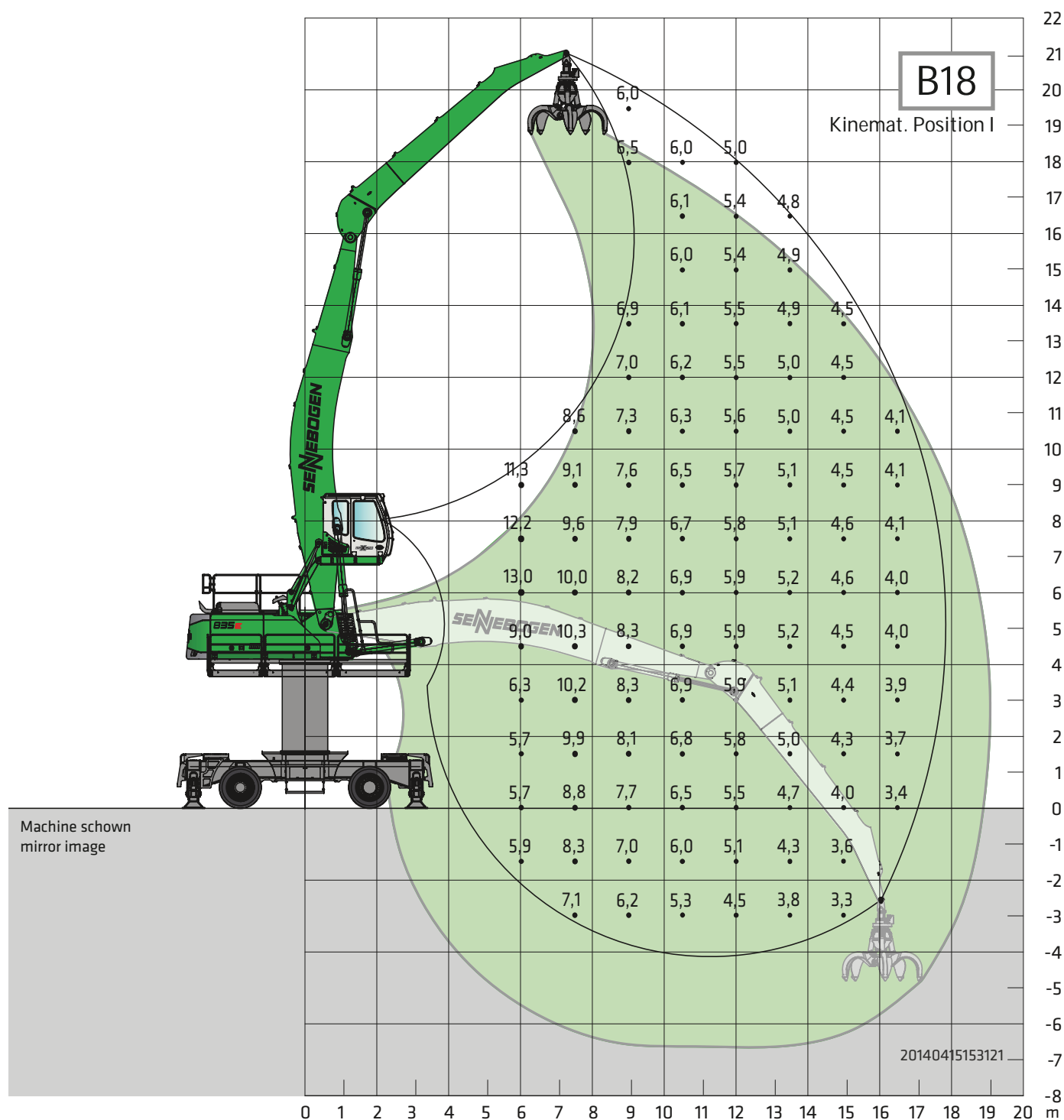
B35E Lift capacities



Undercarriage	MP41E	Compact boom Loading stick	10,8 m Banana 7,9 m	Cab	maXcab E300/260, hydraulic eleva- ting and forward moving (Option)
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All load ratings are specified in tons (t) and apply at the end of the stick, without attachment, on a solid, level substrate. Attachments, such as grapple, magnet, load hook, et cetera 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 ISO 10567. In accordance with the EU standard, EN 474-5, material handling machines in hoist operation must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device. The specified load ratings apply for the machine supported with 4-point claw support and slewable 360°. The specified load ratings in square brackets [] apply with blocked pendulum axle, unsupported, free standing, slewable 360°.

