

SENEBOGEN



97 kW (Stage IIIa)

104 kW (Stage IVf)

90 kW (Electro)



26.3 t



11 m



MAXCAB

821E

Crawler material handler

Stage IVf emission standards

821E Advanced. The E-Series



1962: Rope-driven S833 with elevated operator cab

What makes up the E-Series

- More than 65 years of experience in designing and constructing hydraulic material handling machines
- Uncompromisingly high performance in all areas: Focus on material handling
- Technology that can be mastered: High-quality components without over-engineering
- Long product service life and high value retention

Your top benefits

1

Green Efficiency

Safe fuel - reduce operating costs
Work quietly - protect operator and environment



2

Peak performance

Durable mechanical systems - stressed parts optimized
High speeds - high load capacities

3

Maximum usability

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



4

Maximum safety

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

5

Maintenance and service made easy

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

6

Consultation and support in your area

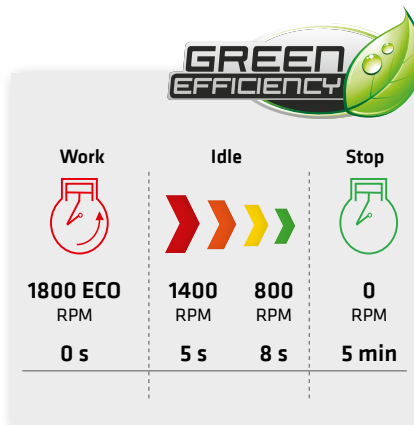
3 production sites - 2 subsidiaries
more than 130 sales partners - worldwide and also in your area





Subject to technical changes. Further options available upon request.

821E The E-Series. At a glance.



Four ways to save fuel

- Up to 20% savings: working in Eco Mode with reduced engine speed
- Idle automation reduces speed to 40% of operating speed
- Stop automation switches the engine off when not needed
- Optimized settings of engine and hydraulics reduces fuel consumption



Quiet operation 3

- Consistently quiet operation thanks to decoupled engine mounts and soundproofing in the doors
- Sound pressure level reduced by up to 4.5 dB; 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 **1**
- 2 cameras to the right and rear
- Platform with railing next to cab sliding door* **2**

Powerful hydraulic system **5**

- Strong pumps with power reserves
- Top efficiency thanks to large-dimensioned hydraulic valves and lines
- Extra-long change intervals of 4,000 operating hours through initial fill-up with special oil with extended service life when using SENNEBOGEN HydroClean*

* Optional

MAX CAB The premium cab.

Panoramic view

Features

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

Our SENNEBOGEN joysticks

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

821E Maintenance and service made easy.



Optimized for maintenance

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



Hydro Clean*

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



Central measuring points

- Easily accessible, central measuring points
- Quickly inspect entire hydraulic system



