



**395** kW (Tier IIIa)  
**391** kW (Tier IV)  
**390** kW (Electric)



**140 - 165** t



**21 - 27** m



**MAXCAB**

**MASTERCAB**

# 875E Hybrid

Material handling machine

Tier IV emission standards

# 875E Advanced. The E-Series. Hybrid



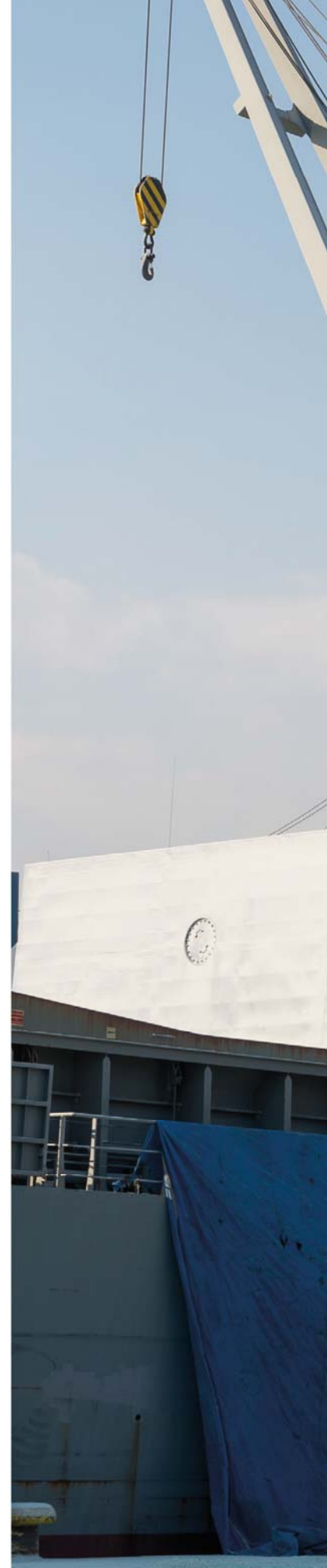
1962: Rope-driven S833 with elevated cab

## What the E-Series unique

- 60 years of experience in designing and constructing hydraulic material handling machines
- Uncompromisingly high performance in all areas, with a focus on material handling
- High-quality components and no over-engineering ensure manageable technology
- Long product service life and high value retention

## Your key benefits:

- 1 Green Efficiency**  
Save fuel – reduce operating costs  
Work quietly – protect operator and environment
- 2 Peak performance**  
Durable mechanical systems – optimized stressed parts  
High speeds – high load capacities
- 3 Maximum ease of use**  
Maxcab comfort cab – work in comfort  
SENCON – SENNEBOGEN Control System
- 4 Maximum safety**  
Safe entry and exit – non-slip steps  
State-of-the-art cameras – overview of the entire work area
- 5 Easy maintenance and service**  
Straightforward error diagnostics – central measuring points  
Simple maintenance – clear labeling
- 6 Consultation and support**  
3 production sites – 2 subsidiaries  
130 sales partners – more than 300 service stations





# 875E Hybrid The E-Series. Pure comfort.

## Maxcab Industry comfort cab

- Air-sprung comfort seat with heating
- Convenient joystick control
- Full-surface, sloped windshield
- Sliding door, platform in front of the cab
- Color monitor for right-side and rear-facing camera feeds
- SENNEBOGEN Optimode: Various modes for optimizing performance
- Floor window



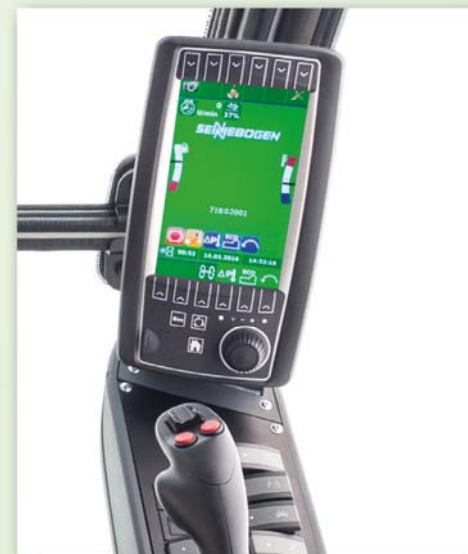
## Platform with railing

- Safety when entering and exiting the cab
- Sliding door ensures safe entry and exit



## Automatic air conditioning

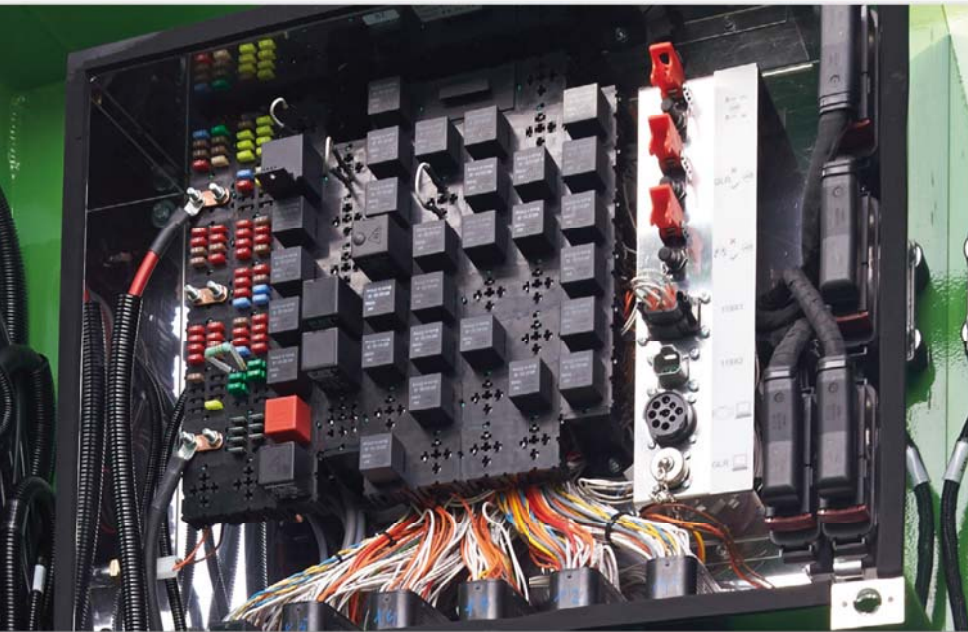
- Consistently pleasant working climate, thanks to 10 evenly distributed air vents
- Central controls ensure simple operation



## SENCAN

- Clearly organized menu
- Determine operating values without additional instruments
- Fast troubleshooting using detailed messages

# 875E Hybrid Maintenance and service made easy



## Optimized for maintenance

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



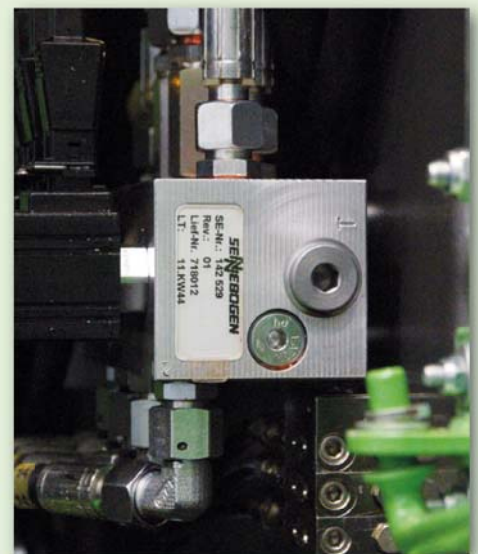
## HydroClean\*

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



## Central measuring points

- Easily accessible central measuring points
- Quick inspection of the entire hydraulic system

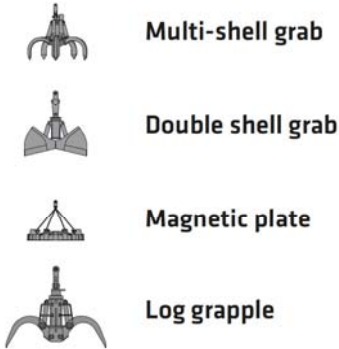


## Clear labeling

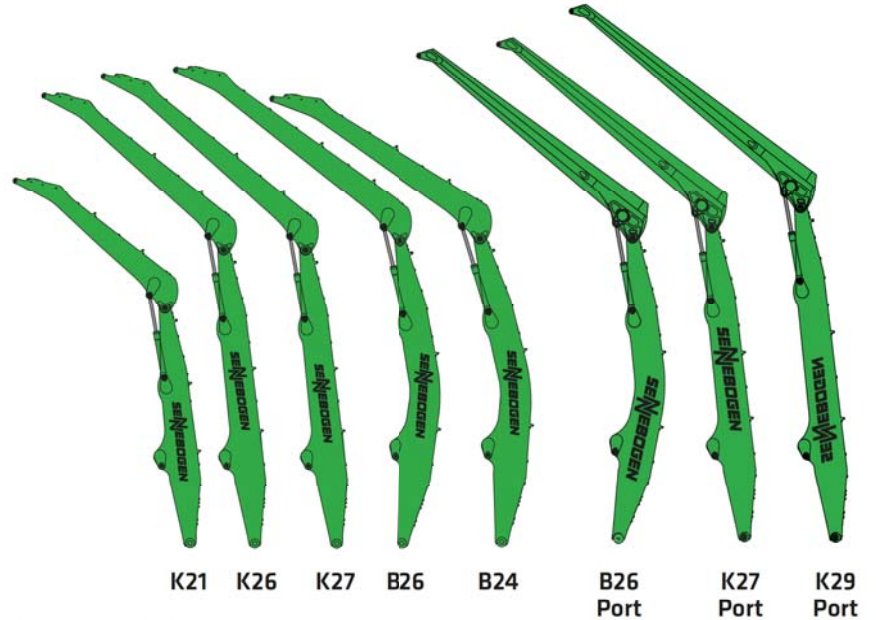
- Labelling of all parts with a unique part number
- Uncomplicated and reliable spare parts ordering

