



168 kW (Stage V)

132 kW (Electro)



38 - 43.5t







Mobile material handling machine

BBOE 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: Highquality components without over-engineering
- Long product service life and high value retention

Your top benefits

- Green Efficiency
 Safe fuel reduce operating costs
 Work quietly protect operator and environment
- Peak performance

 Durable mechanical systems stressed parts optimized

 High speeds high load capacities
- Maximum usability

 Comfortable Maxcab operator cab relaxed work

 SENCON work program selection made easy
- Maximum safety

 Safe entry and exit no-slip steps

 State-of-the-art camera entire work area in view
- Maintenance and service made easy

 SENNEBOGEN Control System SENCON easy diagnosis
 Easy Maintenance clear labeling
- Consultation and support in your area
 3 production sites 2 subsidiaries
 more than 130 sales partners worldwide and also in your area







 $\label{thm:continuous} \textbf{Subject to technical changes. Further options available upon request.}$

BBOThe 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 **1**

- 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 largedimensioned 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



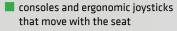
The premium cab.



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



- 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

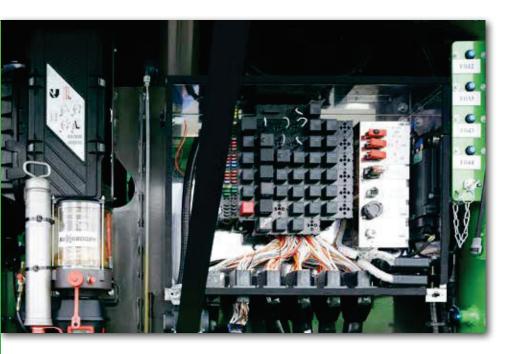


6 * Option





B 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



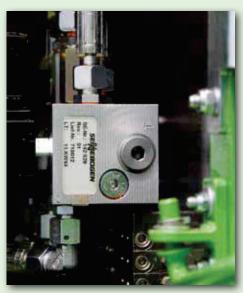
Hydro Clean*

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



Central measuring points

- Easily accessible
- Quickly inspect entire hydraulic system



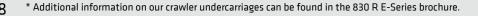
Clear labeling

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

* Option 7

BBD Modular design - versatile solutions

Equipment options (others available upon request) **Attachments** Orange peel grab Clamshell grab Magnetic plate Scrap metal shears Vacuum traverse Cabs K14 ULM K15 K17 **B16** K14 **K13 VT** Cab elevation Uppercarriage 2,60 m + Maxcab Diesel-hydraulic drive ιMι E300/260 Electrohydraulic drive E270 Maxcab Industry Motorized cable reel **Options Transformer Undercarriage variants** тах. тах. тах. тах. тах. 1,5 m 1,5 m 4,5 m 4,5 m 1,5 m Mobile M Mobile MHD Mobile MHDS Crawler Crawler special 4-point pedestal Crawler T41/380* R44/380* **MP30 MP41 MP34** R35/340* **ST48**





BBOAdvantages at a glance



BBO Technical data, equipment

MACHINE TYPE

Model (type) 830

ENGINE	
Power	Stage V: Rated Power: 168 kW at 2200 rpm 188 kW at 1900 rpm Stage Illa: Rated Power: 164 kW at 2000 rpm 172 kW at 1800 rpm
Model	Cummins 6.7 Direct injection, turbo charged, charge air cooler, reduced emissions, Eco Mode, idle automation, stop automation
Cooling	Water-cooled
Diesel filter	with water separator and heating system
Air filter	Dry filter with integrated pre-separator, automatic dust discharge, main element and safety element, contamination indicator
Fuel tank	450 l
DEF tank	45 l
Electr. system	24 V
Batteries	2 x 150 Ah, main switch
Options	 Engine block heater for temperatures below -20 °C Electric fuel pump Jump-start battery terminals

UPPERO	CARRIAGE	
Design	Torsion-resistant box design, precision crafted, steel bushings for boom bearings. Extremely service-friendly design, longitudinal engine	
Central lubrica- tion	Automatic central lubrication for equipment and slewing gear	
Electrical sys- tem	Central electrical distributor, battery disconnect switch	
Cooling system	3-circuit cooling system with high cooling out- put, thermostatically regulated fan drive for oil cooler and water cooler, fan reversal for cleaning	
Options	 Slewing gear brake via foot pedal Hand rail at the upper structure for additional safety LED lighting packages Fire extinguisher Sea climate resistant coating Electric heater for hydraulic tank 	

Options	Low-temperature packages
	Hydraulically driven magnetic generator
	15 kW/20 kW
	Telematic system SENtrack DS

HYDRA	ULIC SYSTEM
Load sensing / L pilot-controlled	UDV hydraulic system for hydraulic, work 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	520 l/min
Operating pressure	max. 350 bar
Filtration	High-performance filtration with long change interval
Hydraulic tank	310 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	Hydraulic circuits secured with safety valves, emergency lowering of the equipment at engine standstill, pipe fracture safety valves for lift cylinder and stick cylinder
Options	 Bio-oil - environmentally friendly ToolControl for programming pressure/rate for up to 10 tools Additional hydraulic circuit for shear attachment Load moment warning with capacity utilization indicator Overload safeguard with overload shutdown 3 µm hydraulic micro-filter - SENNEBOGEN HydroClean

SLEWING DRIVE		
Gearbox	Compact planetary gear with bent-axis hydraulic motor, integrated brake valves	
Parking brake	Spring-loaded multi-disk brake	
Slewing ring	Strong slewing ring, sealed	
Slewing speed	0-8 rpm, variable	



Subject to change.