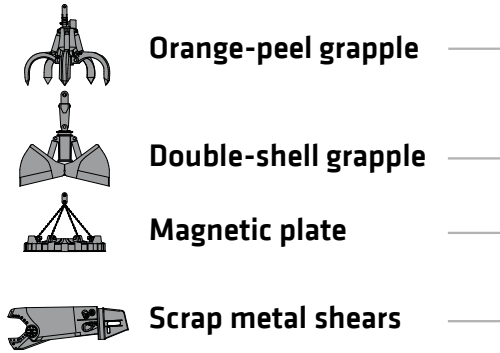
Clear labeling

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

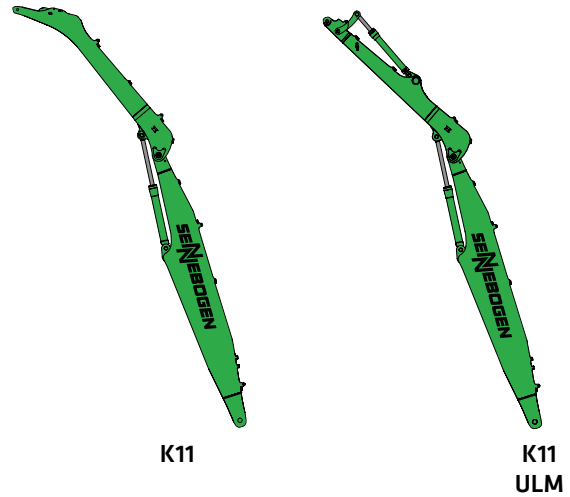
* Option

821E Modular design – versatile solutions

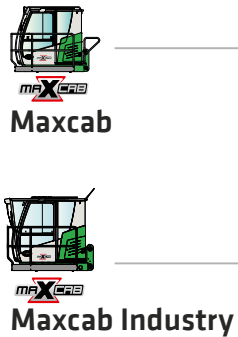
Attachments



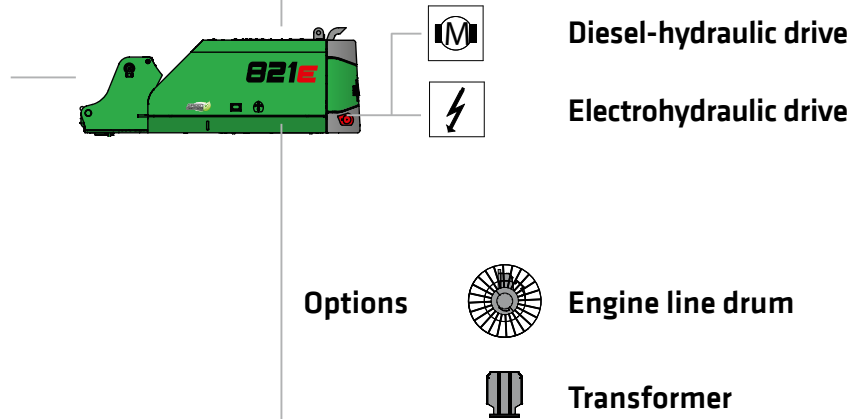
Equipment options (others available upon request)



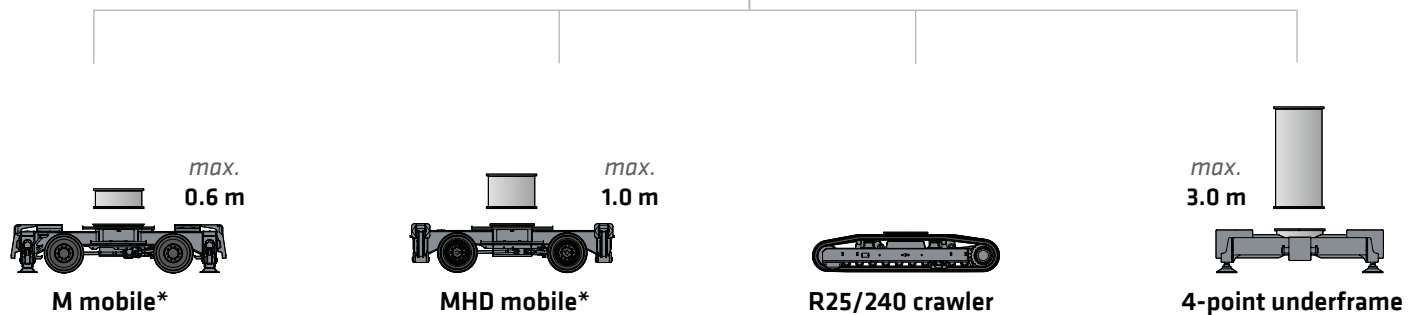
Cabs



Uppercarriage



Undercarriage variants



821E Advantages at a glance

Reliable operation
through robust and FEM-
optimized equipment

Sliding door for convenient
entry and exit

Ideal overview and
safe working height
thanks to stable cab
elevation

High load capacities even
when fully extended
thanks to massive cylinders

Robust side
covers made of
recyclable sheet
steel

Better illumination of the
work area with powerful
LED headlights*

Safe entry and exit
thanks to railing*,
handles and no-slip steps

*Option

821E Technical data, equipment

MACHINE TYPE

Model (type) **821**

ENGINE

Power	97 kW / 130 hp at 2,200 rpm (IIIa) 104 kW / 141 hp at 2,200 rpm (IVf)
Model	Cummins QSB 4.5 Stage IVf Direct injection, turbo-charged, charge air cooler, reduced emissions, Eco Mode, idle automation
Cooling	Water-cooled
Air filter	Dry air filter with cyclonic pre-filter, safety element, contamination indicator
Fuel tank	330 l
DEF tank	30 l
Electrical system	24 V
Batteries	2 x cold-start high-performance batteries
Options	<ul style="list-style-type: none"> ■ Engine block heater for temperatures below -20 °C ■ Electric fuel pump ■ Jump-start terminals

