



### A-long term investment

The G-series is characterised by robust components, and an intelligent and resource-efficient machine design - the machine retains its value over the long-term, even with demanding continuous use.

#### **Maximum comfort**

The spacious cabs are designed with the needs of the operator in mind - comfortable and spacious with sophisticated features.

### **Energy efficiency**

Appreciated around the world, thanks to drives that are resource- and environmentally-friendly and the Green Hybrid energy recovery system - whether with diesel drive or as an electric version.

## **Modular variety**

Unique machine variety - we build the perfect machine to meet the needs of your application.

#### Maintenance & Service

Intelligent fleet management and machine status monitoring via telemetry using the SENtrack portal as well as unique accessibility of machine components.





## **LATEST GENERATION** MATERIAL **HANDLING TECHNOLOGY**

The **-**Series.





Low operating costs thanks to energy recovery through the Green Hybrid system



Manageable and service-friendly technology for maximum machine availability



Consistent performance thanks to robust steel construction, and high-quality drive and control components from renowned manufacturers



High handling capacity of up to 1,200 t per hour\* reduces the berthing time of ships



Sophisticated technology thanks to the consistent further development up to the 6th generation of the G-series - for demanding material handling



Durable and robust in extreme weather and harsh operating conditions, works equally well in the cold of the Arctic Circle or in extreme heat







The durability and reliability of the SENNEBOGEN Material handling machines is based on decades of experience in the design of high-quality crane and material handling technology. We can find the perfect solution for every port application, ensuring you can handle general cargo and bulk materials in an efficient and resource-saving way.



#### LONG SERVICE LIFE, HIGH VALUE RETENTION

- Reliable and powerful thanks to its robust construction and high-quality components
- Temperature-controlled cooling system, designed and tested for heavy-duty applications and high ambient temperatures

## SOPHISTICATED, STATE-OF-THE-ART TECHNOLOGY

- Consistent design for demanding material handling
- Increased efficiency thanks to multi-circuit hydraulics, optimized hose and pipe routing



#### **SIMPLE TO MAINTAIN & SERVICE**

- Fewer service operations on site thanks to SENcon remote diagnostics
- Ideal accessibility to all clearly labeled components for easy maintenance

## ENVIRONMENTALLY FRIENDLY DRIVE TECHNOLOGY

- State-of-the-art engine, drive and emission systems in line with the latest technology (stage V)
- Refueling with alternative fuel HVO possible





Boom lowers, gas compresses



Energy storage module consisting of hydraulic cylinder and nitrogen accumulator

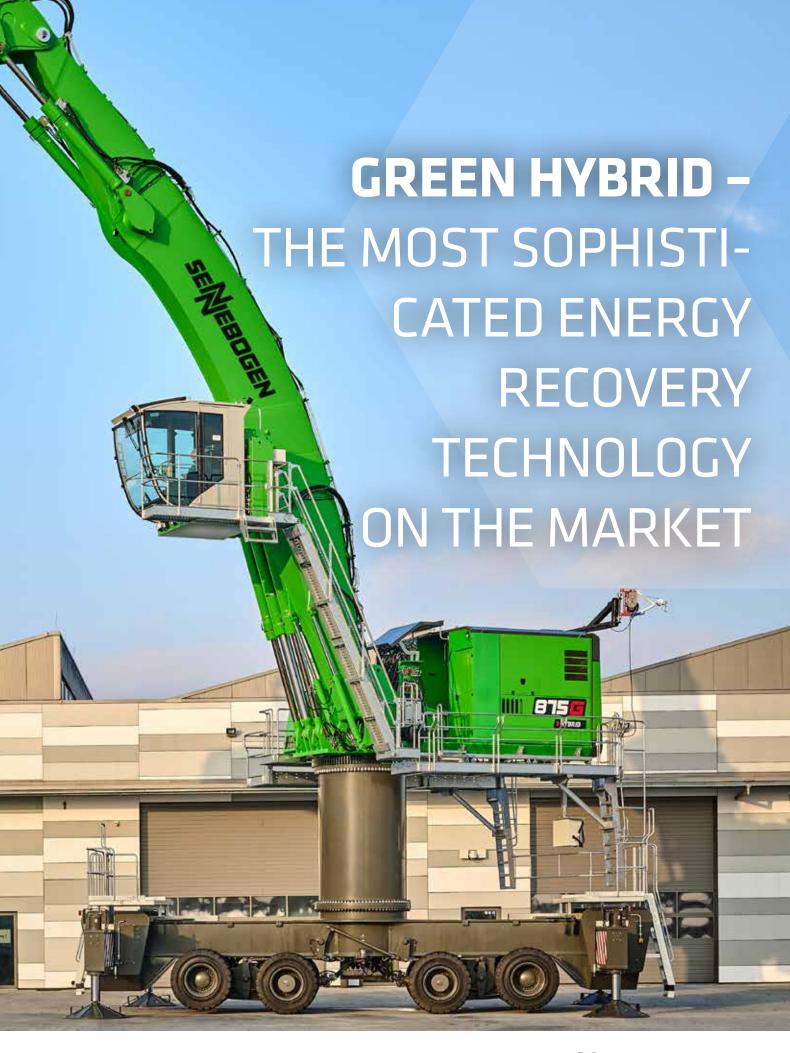


The nearly constant force transmission throughout the cylinder cycle supports the next boom lift