\* Optional

### Attachments



### Equipment options (others available upon request)



### Cabs



### Cab elevation



### Uppercarriage



Diesel-hydraulic drive

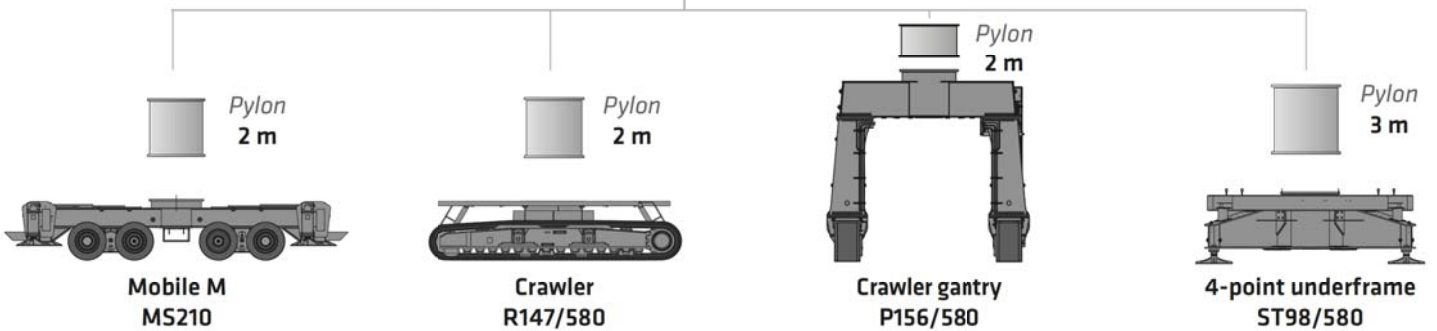
Electrohydraulic drive

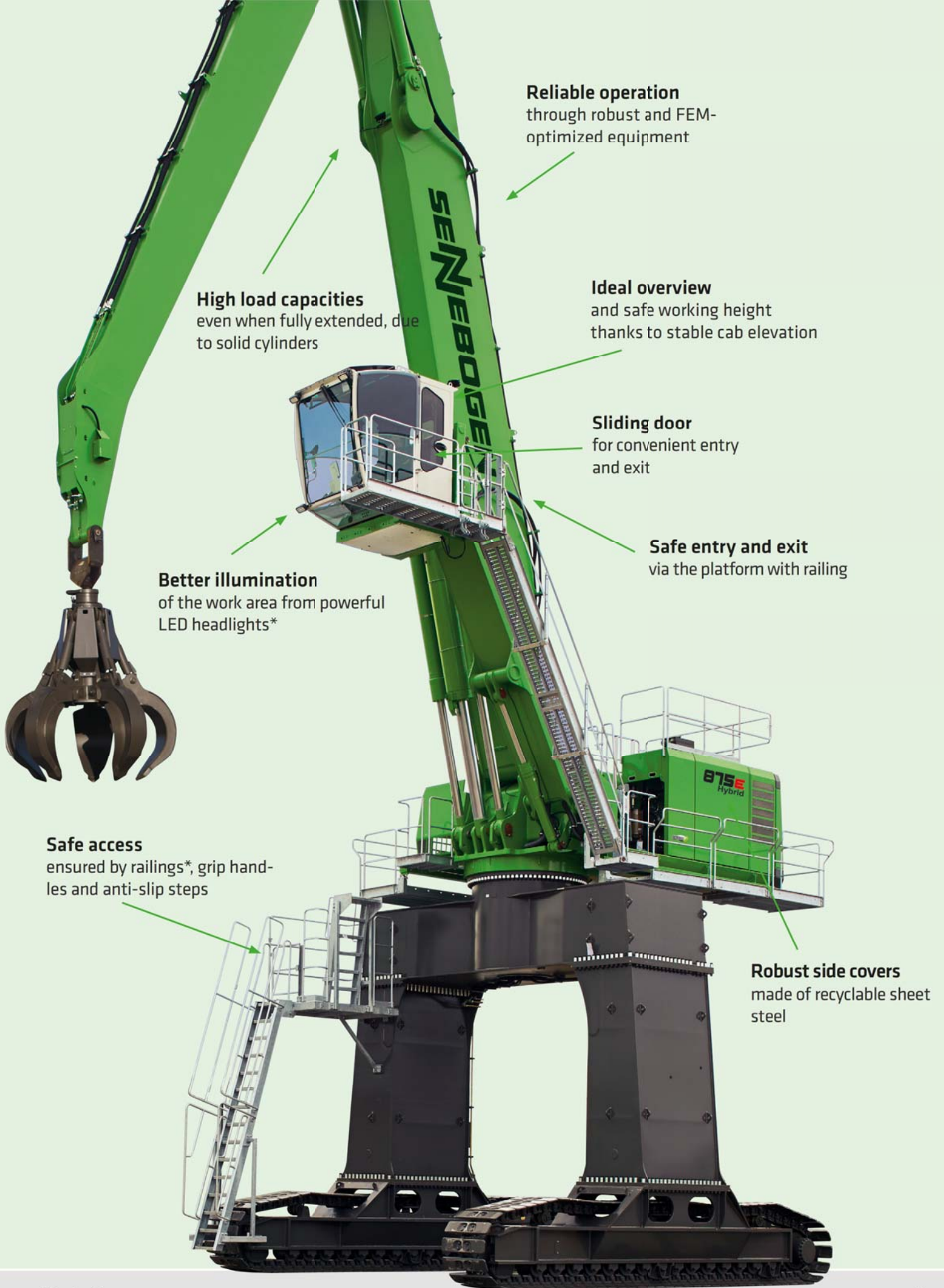
### Options

Engine line drum

Transformer

### Undercarriage variants





**Reliable operation**  
through robust and FEM-  
optimized equipment

**High load capacities**  
even when fully extended, due  
to solid cylinders

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

**Sliding door**  
for convenient entry  
and exit

**Safe entry and exit**  
via the platform with railing

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

**Safe access**  
ensured by railings\*, grip hand-  
les and anti-slip steps

**Robust side covers**  
made of recyclable sheet  
steel

\* Optional

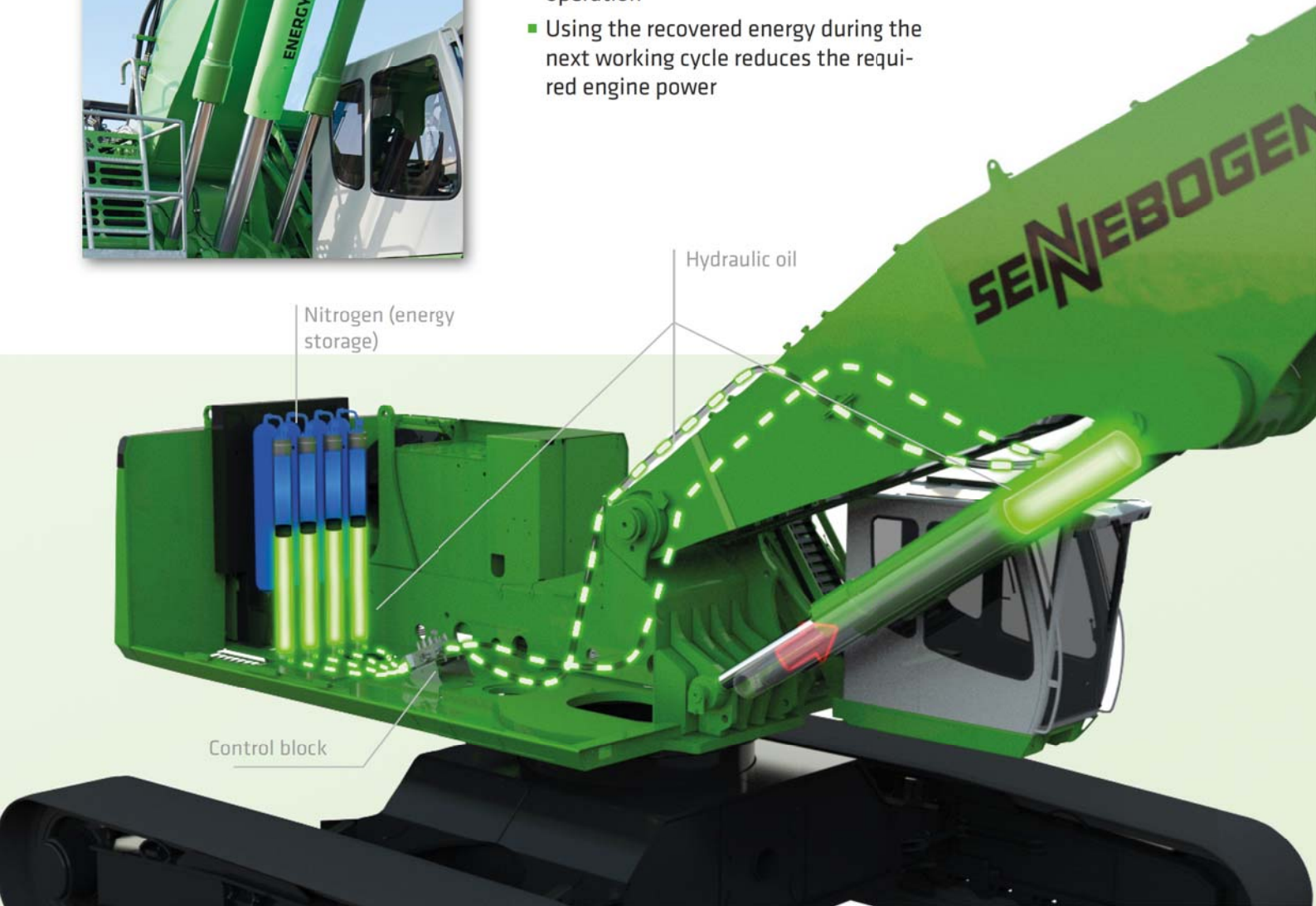
**875E**  
Hybrid

# SENNEBOGEN Green Hybrid Energy Recovery System



## Save 30% energy with the Green Hybrid system

- A combination of hydraulic cylinders on the boom and nitrogen-gas piston accumulators recovers energy during operation
- Using the recovered energy during the next working cycle reduces the required engine power