UPPERCARRIAGE

Design	Torsion-resistant upper frame with end shields all the way from boom linkage to counterweight for optimized force transmission, precision-crafted steel bushings for boom bearings, lockable storage compartment, outstanding design, very low noise emissions
Central lubrication	Automatic central lubrication for equipment and slewing gear raceway
Electrical system	Central electrical distributor, battery disconnect switch
Options	<ul style="list-style-type: none"> ■ Slewing gear brake via foot pedal ■ Perimeter uppercarriage railing for additional safety ■ LED lighting packages ■ Fire extinguisher ■ Special paint finish ■ Electric hydraulic tank preheater with uppercarriage power socket ■ Low-temperature package (oils, battery heater, hydraulic oil preheater, cab preheater, motor preheater) ■ Platform with railing next to cab ■ Hydraulically driven 9 kW/15 kW magnetic generator



HYDRAULIC SYSTEM


Load-sensing/LUDV hydraulic system for work and travel functions	
Pump type	Swashplate-type variable-displacement piston pump, load pressure-independent flow distribution for simultaneous, independent control of work functions
Pump control	Zero-stroke control, on-demand flow control – the pumps only pump as much oil as will actually be used, pressure purging, load limit sensing control
Operating pressure	Max. 350 bar
Delivery rate	Max. 310 l/min
Filtration	High-performance filtration with long change interval
Hydraulic tank	260 l
Control system	Proportional, precision hydraulic actuation of work movements, 2 hydraulic servo joysticks for work functions, additional functions via switches and foot pedals
Safety	All hydraulic circuits secured with safety valves, hydraulic accumulator for emergency attachment and cab lowering if engine fails, pipe fracture safety valves for stick and hoist cylinders
Options	<ul style="list-style-type: none"> ■ Bio-oil – environmentally friendly ■ ToolControl for programming pressure/rate of up to 10 tools ■ Additional hydraulic circuit for shears attachment ■ Load moment warning with capacity utilization indicator with/without shutdown ■ Electronic overload safeguard with overload shutdown ■ SENNEBOGEN HydroClean 3-µm hydraulic microfilter system


SLEWING DRIVE



Gearbox	Planetary gearbox with axial piston motor and integrated brake valve
Parking brake	Spring-loaded, hydraulically vented safety multi-disk brake
Slewing ring	Oversized slewing ring
Slewing speed	0–8 rpm, continuous. Hydraulic brake valves integrated into motor ensure wear-free braking.


821E Technical data, equipment

 CAB 	
Cab type	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"> ■ 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 ■ Protective roof grating ■ FOPS protective roof grating ■ Protective front grating ■ Radio with speakers ■ Maxcab industrial cab with undivided armored glass windshield ■ electrical cooler

 ATTACHMENTS	
Design	Sealed and soiling-protected box design with oversized bearing points for long service life. Oversized bearing points with low-maintenance, sealed special bushings, precision-crafted
Cylinders	Special hydraulic cylinder with hydraulic end position damping, optimized kinematics for high lifting power. The material handling attachment is specifically designed for high-performance applications.
Central lubrication	Automatic central lubrication system
Options	<ul style="list-style-type: none"> ■ Ball valves on the hydraulic lines to open, close, and rotate grapple ■ Multi-coupling ■ Adjustable hoisting limiter/stick limiter