B35E Lift capacities



Undercarriage
Pylon

MP42E
2,5 m

Compact boom
Loading stick

10,8 m Banana
7,9 m

Cab

maXcab E270, hydraulisch
hochfahrbar (Option)

All load ratings are specified in tons (t) and apply at the end of the stick, without attachment, on a solid, level substrate. Attachments, such as grapple, magnet, load hook, et cetera 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 ISO 10567. In accordance with the EU standard, EN 474-5, material handling machines in hoist operation must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device. The specified load ratings apply for the machine supported with 4-point claw support and slewable 360°. The specified load ratings in square brackets [] apply with blocked pendulum axle, unsupported, free standing, slewable 360°.

835E Grab recommendation

Multi-shell grab SGM (4 shells)



Design / size	Grab content	Weight ¹		max. load capacity
		Shell shape ²		
		H0	G	
SGM	l	kg	kg	t
400.40-4	400	1570	1720	8,0
600.40-4	600	1600	1790	
800.40-4	800	1685	1930	
1000.40-4	1000	1755	2085	
1250.40-4	1250	1850	2200	

Multi-shell grab SGM (5 shells)



Design / size	Grab content	Weight ¹		max. load capacity
		Shell shape ²		
		H0	G	
SGM	l	kg	kg	t
400.40	400	1820	1920	8,0
600.40	600	1910	2035	
800.40	800	1960	2140	
1000.40	1000	2040	2290	
1250.40	1250	2180	2415	

Double shell grab SGZ



Design / size	Grab content	Weight ¹	max. payload
SGZ	l	kg	t
1500.50	1500	1989	8,0
2000.50	2000	2246	
2500.50	2500	2345	
3000.50	3000	2532	
4000.50	4000	2880	
3000.50 L	3000	2140	8,0
3500.50 L	3500	2260	
4000.50 L	4000	2480	
4500.50 L	4500	2600	
1500.50 HD	1500	2240	8,0
2000.50 HD	2000	2535	