### Safety

- Usage of Standard hydraulic components
- Energy storage in the enclosed rear section

### Reduced operating costs

- Highest-quality components for long service life and reliability
- Proven concept: operating successfully since 2013
- High system efficiency - highly effective even with small lifting movements



# 875E Hybrid Recommended grabs

## SGM orange peel grab (5/6 shells)



Design / size	Grab capacity	Weight <sup>1</sup>		Max. load capacity
		Shell shape <sup>2</sup>		
		HO	G	
<b>SGM</b>	<b>l</b>	<b>kg</b>	<b>kg</b>	<b>t</b>
2500.60	2500	4270	4645	15.0
3000.60	3000	4310	4675	
3500.60	3500	4390	4895	
4000.60	4000	4460	5050	
3000.70	3000	7015	7360	15.0
4000.70	4000	7160	7560	
5000.70	5000	7250	7830	

## Double-shell grab SGZ



Design / size	Grab capacity	Weight <sup>1</sup>	Maximum load capacity
		kg	t
3000.60	3000	3530	12.0
3500.60	3500	3720	
4000.60	4000	3920	
5000.70	5000	6500	
6000.70	6000	6800	
4000.60-L	4000	3470	
4500.60-L	4500	3610	
5000.60-L	5000	3755	15
6000.70-L	6000	6250	
7000.70-L	7000	6490	14
2500.60-HD	2500	3850	
3500.60-HD	3500	4280	

## Magnetic plates



Type series / model	Power	Deadweight	Breakaway force	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

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

<sup>2)</sup> Half-open shells: sheet steel width 400 mm, from 1,250 l: sheet steel width 500 mm

### MACHINE TYPE

Model (type) **875**

### ENGINE

Power **395 kW / 537 HP at 1800 rpm (Tier IIIa)**  
**391 kW / 532 HP at 1800 rpm (Tier IIIb)**

Model **Cummins QSX-15**  
Direct injection, turbo charged, charge air cooler, reduced emissions, ECO-Mode, automatic idle

Cooling Water-cooled

Air filter Dry filter with integrated pre-separator, automatic dust discharge, main element and safety element, contamination indicator

Fuel tank **2300 l**

Electr. system **24 V**

Batteries **2 x 210 Ah**, battery disconnect switch

Options

- Engine block heater
- Electric fuel pump

### UPPERCARRIAGE

Design Torsion-resistant box design, precision crafted, steel bushings for boom brackets  
Clear, easy-to-service design, engine installed in longitudinal direction

Central lubrication Automatic central lubrication system for equipment and slewing gear raceway

Cooling system Compact 3-circuit cooling system with high cooling capacity, thermostatically regulated fan drive for oil cooler and water cooler reduces fuel consumption and noise emission, fan reversal for simple and regular cleaning

Options

- Slewing gear brake via foot pedal
- LED lighting package
- Fire extinguisher
- Maritime climate varnishing as corrosion protection
- Electric hydraulic tank pre-warming for temperatures below -20 °C
- Low-temperature package for use at temperatures below -20 °C
- Hydraulically driven magnetic generator 25/33 kW

### HYDRAULIC SYSTEM

Load sensing / LUDV hydraulic system, pilot-controlled hydraulic work functions

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 the amount of oil that will be consumed, pressure purging, load limit sensing control

Delivery rate **2 x 475 l/min** and **1 x 274 l/min** for rotary drive in the closed circuit

Operating pressure **max. 350 bar**

Hydraulic tank **1400 l**

Control system Proportional, precise hydraulic control of work movements, 2 hydraulic servo joysticks for the work functions, additional functions via switches and foot pedals

Safety Hydraulic circuits secured by safety valves  
Emergency lowering of the equipment in the case of engine failure  
Pipe-fracture safety valves for hoist cylinders and stick cylinders

Options

- Bio oil filling – environmentally friendly
- ToolControl for programming pressure/rate for up to 10 tools
- Load torque warning with maximum load display
- Overload safeguard with shutdown
- High-performance filtration with long-term change interval SENNEBOGEN HydroClean micro-filter system water separator

### SLEWING DRIVE

Gearbox Compact planetary gear with slant-axis hydraulic motor, integrated brake valves

Parking brake Spring-loaded disk brake

Slewing ring Robust 3-row sheave slewing ring, sealed. External-gear slewing ring with 360° protection and pinion gear lubrication

Slewing speed 0–5 rpm, continuously variable

# 875E Hybrid Technical data, equipment

## CAB

Cab type	Maxcab Industry E300/260, with hydraulic elevation and tilt feature
Cab equipment	Sliding door, excellent ergonomics, automatic air conditioning, air-sprung comfort seat with heating, fresh/recirculating air filter, joystick control, 12 V/24 V connections, SENCON
Options	<ul style="list-style-type: none"> <li>■ Skylift 700 or 900 cab height elevation</li> <li>■ Auxiliary heating system with timer</li> <li>■ Cabs with activated carbon filters for inside/outside air</li> <li>■ Armored-glass windshield</li> <li>■ Armored-glass sunroof</li> <li>■ Safety side window and rear window</li> <li>■ Sunblind for sunroof and windshield</li> <li>■ Radio with speakers</li> <li>■ Mastercab</li> <li>■ Active seat air conditioning</li> </ul>

## ATTACHMENTS

Design	Decades of experience and the latest computer simulations guarantee maximum stability and service life 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
Central lubrication	Automatic central lubrication system
Options	<ul style="list-style-type: none"> <li>■ Ball valves in the hydraulic lines for quick and easy grapple switching</li> <li>■ Maritime climate varnishing</li> <li>■ Maritime climate coating of all cylinders, nickel- and chrome-plated</li> <li>■ Float position of the equipment</li> <li>■ Hoisting limiter/stick limiter adjustable for stop settings</li> <li>■ LED Lighting</li> <li>■ Camera on a stick</li> <li>■ Special port equipment with increased load capacities</li> </ul>

## UNDERCARRIAGE

Design	Undercarriage in stable, torsion-resistant box design, in various versions
Mobile undercarriage:	Mobile undercarriage with integrated 4-point outrigger system, all-wheel drive powered by a variable-displacement hydraulic motor with direct-mounted, automatically actuated brake valve and 2-stage power shift transmission. Planetary gear axles with integrated steering cylinders, solid-rubber tires, all-wheel drive, mobile undercarriage MS210
Crawler undercarriage:	Crawler undercarriage with hydraulic traction drive for each crawler integrated in the chassis and connected by a compact planetary gear to an axial piston motor, spring-actuated parking brake, hydraulically vented multi-disk brakes, crawler undercarriage type R 147/580, crawler portal undercarriage P156/580
4-point underframe	ST147/580
Speed	0-2 kph (crawler) 0-6 km/h (mobile)
Options	<ul style="list-style-type: none"> <li>■ Flat-base plates 900 mm, rounded 1,000 mm, 3-grouser crawler shoes, canted</li> </ul>