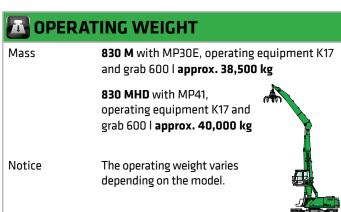
BBD Technical data, equipment

CAB	
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	 active seat air conditioning Auxiliary heating system with timer Cabs with active carbon filter Armored-glass windshield Armored-glass sunroof Safety side window and rear window Rolling shade for roof window and windshield Protection guards FOPS protective roof grating Protective front grating Radio with speakers Maxcab industrial cab with undivided armored glass windshield electrical cooler

EQUIPM	ENT
Design	Decades of experience, state-of-the-art computer simulation, highest level of stability, longest service life, large-dimensioned and low-maintenance bearing points, sealed special bearing bushes, precision-crafted, quick-release couplings on the connections - open/close/rotate grapple
Cylinders	Hydraulic cylinders with high-quality sealing and guide elements, end position damping, sealed bearing points
Options	 Ball valves on the hydraulic lines - open and close grab nickel-plated and chrome-plated Float position of the equipment Hoisting limiter / stick limitation adjustable for stop settings, e.g. in the hall Multi-coupling

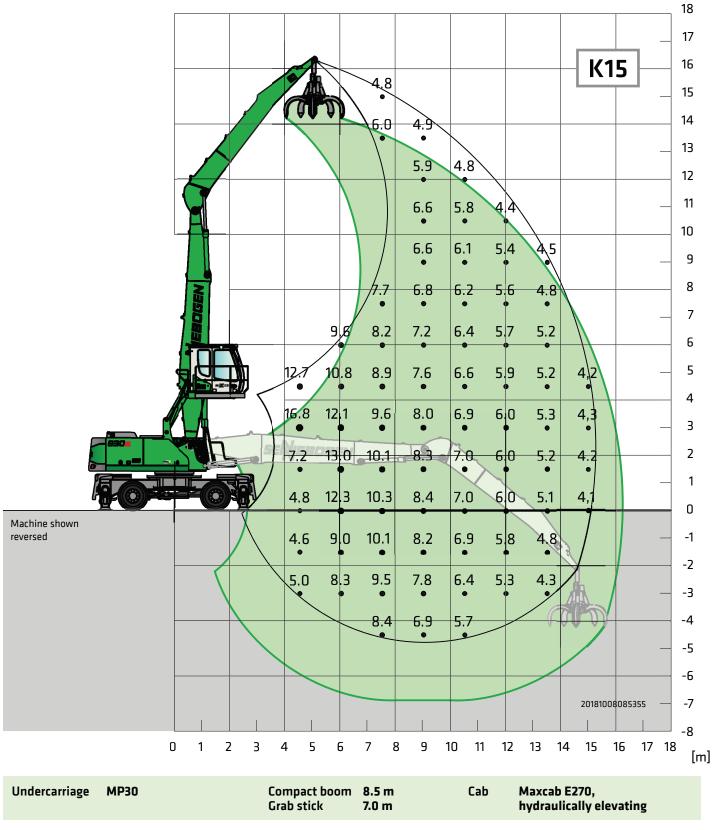
UNDER	CARRIAGE
Design	Strong mobile undercarriage with integrated 4-point outriggers, steering axle as hydraulically locking pendulum axle, pendulum axle cylinder with pipe fracture safety valves
Drive	All-wheel drive powered by a variable-dis- placement hydraulic motor with direct- mounted, automatically actuated brake valve and 2-stage power shift transmission, strong planetary axles with integrated steering cylin- ders, service brake in 2-circuit system
Parking brake	Spring-loaded multi-disk brake
Tires	M: solid-rubber tires 12.00-20, 8x MHD: solid-rubber tires 12.00-20, 8x MHDS: solid-rubber tires 16.00-25, 4x Trailer: pneumatic tires 650/65-R25, 4x
Speed	0 - 7 km/h stage I 0 - 20 km/h stage II Trailer 25 km/h
Options	 MHD: pneumatic tires 12.00-20, 8x MHDS: pneumatic tires 20.50-R25, 4x Additional pushing blade for 4-point outriggers Individual outrigger actuation Protection for travel drive, shunting coupling





Subject to change.