Magnetic plates



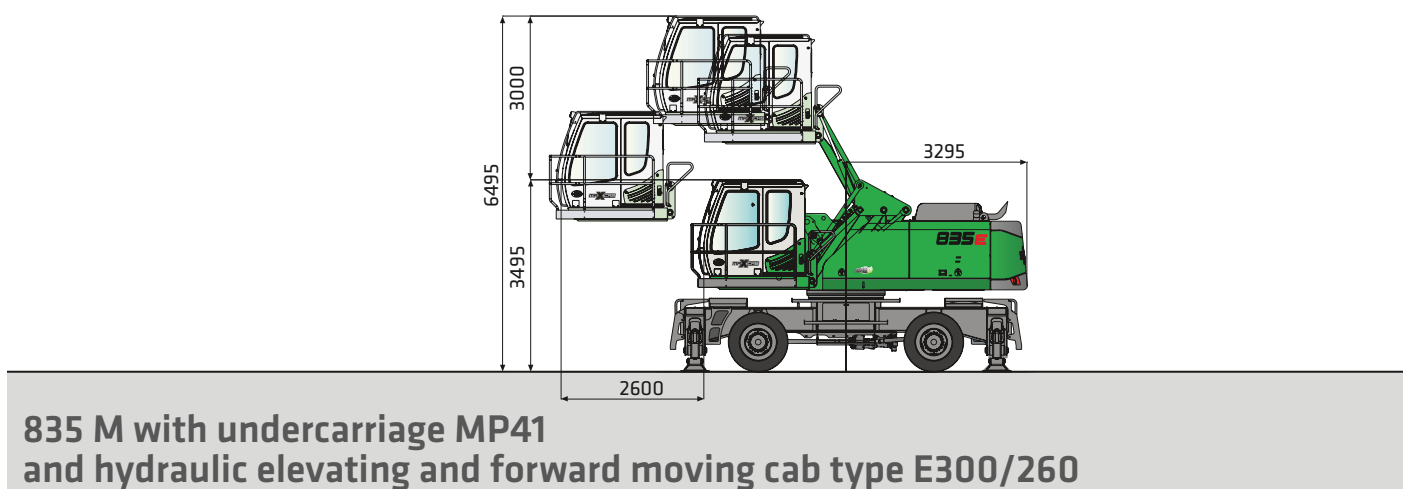
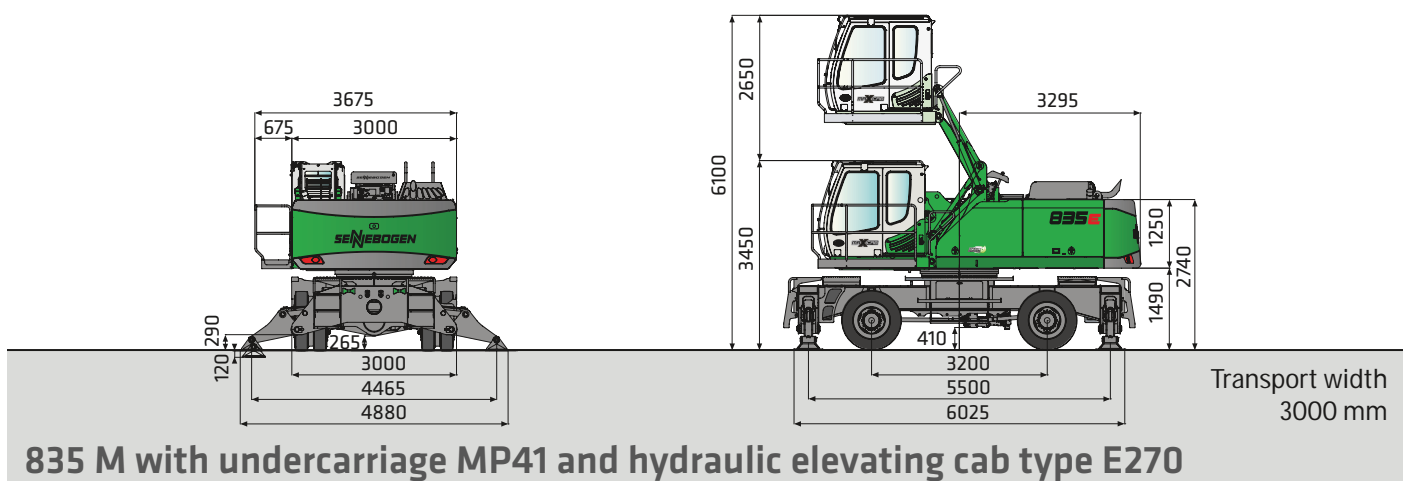
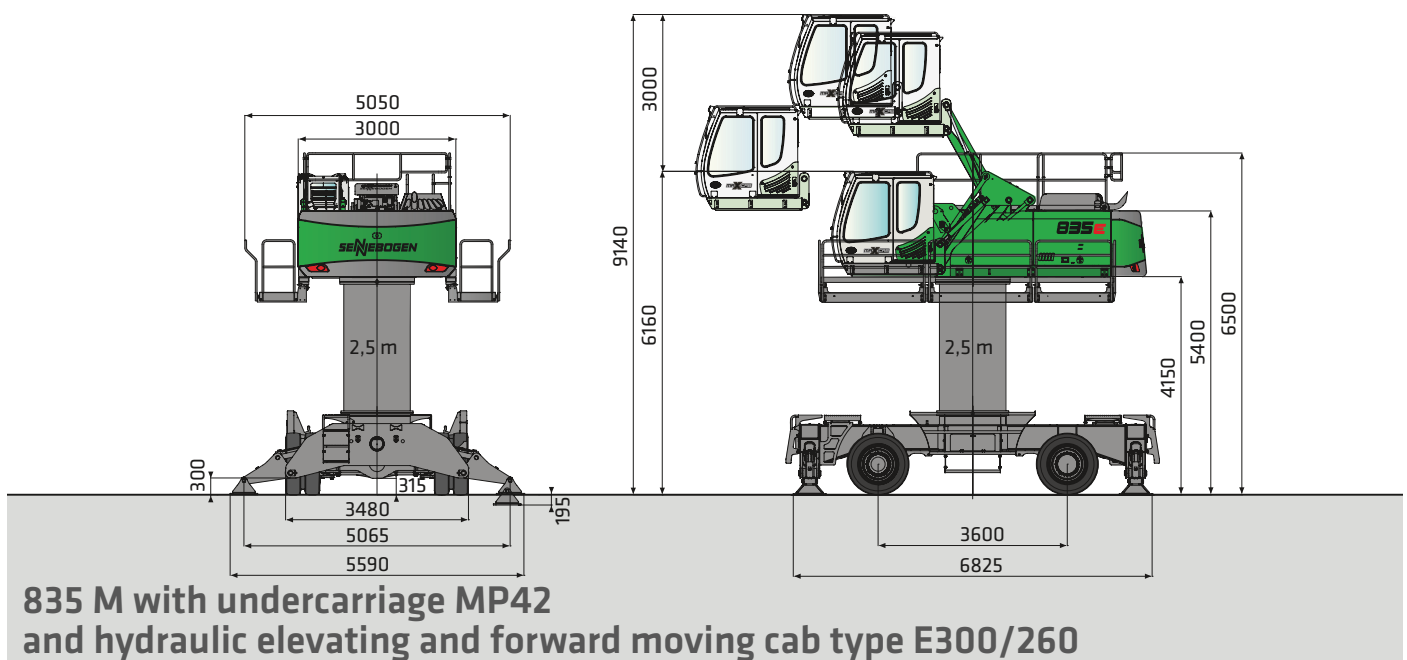
Type series / model	Power	Deadweight	Break-away force	Load-bearing in kg
WOKO	kW	kg	kN	Bramme (safety factor 2)
S-RSL 15	12,2	1950	360	1800
S-RSL 17	17,0	2500	460	2300
S-RLB 13,5	10,0	1700	300	15000
S-RLB 15	11,7	2400	380	19000
S-RLB 17	17,8	3300	640	32000
Recommended magnetic generator: 15 kW / 20 kW				