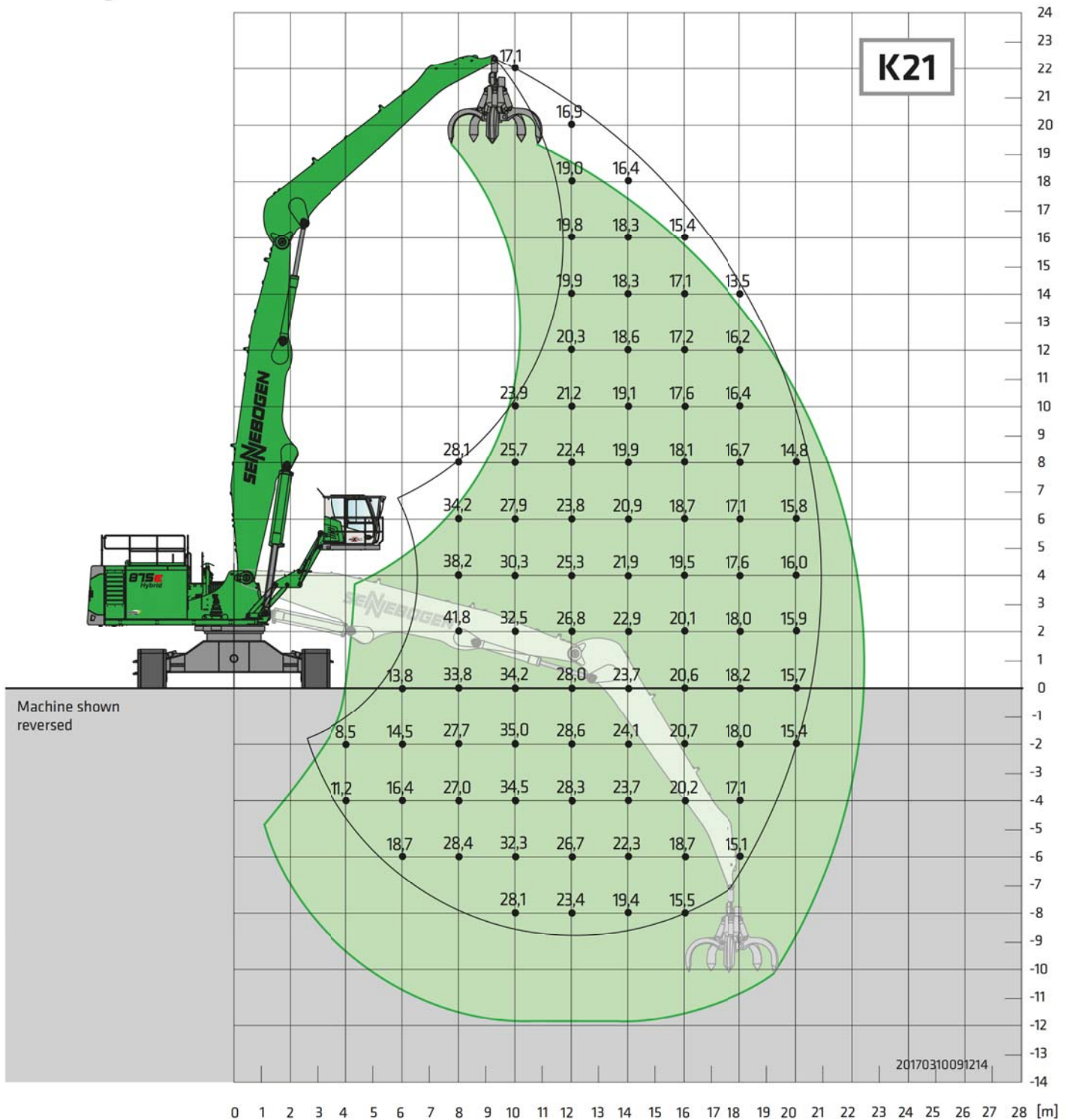
## ELECTRIC DRIVE

Option	<ul style="list-style-type: none"> <li>■ Power: <b>390 kW / 400 V / 50 Hz</b> Total connected load 720 kVA, 800-A machine-side fuse (also with generator) at 400 V, motor start via star-delta circuit</li> <li>■ Benefits: Lowest operating costs, quiet and virtually vibration-free work, long service life of hydraulic components</li> </ul>
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## OPERATING WEIGHT

Mass	<b>Approximately 140 t</b> <b>875 E with work equipment K27 and grab 3,000 l</b>
Notice	Operating weight varies depending on the model and equipment.

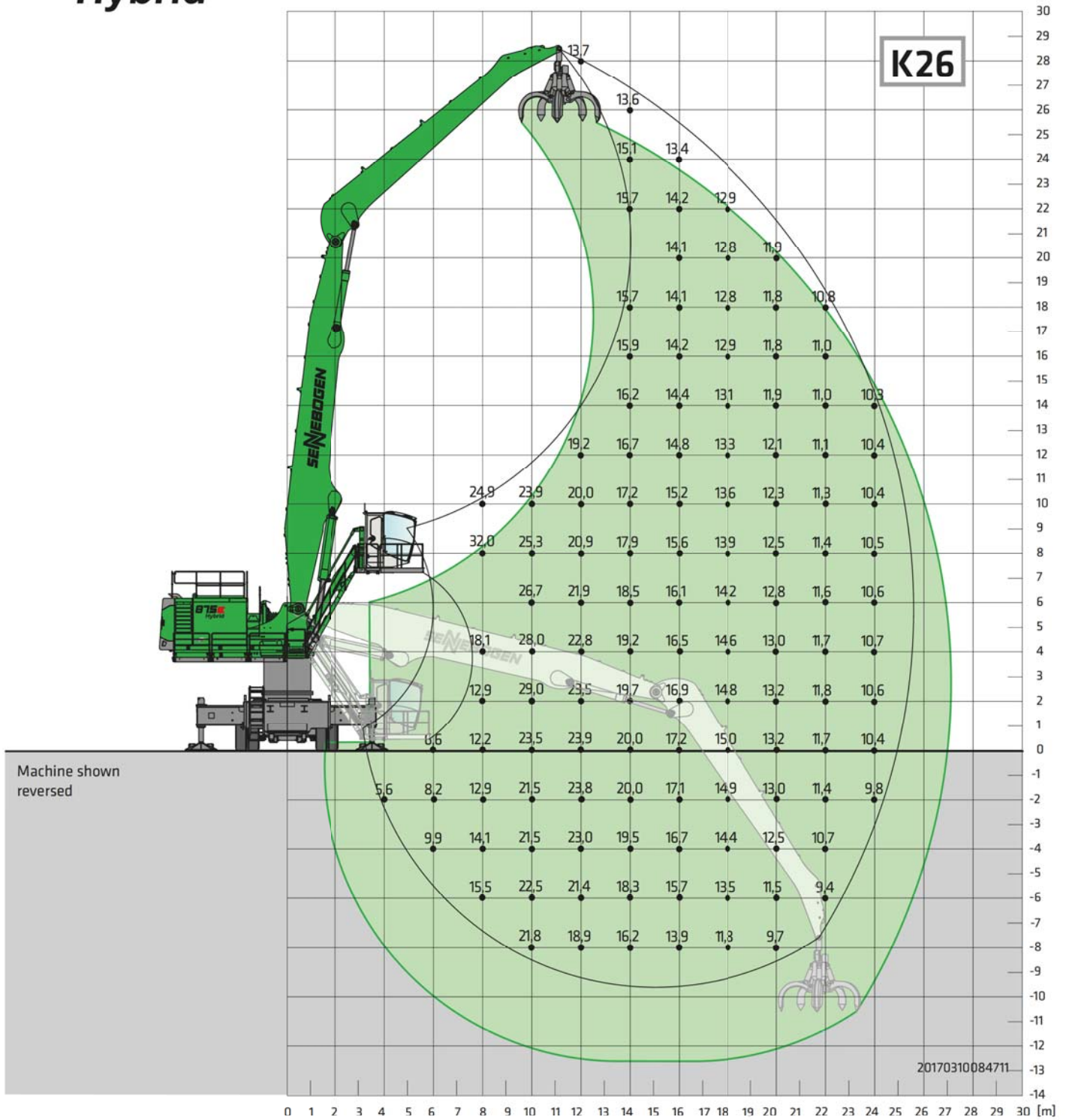
# 875E Hybrid Load ratings



Undercarriage **R147/580**      Compact boom **12 m**      Cab **Maxcab Industry E300/260, hydraulic elevation and tilt feature**  
 Dipper stick **10 m**

All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. 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.