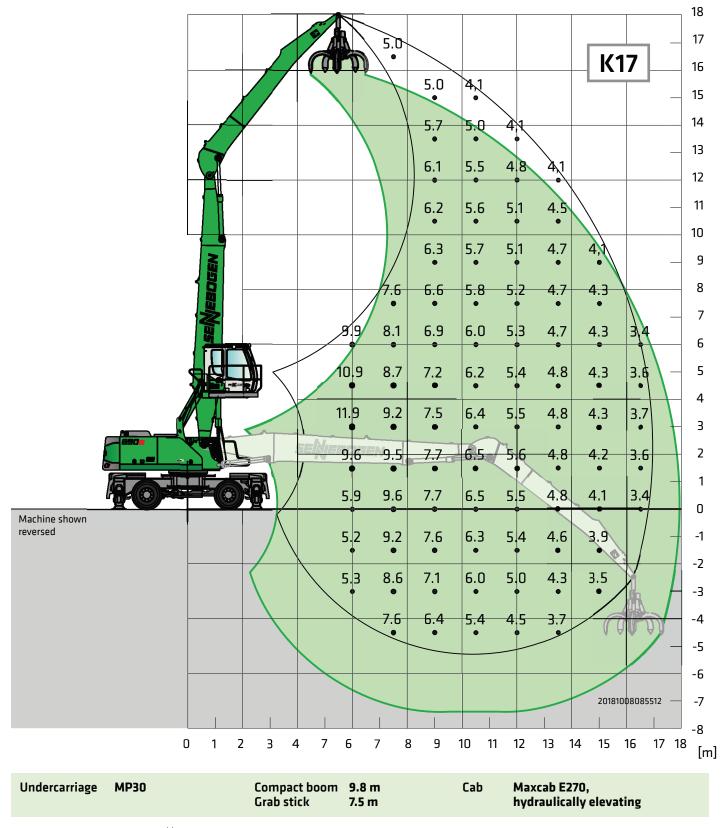


The specified load ratings apply 360° on the crawler undercarriage; telescopic undercarriages must be completely extended.

12 Technical features and dimensions subject to change.

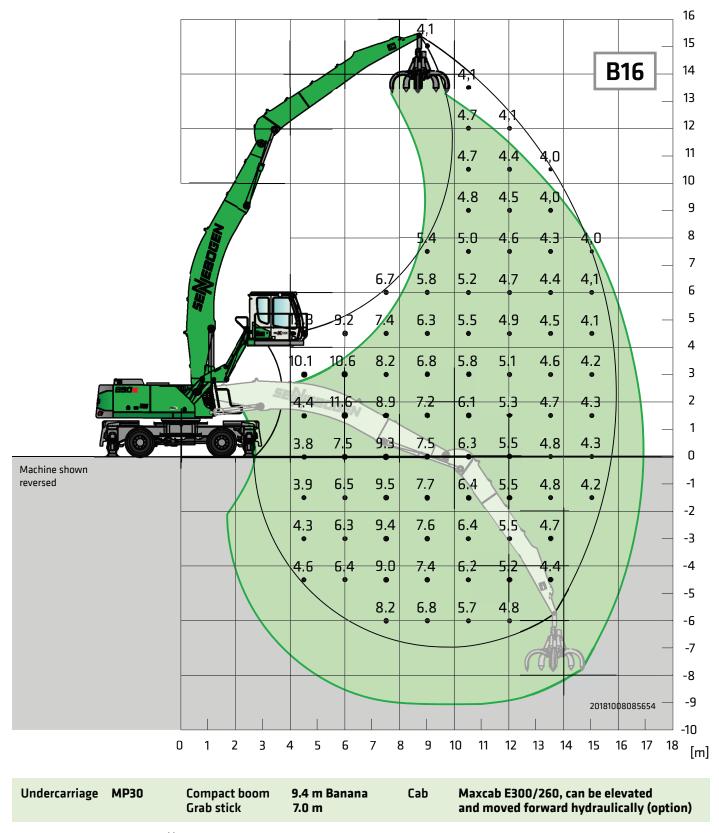






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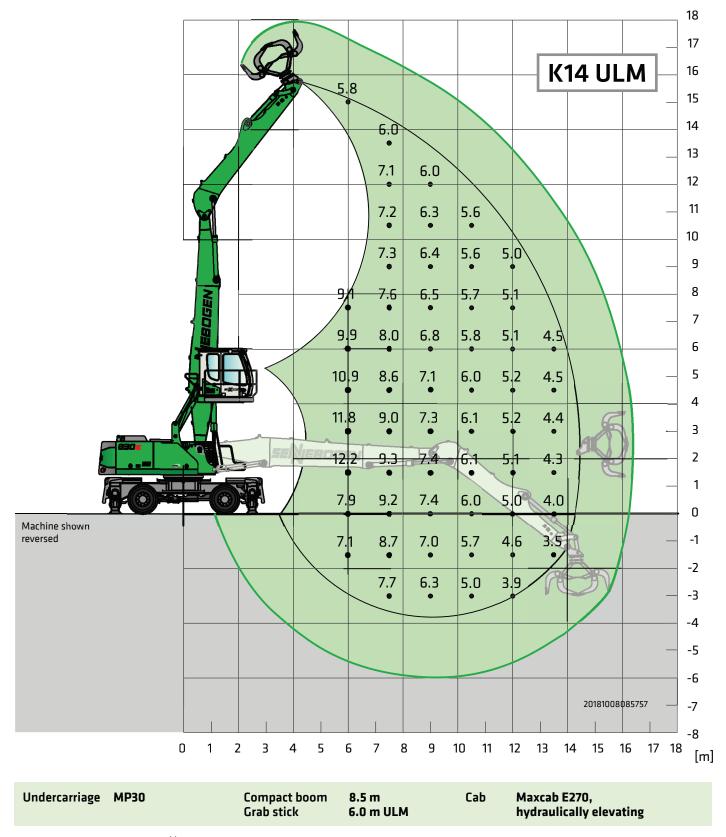