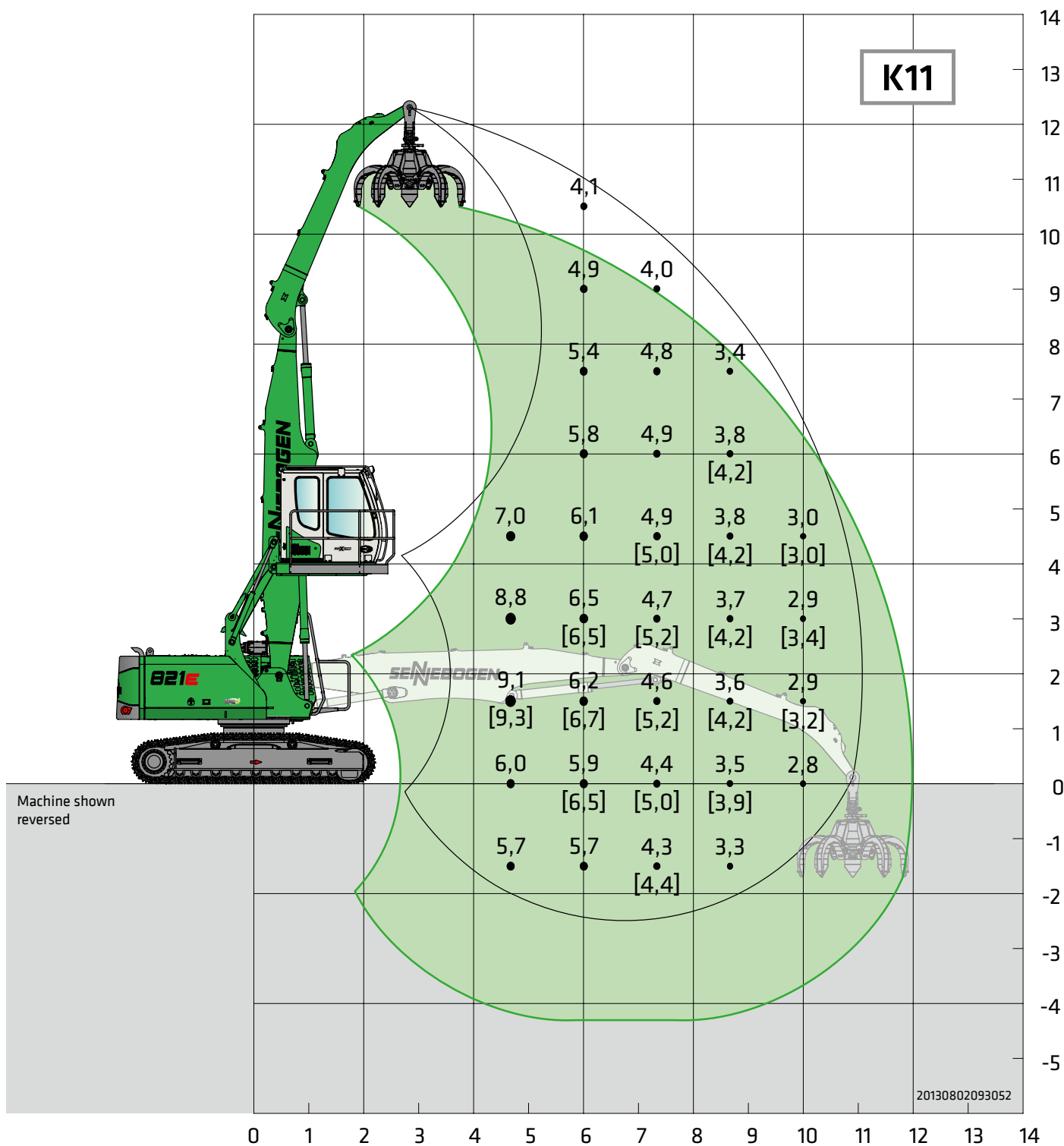
 UNDERCARRIAGE	
Design	Crawler undercarriage in stable, torsionally rigid box design
Travel drive	Hydraulic travel drive
Parking brake	Spring-loaded multi-disk brakes with hydraulic brake valves
Traveling gear	Undercarriage with 600 mm B4HD traveling gear and 3-grouser track shoes R25/240 crawler undercarriage
Travel speed	Stage I: 0-1.8 km/h; Stage II: 0-2.4 km/h
Options	<ul style="list-style-type: none"> ■ B4HD crawler track with 700 mm 3-grouser canted track shoes

 ELECTRIC DRIVE 	
Option	<ul style="list-style-type: none"> ■ Power: 90 kW, 400 V, 50 Hz Total connected load 200 kVA, customer-provided 250 A fuse (alternatively 315 A with magnet system) for 400 V – delta-connection motor start ■ Advantages: Lowest operating costs, quiet and virtually vibration-free work, long service life of hydraulic components

 OPERATING WEIGHT	
Mass	821 R with R25/240 undercarriage, K11 compact attachment and 600-l orange-peel grapple approx. 26,300 kg
Note	Operating weight varies by model and equipment.