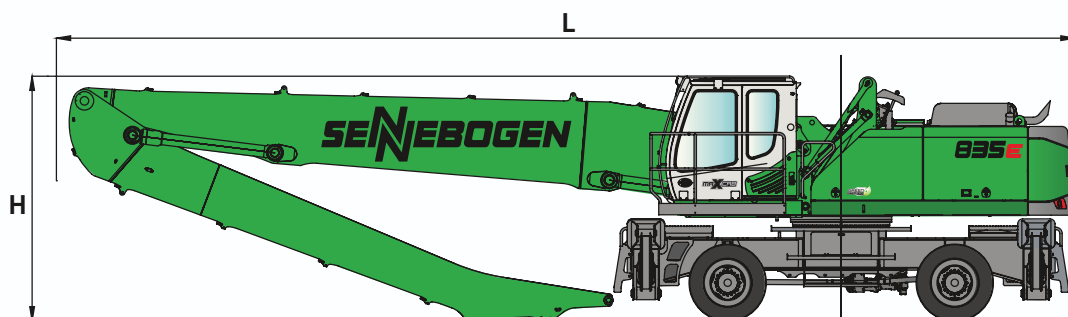
*) On request

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

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

835E Dimensions





Transport dimensions 835 M with undercarriage type MP41E

	Loading boom	Grabstick	Transport length (L)	Transport height (H)
K16	9,1 m	6,9 m	13,5 m	3,45 m
K18	10,1 m	7,9 m	14,5 m	3,45 m
B18	10,8 m Banana	7,9 m	15,0 m	3,45 m
K16 ULM	9,1 m	6,6 m	13,5 m	3,45 m

This catalog describes machine models, the scope of equipment of individual models, and configuration possibilities (standard equipment and optional equipment) of the machines delivered by SENNEBOGEN Maschinenfabrik. Machine illustrations can contain optional equipment and supplemental equipment. Depending on the country in which the machines are delivered, deviations from the equipment are possible, particularly with regard to standard equipment and optional equipment.

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