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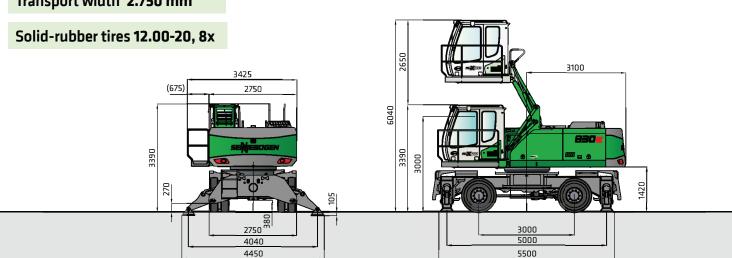




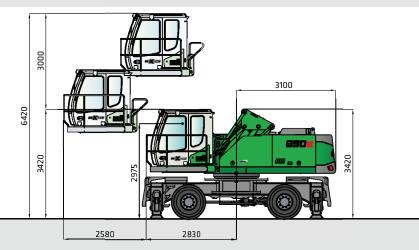
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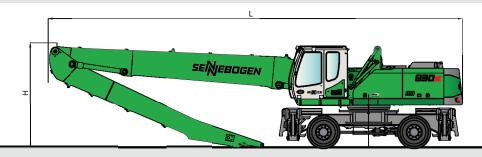
Transport width 2.750 mm



830 M with undercarriage type MP30 (series) and hydraulically elevating cab type E270



830 M with cab type E300/260 (option), can be elevated and moved forward hydraulically



830 M with undercarriage type MP30

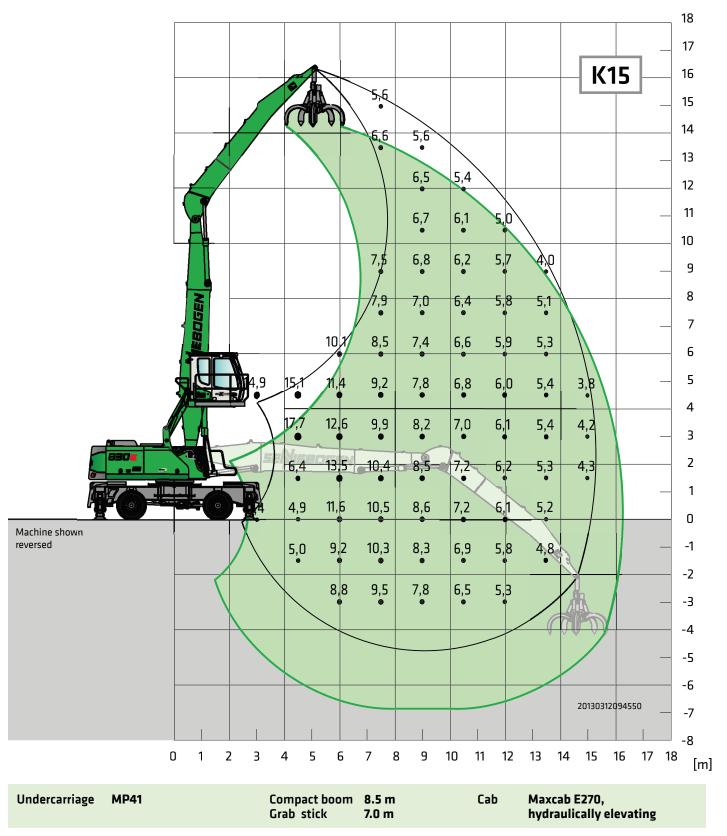
	Load boom	Grab stick	Transport length (L)	Transport height (H)
K15	8.5 m	7.0 m	12.45 m	3.40 m
K17	9.8 m	7.5 m	13.75 m	3.45 m
B16	9.4 m Banana	7.0 m	13.40 m	3.50 m
K14 ULM	8.5 m	6.0 m	12.45 m	3.40 m

16 Technical features and dimensions subject to change.

Dimensions in [mm]