821E Load ratings



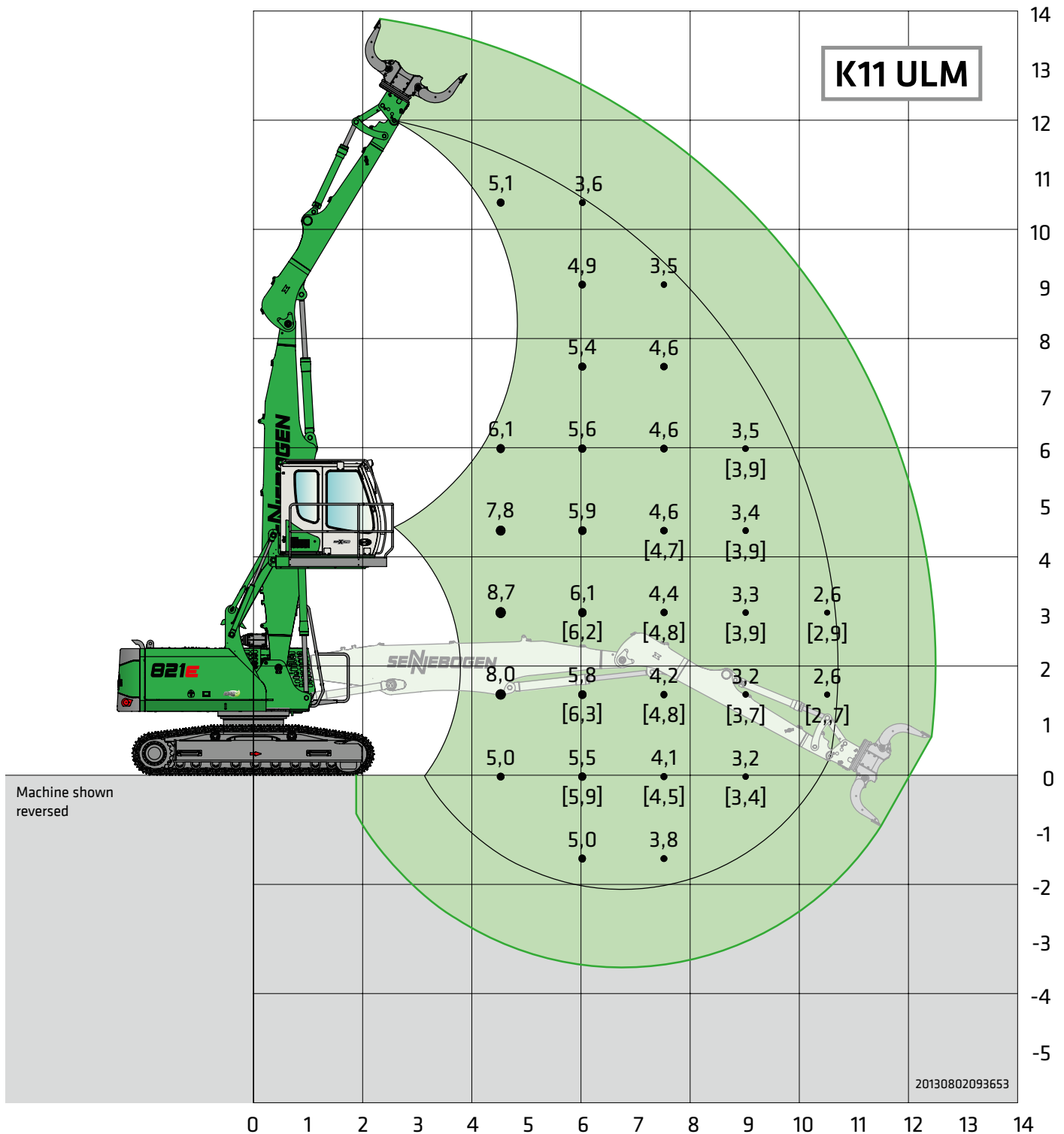
Undercarriage R25/240

Compact boom 6.3 m
Dipper stick 4.6 m

Cab E270 Maxcab,
hydraulically elevating

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 with maximum track gauge. The values in parentheses [] apply in the longitudinal direction for the undercarriage. Safe working loads include attachments such as multi-shell grapples, magnets, etc. According to harmonized EU standard EN 474-5, hydraulic excavators used for lifting must be equipped with pipe fracture safety devices on the hoist cylinders and an overload warning device.