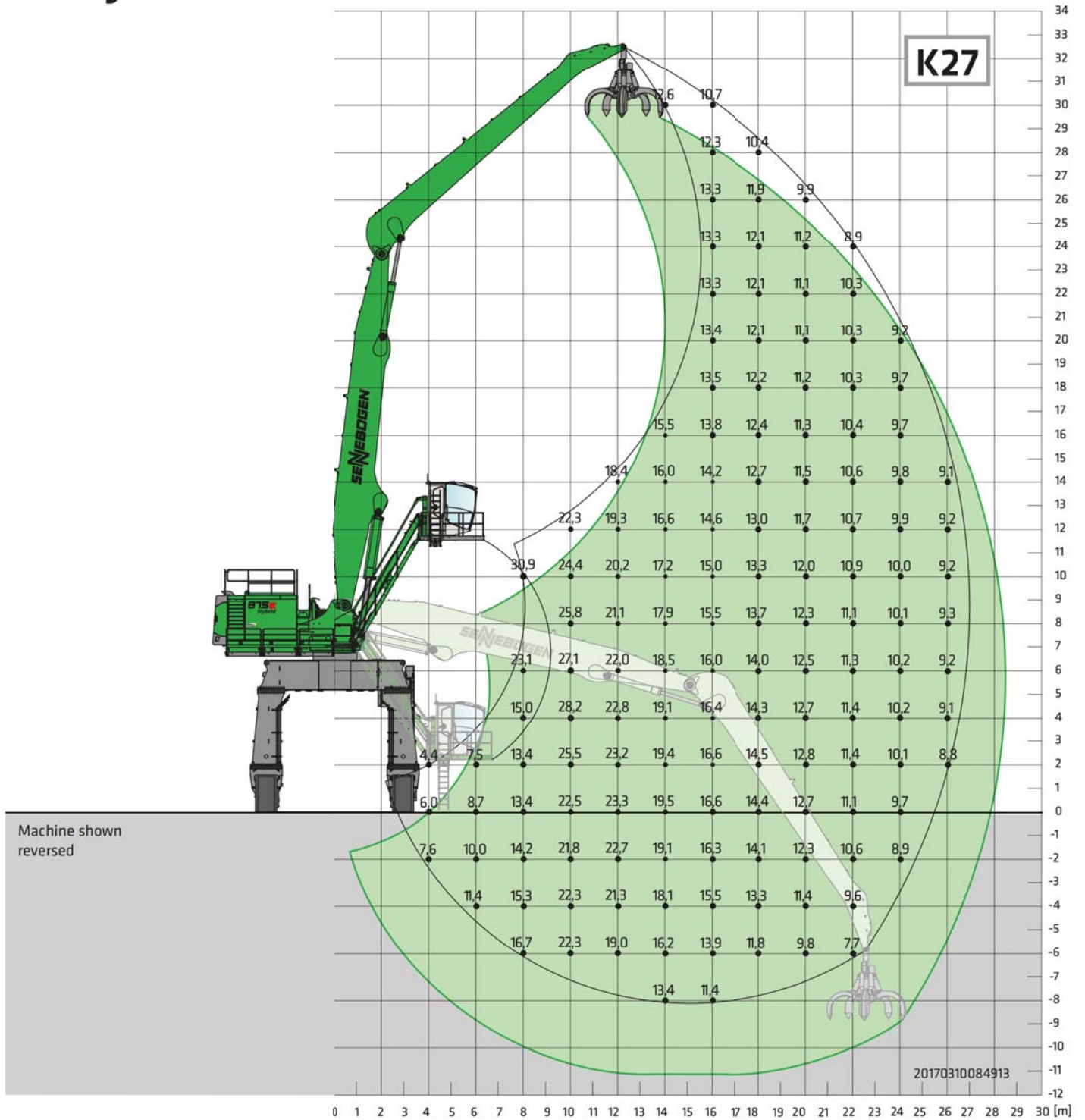
# 875E Hybrid Load ratings



<b>Undercarriage Pylon</b>	<b>MS210 1.5 m</b>	<b>Compact boom Dipper stick</b>	<b>15 m 12 m</b>	<b>Cab Skylift 700 with Mastercab, hydraulic elevation feature (optional)</b>
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# 875E Hybrid Load ratings



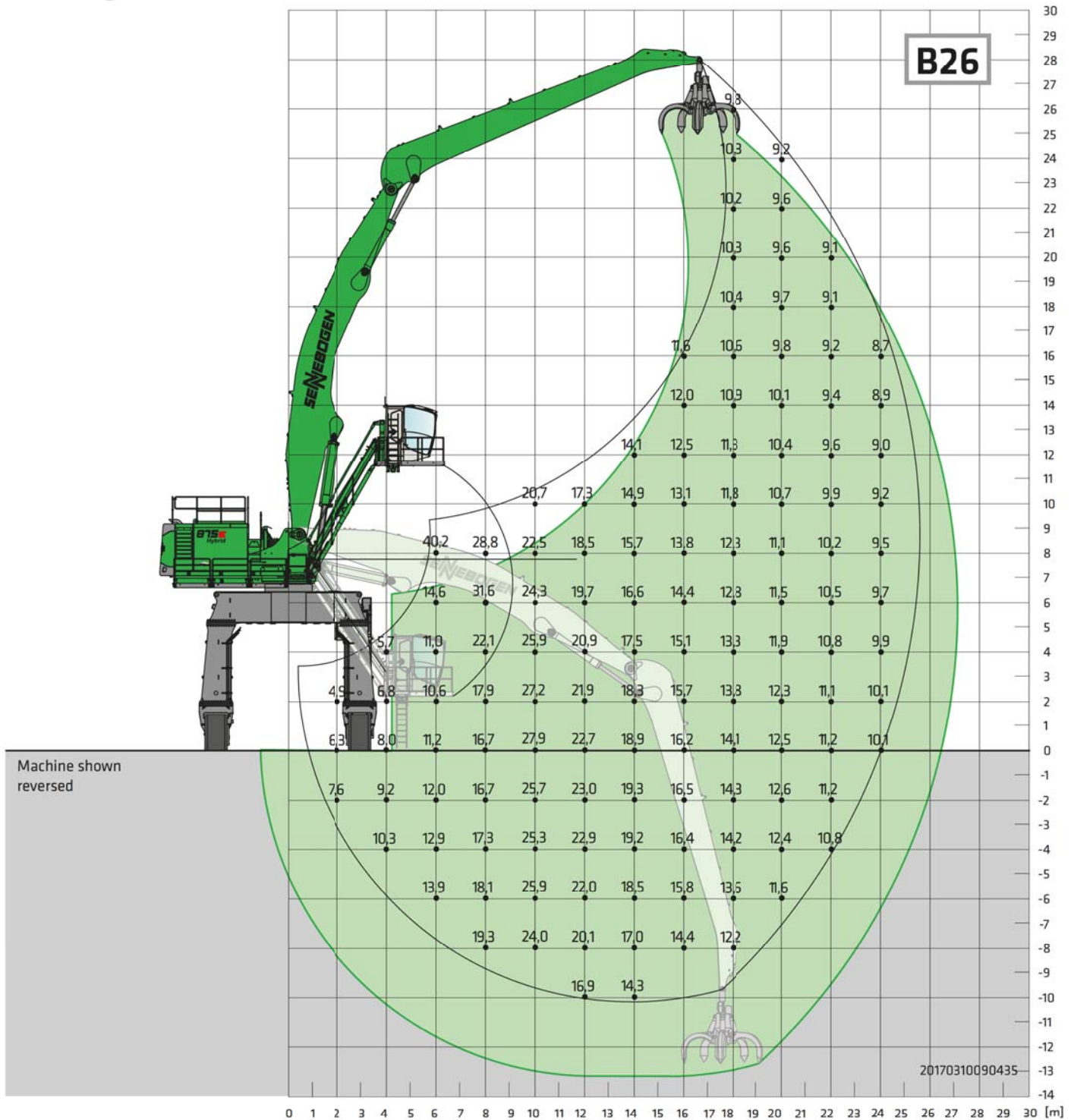
Undercarriage P156-580

Compact boom 15 m  
Dipper stick 13.5 m

Cab Skylift 900 with Mastercab, hydraulic elevation feature (optional)

All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. 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.

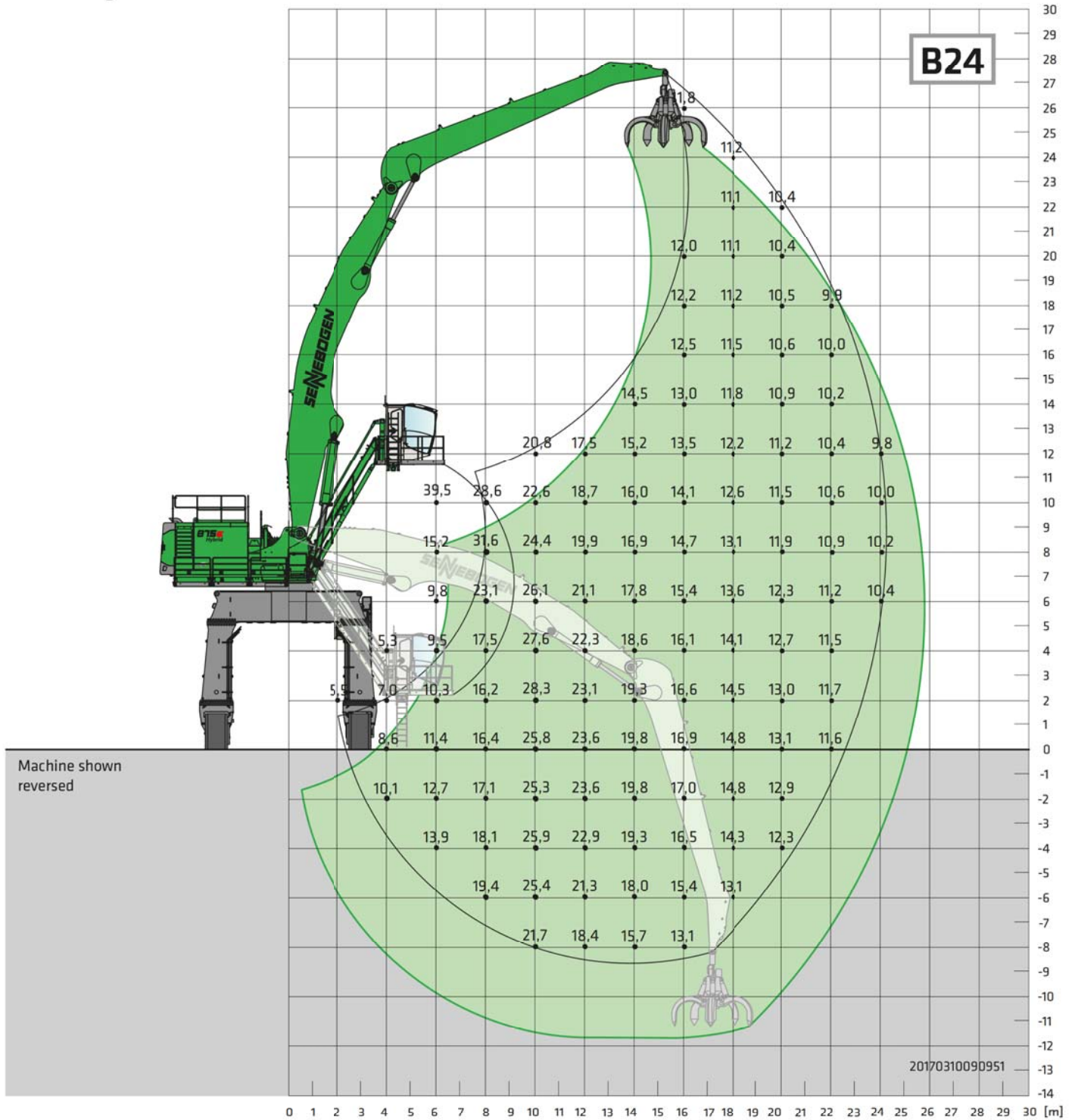
# 875E Hybrid Load ratings



<b>Undercarriage</b>	<b>P156-580</b>	<b>Compact boom</b>	<b>14.5 m Banana</b>	<b>Cab</b>	<b>Skylift 900 with Mastercab, hydraulic elevation feature (optional)</b>
		<b>Dipper stick</b>	<b>13.5 m</b>		

All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. 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.