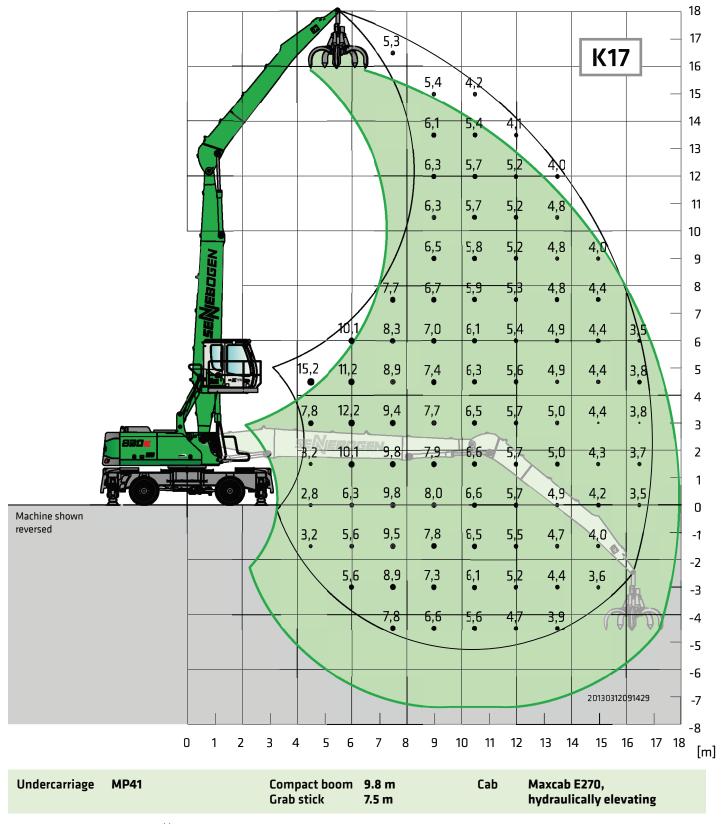




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The specified load ratings apply 360° on the crawler undercarriage; telescopic undercarriages must be completely extended.





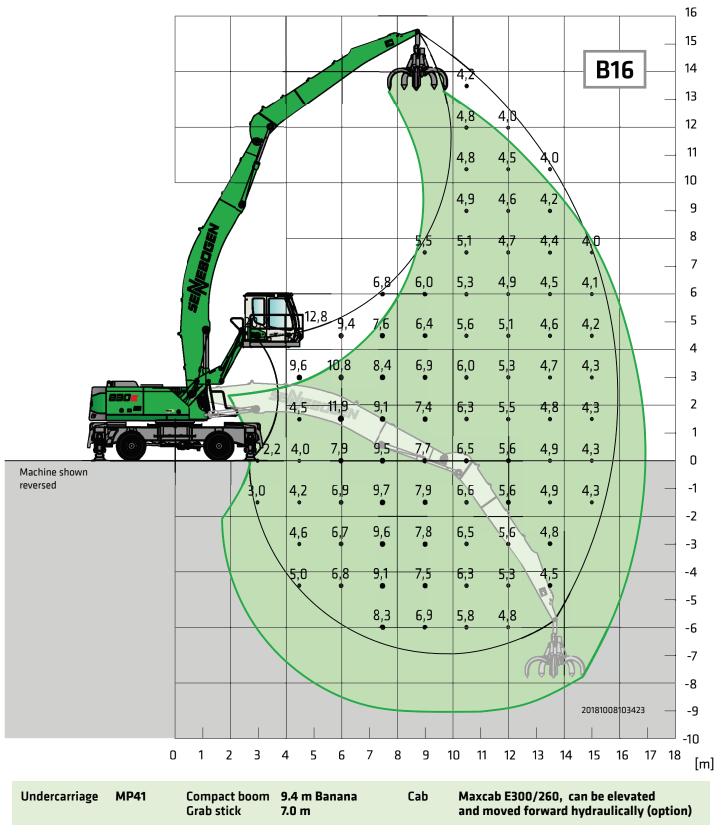
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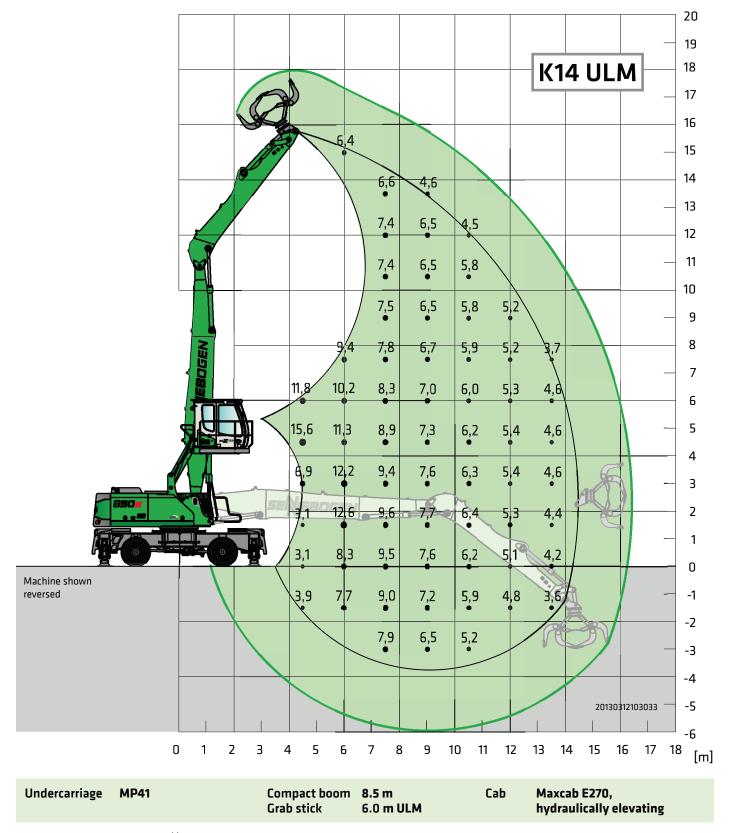