821E Load ratings



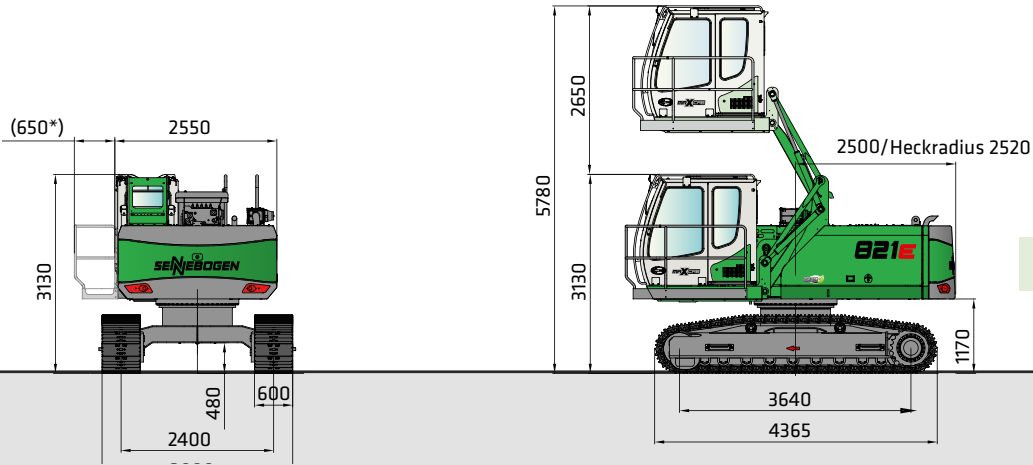
Undercarriage R25/240

**Compact boom 6.3 m
Dipperstick 4.2 m ULM**

**Cab E270 Maxcab,
hydraulically elevating**

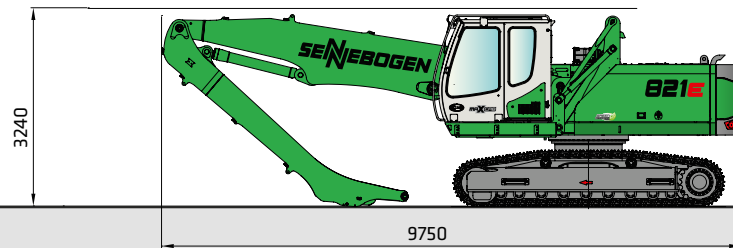
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821E Dimensions