# 875E Hybrid Load ratings



**Undercarriage P156-580**

**Compact boom  
Dipper stick**

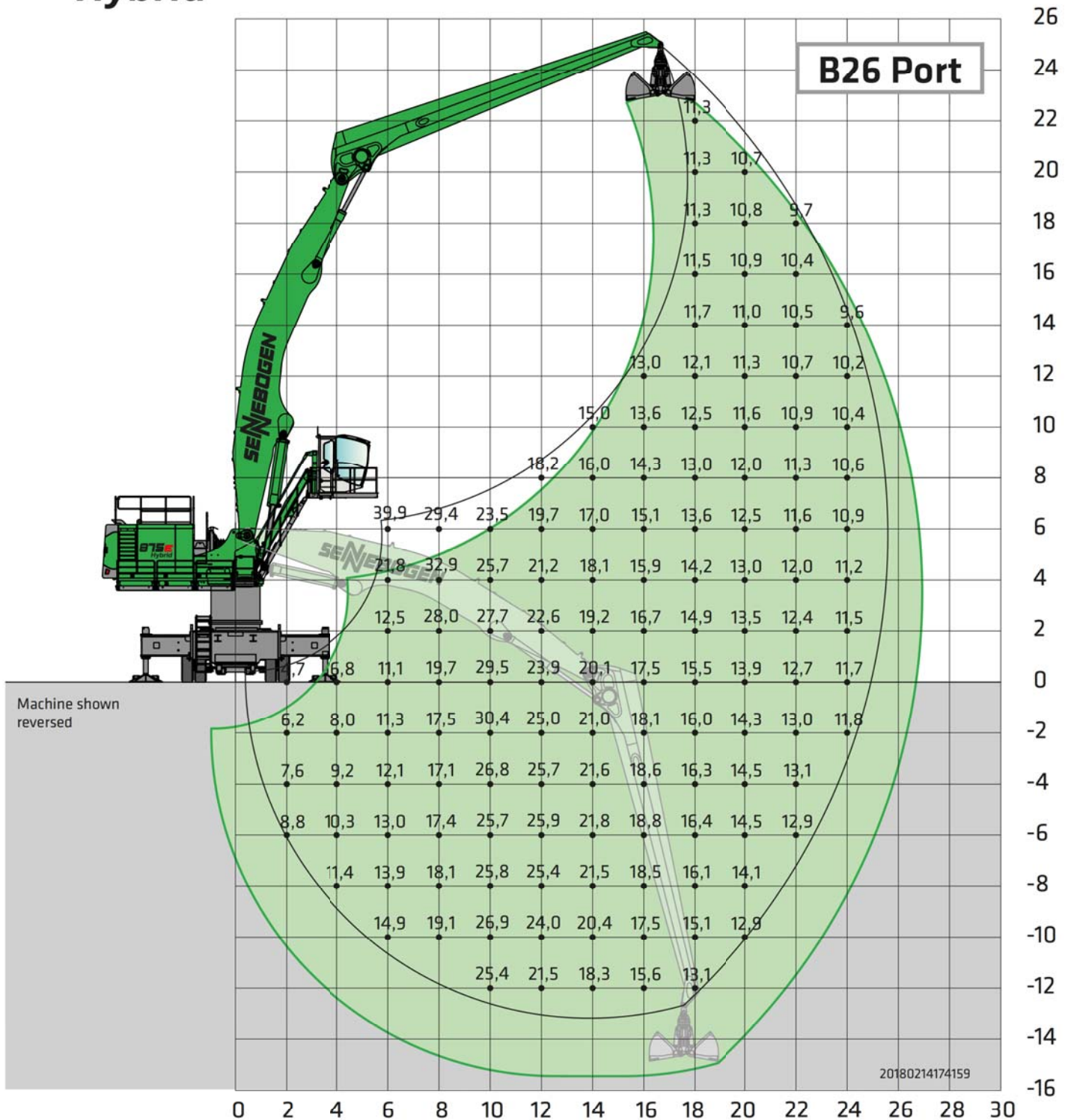
**14.5 m Banana  
12 m**

**Cab Skylift 900 with Mastercab,  
hydraulic elevation feature (optional)**

All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. 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.



# 875E Hybrid Load ratings



**Undercarriage MS210**

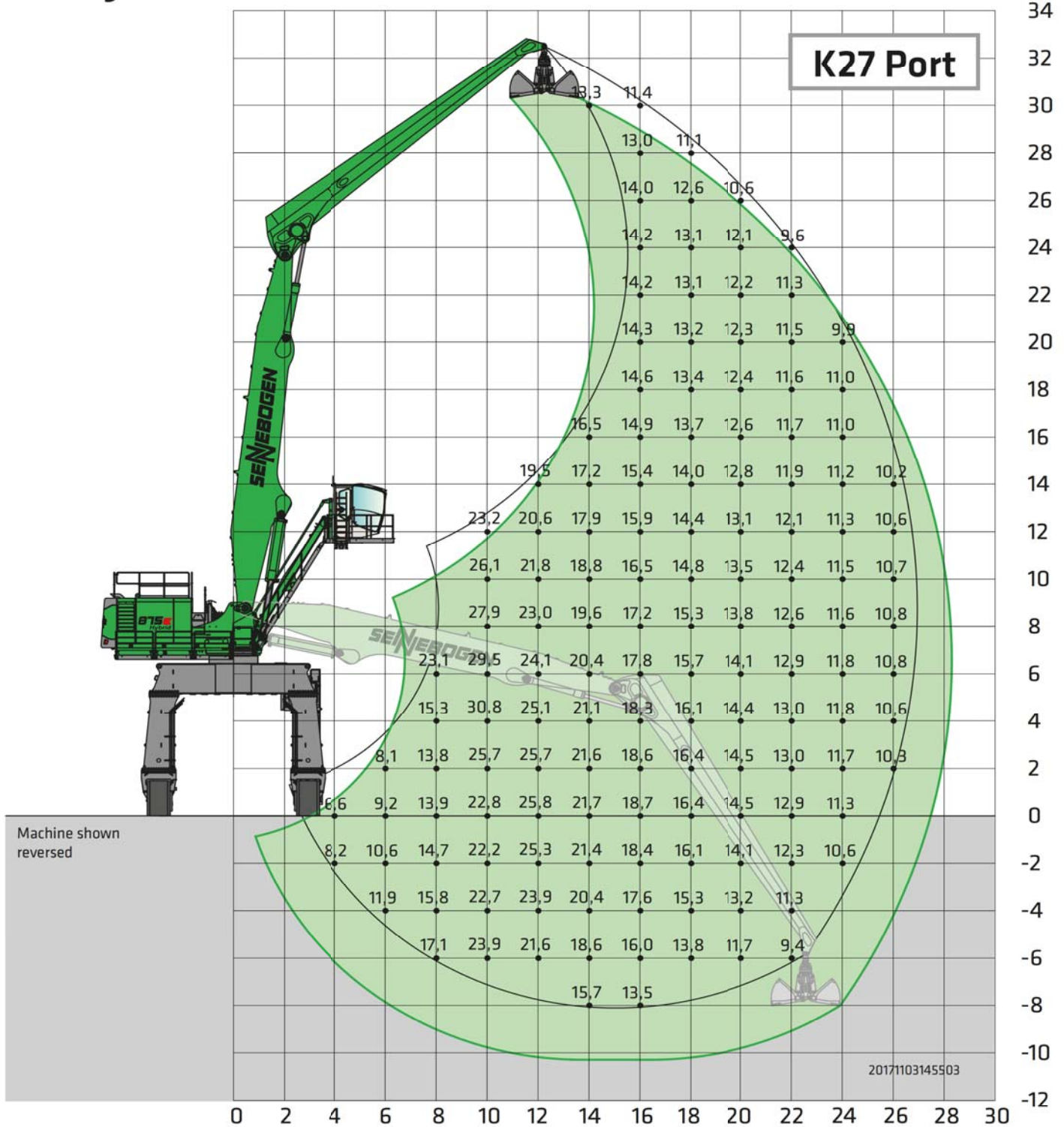
**Compact boom  
Dipper stick**

**14.5 m Banana  
13.5 m**

**Cab Skylift 900 with Mastercab,  
hydraulic elevation feature (optional)**

All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. 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.