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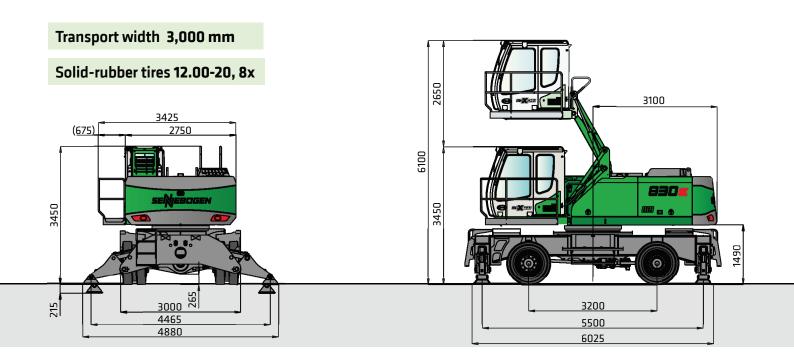
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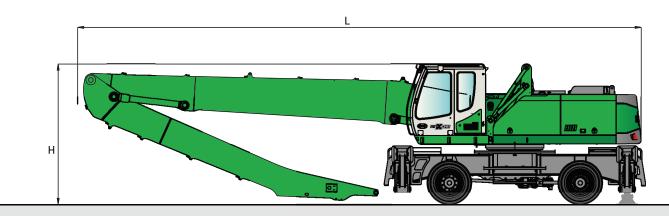
20 Technical features and dimensions subject to change.





MHD



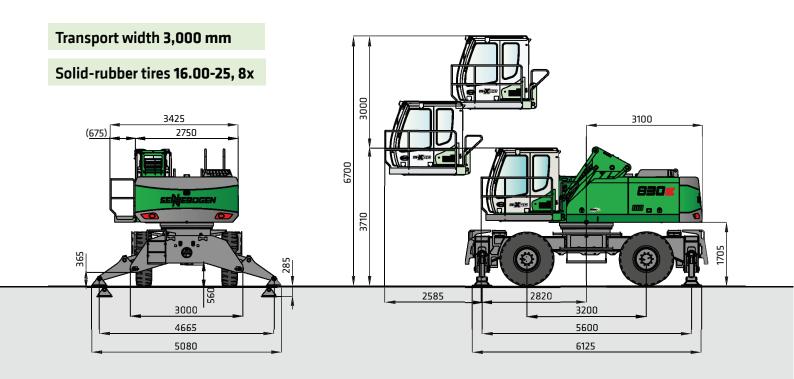


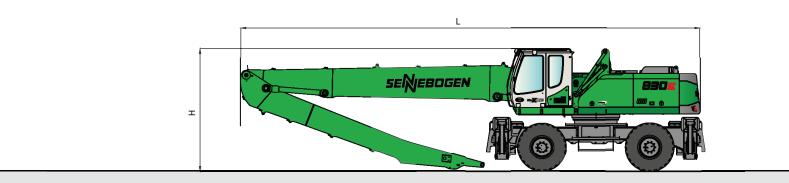
830 MHD with undercarriage type MP41, hydraulically elevating Maxcab type E270, tires 12.00 - 20, 8x, transport width 3,000 mm, working weigth with boom K17, 600 I orange peel grab, approx. 40,000 kg

	Load boom	Grab stick	Transport length (L)	Transport height (H)
K15	8.5 m	7.0 m	12.5 m	3.45 m
K17	9.8 m	7.5 m	13.8 m	3.45 m
B16	9.4 m	7.0 m	13.4 m	3.5 m
K14 ULM	8.5 m	6.0 m	12.5 m	3.45 m



MHDS





830 MHDS with undercarriage type MP34, Maxcab can be elevated hydraulically, tires 16.00 - 25, 4x, transport width 3000 mm, working weight with boom K17, 600 l orange peel grab, approx. 41,000 kg