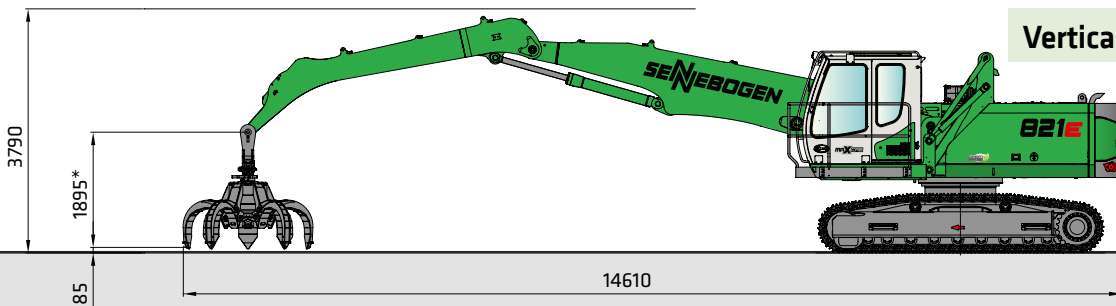


Transport width: 3,000 mm

821 R with R25/240 undercarriage and E270 hydraulically elevating cab

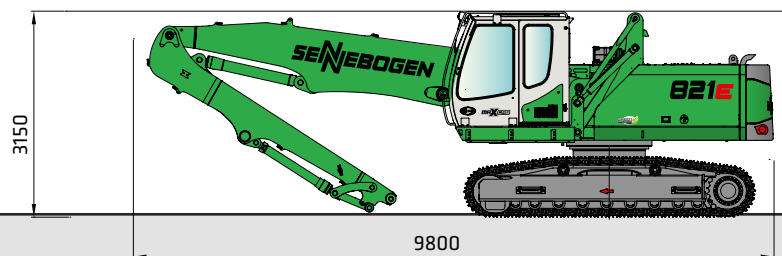


821 R with 6.3 m compact boom and 4.6 m dipperstick



Vertical clearance with 600-l grapple

821 R with 6.3 m compact boom and 4.6 m dipperstick with SENNEBOGEN orange-peel grapple



821 R with 6.3 m compact boom and 4.2 m ULM dipperstick

821E Recommended grapples

SGM orange-peel grapple (4 shells)



Design/size	Grapple capacity	Weight ¹		Max. load capacity
		Shell		
		HO	G	
SGM	l	kg	kg	t
400.30-4	400	1275	1385	4.0
600.30-4	600	1300	1435	
800.30-4	800	1345	1510	

SGM orange-peel grapple (5 shells)



Design/size	Grapple capacity	Weight ¹		Max. load capacity
		Shell ²		
		HO	G	
SGM	l	kg	kg	t
400.30-5	400	1465	1528	4.0
600.30-5	600	1490	1580	
800.30-5	800	1540	1650	

SGZ double-shell grapple



Design/size	Grapple capacity	Weight ¹	Max. load capacity
		kg	
1000.40	1000	1270	4.0
1200.40	1200	1360	
1400.40	1400	1420	
1600.40	1600	1530	

Magnetic plates



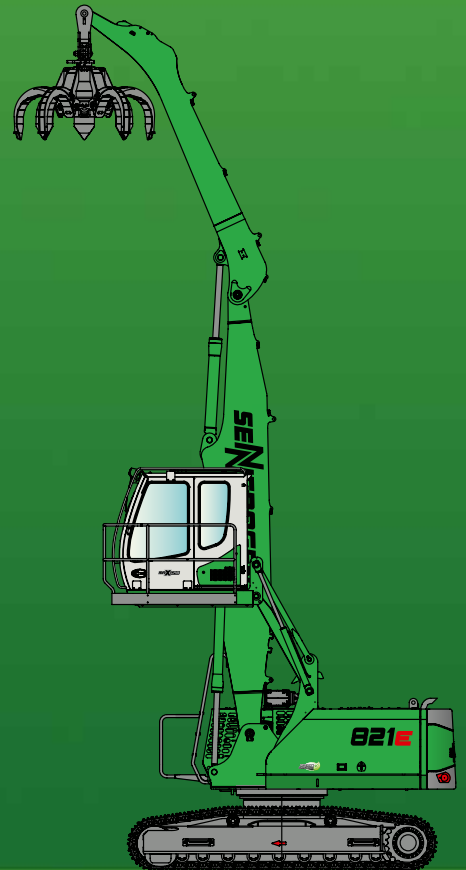
Type series/model	Power	Tare weight	Breakaway force	Load capacity in kg
WOKO	kW	kg	kN	Slab (safety factor 2)
S-RSL 13	10.5	1300	260	13000
S-RLB 10	4.8	730	190	9500
S-RLB 11.5	5.5	1060	240	12000
S-RLB 12.5	8.8	1310	280	14000
S-RLB 13.5	10.0	1700	300	15000
Recommended magnetic generator: 9 kW/15 kW				

*) Available upon request

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

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

821E R



This catalog describes machine models, what equipment comes with individual models, and configuration options (standard equipment and optional equipment) of the machines delivered by SENNEBOGEN Maschinenfabrik. Machine illustrations may contain optional and additional equipment. Actual equipment may vary depending on the country to which the machines are delivered, especially in regard to standard and optional equipment.

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GO FOR GREEN

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