# 875E Hybrid Load ratings

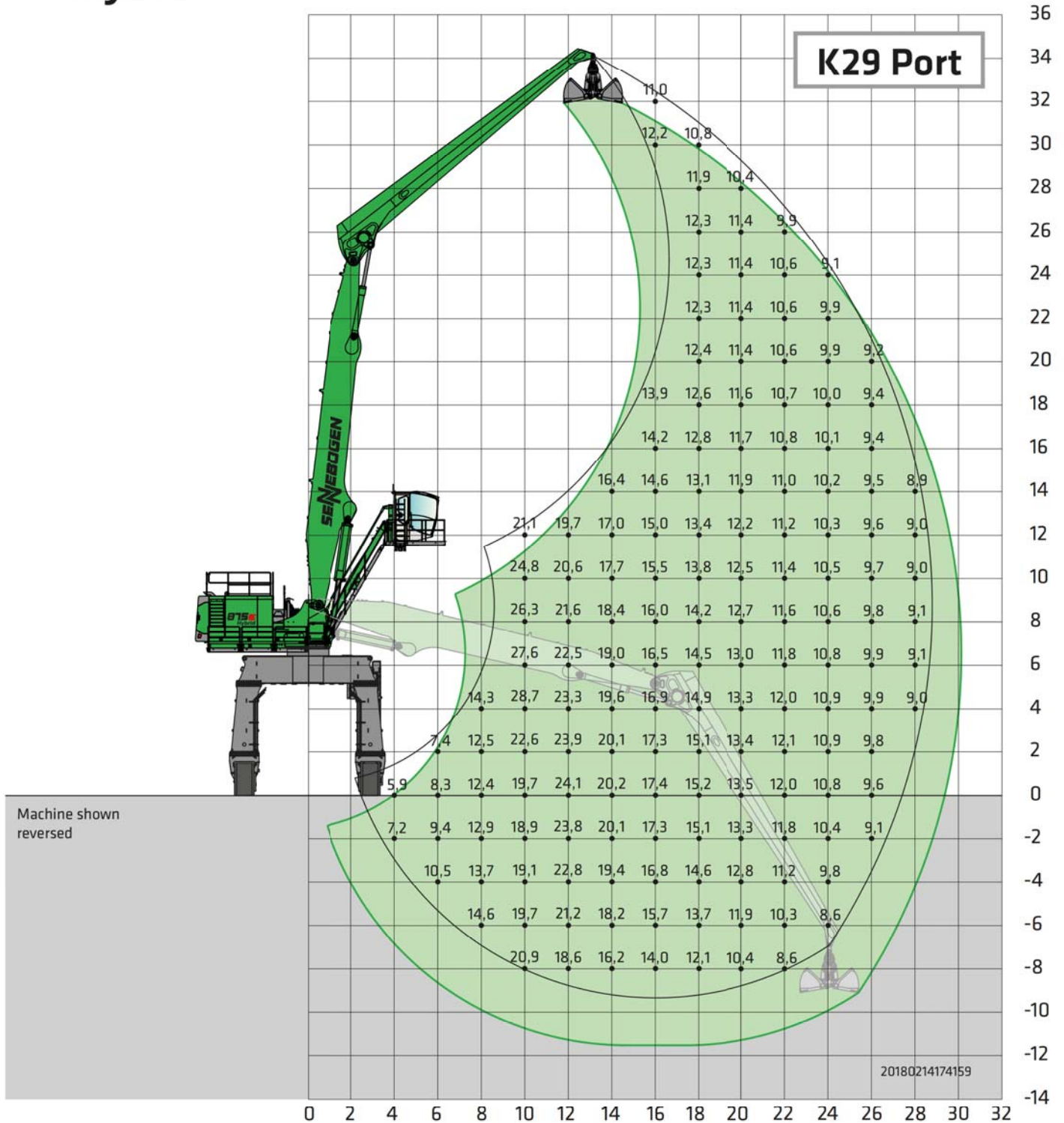


Undercarriage **P156-580**      Compact boom **15 m**      Cab **Skylift 900 with Mastercab, hydraulic elevation feature (optional)**  
 Dipper stick **13.5 m**

All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. 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.



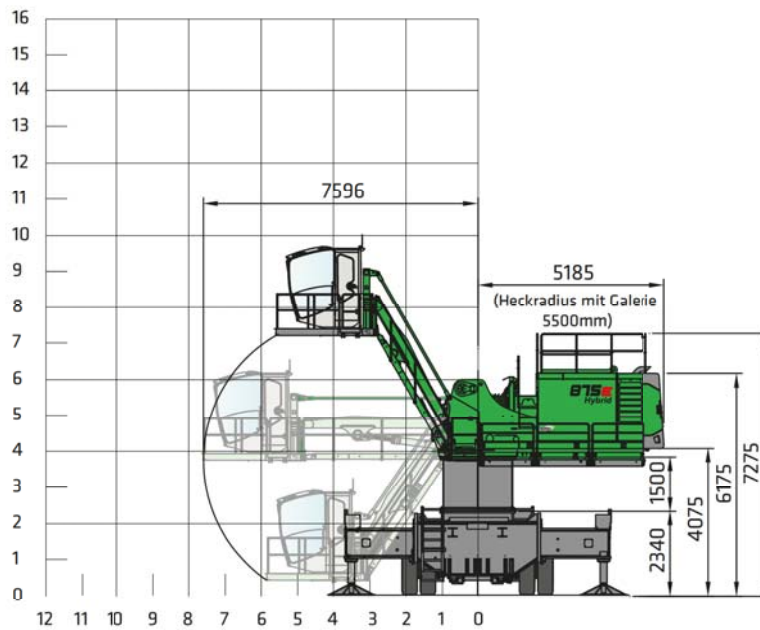
# 875E Hybrid Load ratings



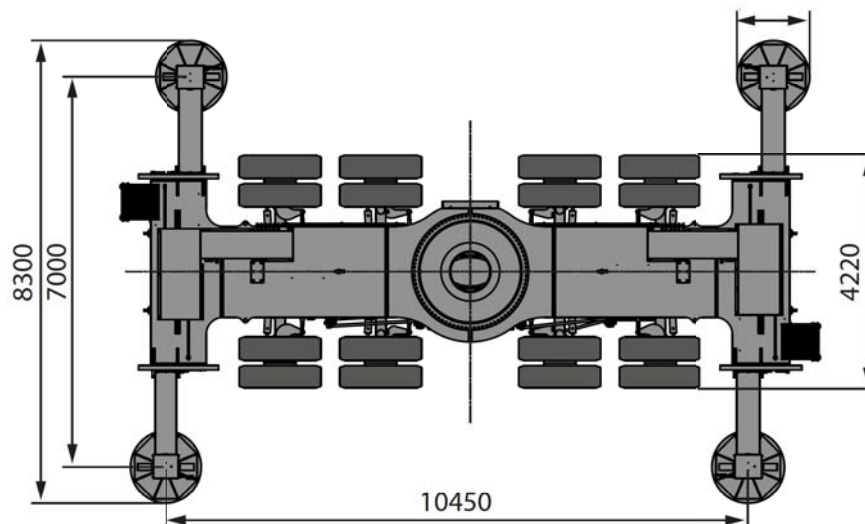
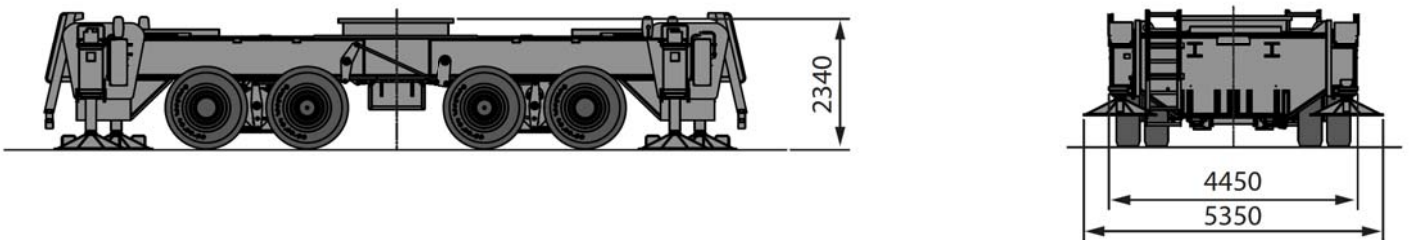
<b>Undercarriage</b>	<b>P156</b>	<b>Compact boom</b>	<b>16 m</b>	<b>Cab Skylift 900 with Mastercab,</b>
		<b>Dipper stick</b>	<b>14.5 m</b>	<b>hydraulic elevation feature (optional)</b>

All values are in tons (t) and are 75% of the static tipping load or 87% of the hydraulic lifting force in accordance with ISO 10567, and apply after reaching the required operating temperature in the Green Hybrid system. They apply on firm and level ground and for 360° slewing. 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.