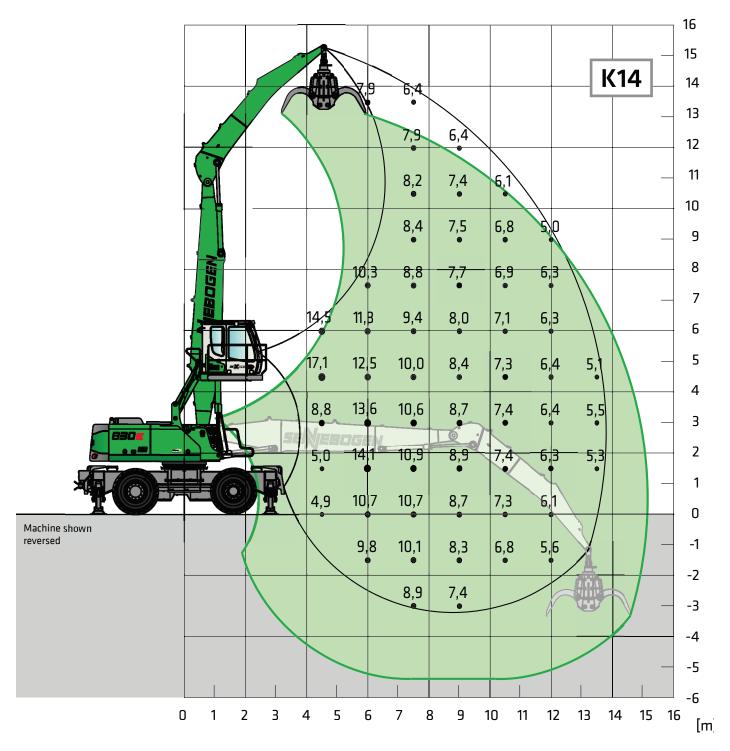
	Load boom	Grab stick	Transport length (L)	Transport height (H)
K15	8.5 m	7.0 m	12.5 m	3.7 m
K17	9.8 m	7.5 m	13.8 m	3.7 m
B16	9.4 m	7.0 m	13.4 m	3.8 m
K14 ULM	8.5 m	6.0 m	12.5 m	3.7 m

72 Technical features and dimensions subject to change.





Trailer



Undercarriage MP38 Compact boom Grab stick	8.2 m 5.8 m	Cab	Maxcab E270, hydraulically elevating
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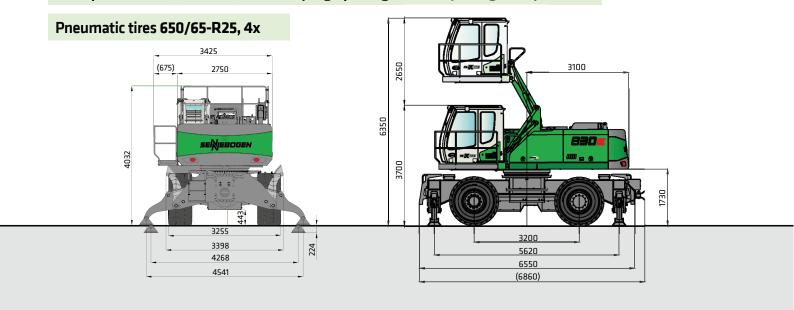
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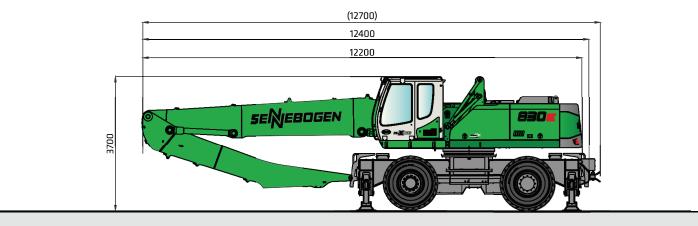
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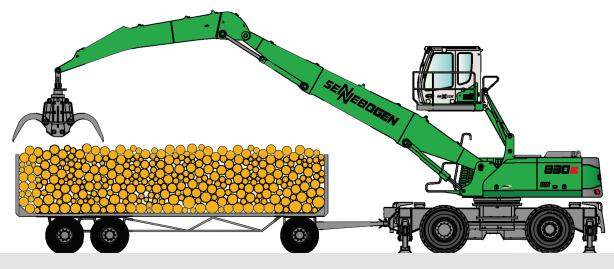
Trailer

Transport width 3,400 mm, extremely high pulling force for pulling heavy trailers





830 trailer, operating weight with boom K14, 1.5 sqm log grab, approx. 43,500 kg



24 Technical features and dimensions subject to change.





VARIOTOOL

From a high-performance handling machine to a multi-functional high-performance tool carrier

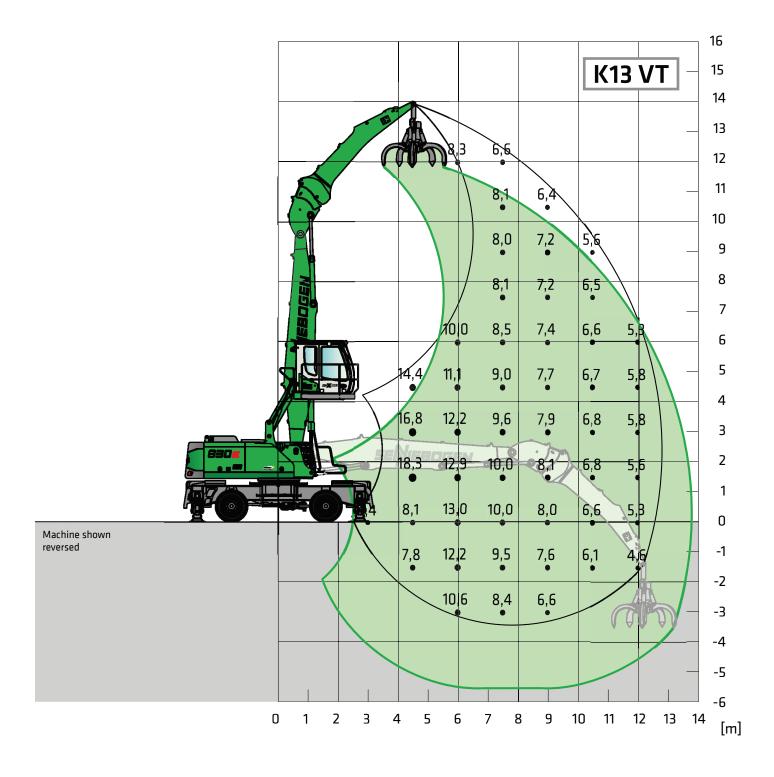


- Stick / shear can be supported without support frame
- Automatic valve protection in coupled and decoupled state
- Effective change of the attachment: simple fast reliable
- Full power with:
 - Orange peel grab
 - Shear
 - Magnet
 - Sorting grab
- Fast and reliable changing of the attachment in seconds from the driver seat

- One basic system for different attachments
- Robust and intelligently simple
- Locking and changing the attachments without exiting
- Maximum versatility
- The material handling machine as a tool carrier
- The "VarioTool" quick changing system for material handling changes attachments fast and reliably



VARIOTOOL



Undercarriage MP41 Compact boom	7.2 m	Cab	Maxcab E270,
Grab stick	5.7 m		hydraulically elevating

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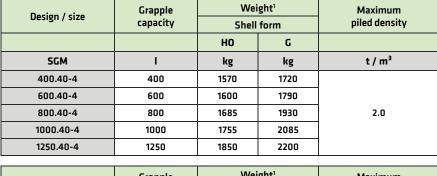
26



Orange peel grab SGM (4 shells)



Orange peel grab SGM (5 shells)



Grapple Grapple		Weight ¹		Maximum	
Design / size	capacity	Shell shape ²		piled density	
		НО	G		
SGM	1	kg	kg	t / m³	
400.40	400	1820	1920		
600.40	600	1910	2035	3.0	
800.40	800	1960	2140		
1000.40	1000	2040	2290	2.0	
1250.40	1250	2180	2415	1	
1400.40	1400	2250	2500		

Design / size	Grapple capacity	Weight ¹	Maximum piled density	
SGZ	ı	kg	t/m³	
1000.40	1000	1270		
1200.40	1200	1360	2.0	
1400.40	1400	1420		
1600.40	1600	1530		
1500.50	1500	1950	2.6	
2000.50	2000	2200	2.6	
2500.50	2500	2300	2.0	
3000.50	3000	2490	2.0	
4000.50	4000	2880	1.6	
3000.50 L	3000	2140	4.0	
3500.50 L	3500	2260	1.0	
4000.50 L	4000	2480		
4500.50 L	4500	2600	0.8	
1500.50 HD	1500	2240	3.5	
2000.50 HD	2000	2535		

Type series / model	Power	Weight	Breakaway force	Load-bearing capacity in kg	
woкo	kW	kg	kN	Slab (safety factor 2)	
S-RSL 13	10.5	1300	260	13000	
S-RSL 15	12.2	1950	360	18000	
S-RLB 12.5	8.8	1310	280	14000	
S-RLB 13.5	10.0	1700	300	15000	
S-RLB 15	11.7	2400	380	19000	
Recommended magnetic generator: 15 kW/20 kW					

^{*)} Available upon request 1) Weight information without grapple suspension, stick bolts, hose system



SGZ clamshell grab

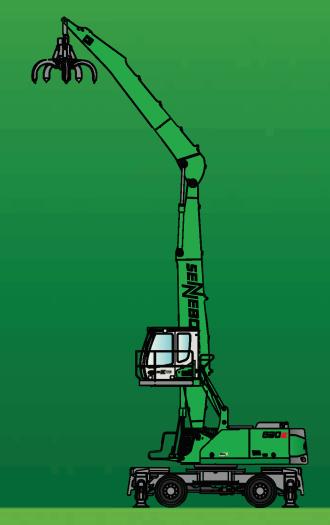


Magnetic plates



²⁾ Half-open shells: shell sheet steel width 400 mm, 500 mm for 1250 l capacity and higher





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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