# 875E Hybrid Dimensions

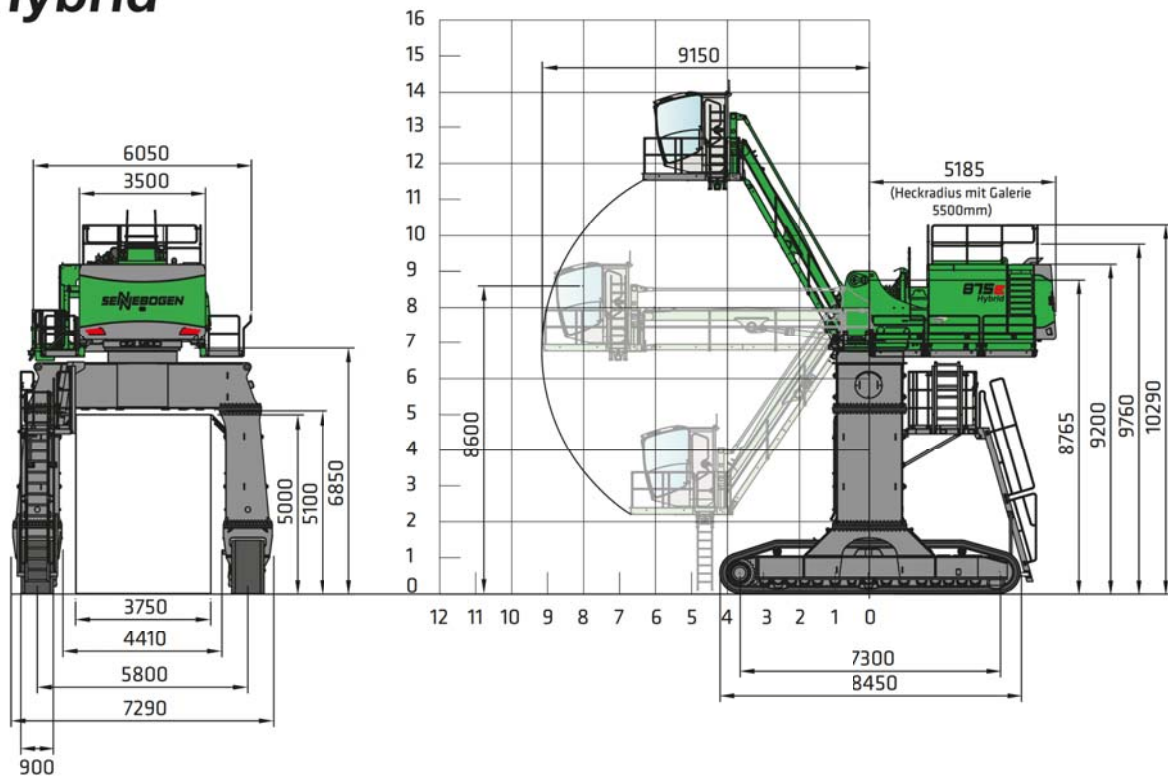


875 R with undercarriage MS210 and Skylift 700 with Mastercab with hydraulic elevation and tilt feature

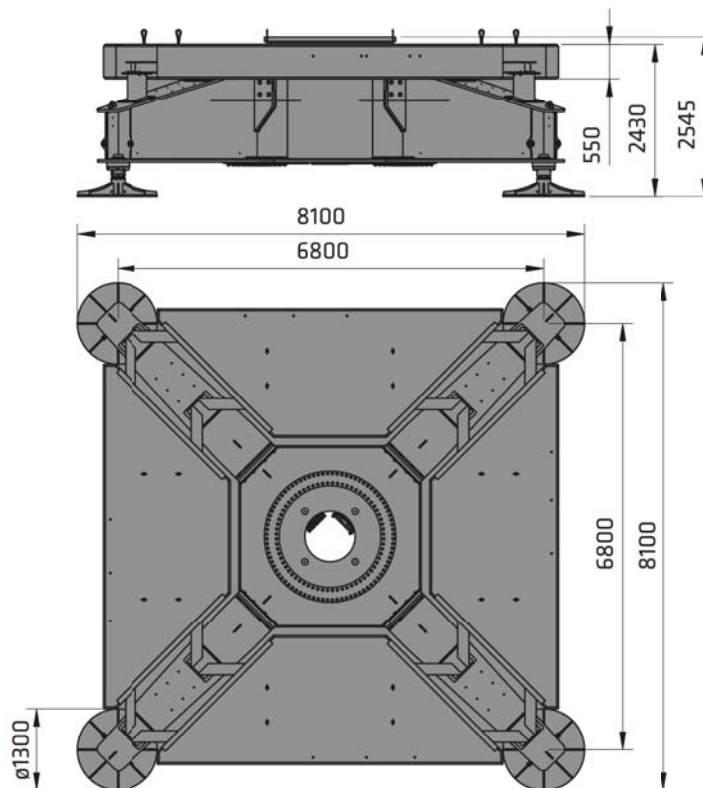


MS210 mobile undercarriage

# 875E Dimensions Hybrid

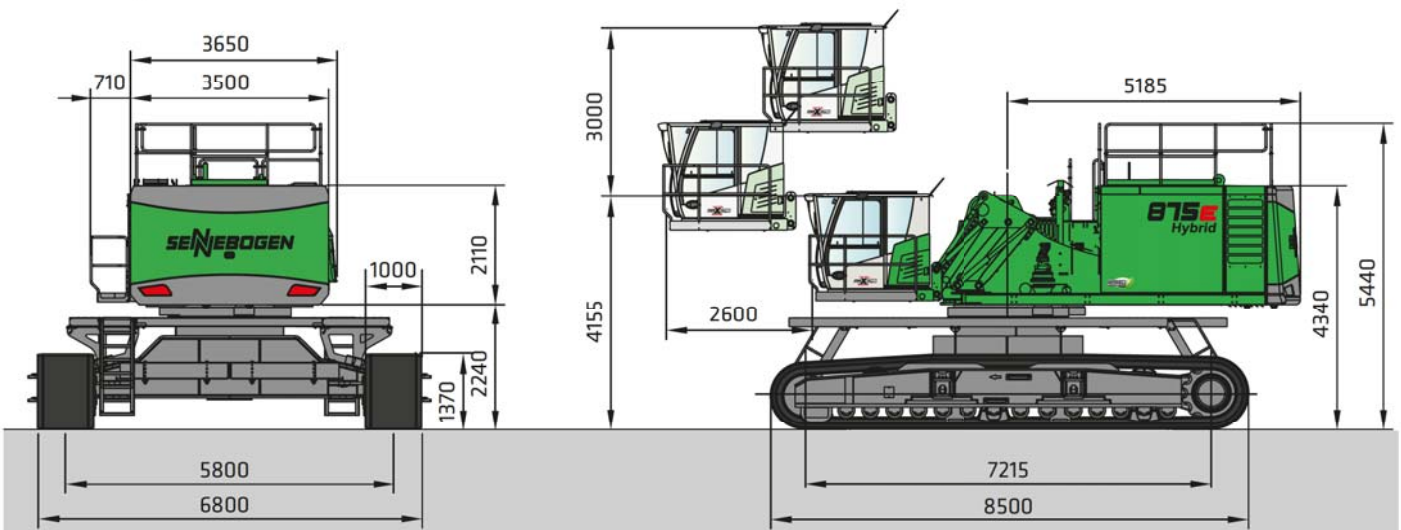


875 R with undercarriage P156/580 and Skylift 900 with Mastercab with hydraulic elevation feature



ST98/680 4-point underframe

# 875E Hybrid Transport dimensions



875 R with undercarriage R147/580 and E300/260 Maxcab Industry cab with hydraulic elevation and tilt feature (standard)



Port handling using a double-shell grab, USA

# 875E One machine – many applications

## Hybrid



Timber loading using a log grapple, Sweden



Coal handling using a double-shell grab, USA



Loading rail cars with coal, Russia



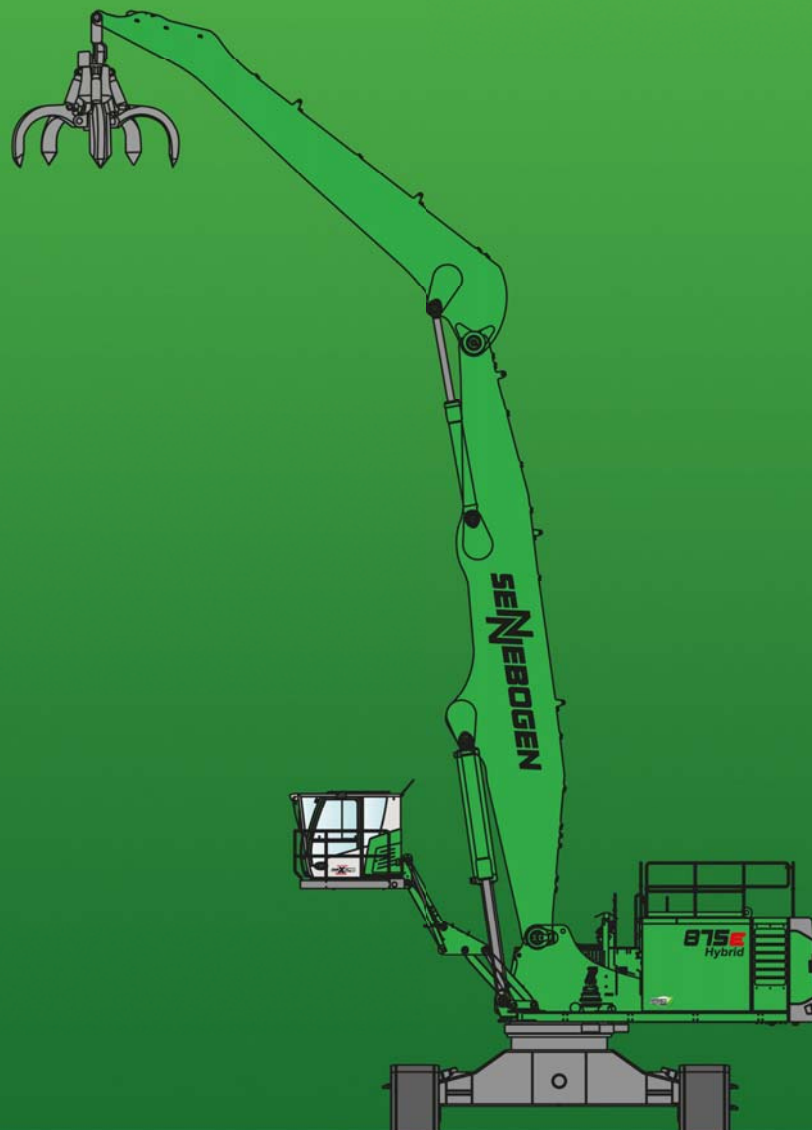
General cargo handling using a spreader, Germany



875 E with port stick at work, Iceland

Note: Photos show applications with various attachments. Attachments and associated control elements are not included in SENNEBOGEN's scope of supply. Sennebogen Vertriebs GmbH & Co KG offers project-specific solutions upon request.

# 875E Hybrid



This catalog describes machine models, equipment features for individual models, and configuration options (standard equipment and optional equipment) of the machines supplied by SENNEBOGEN Maschinenfabrik GmbH. Machine illustrations can contain optional 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.

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