## **selyjebogen** Green**Hybrid**

Protects the environment, saves energy, reduces your costs.

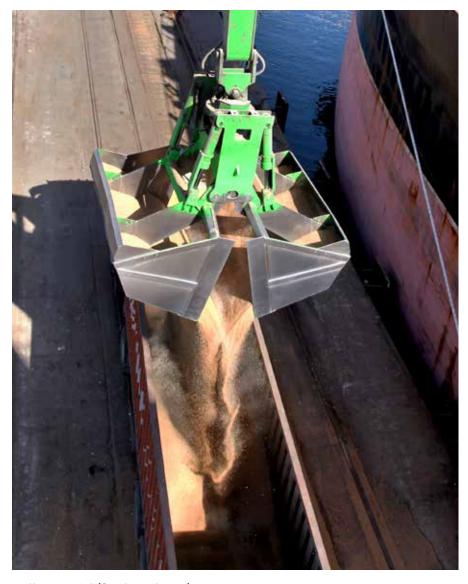
- System advantages: large system volume and constant force transmission over the entire cylinder cycle
- System stability through constant pressure and temperature control
- Functional safety through the use of standard hydraulic components in the protected rear area of the machine
- System is optimally adjusted to the individual machine configuration





## **EXPERIENCE VARIETY**FOR EVERY TYPE OF MATERIAL

Today general cargo, tomorrow bulk cargo - working in the port means staying flexible from day to day. The entire range of material handling technology can be flexibly operated using the quick change system on the stick and the SENNEBOGEN port machines' powerful hydraulics.



Bulk material (feed, coal, etc.)



Scrap handling



Timber grab



Big Bag loading



Timber spreader / wooden pallet loading



Pulp spreader



Paper coil grab



Quick change system with lifting beam

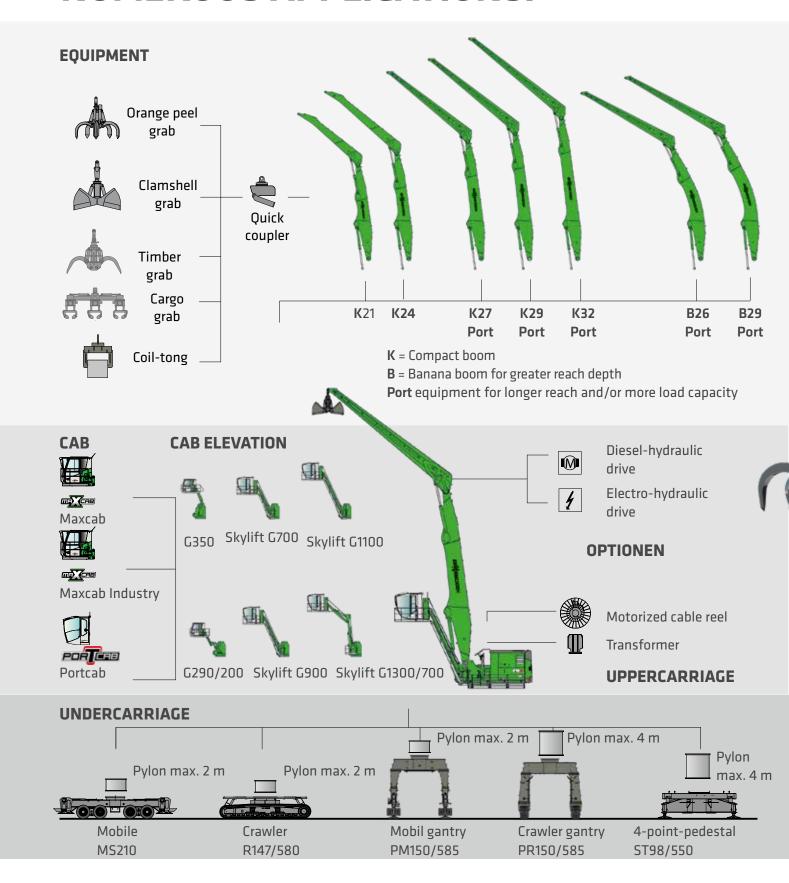


Spreader for steel coils





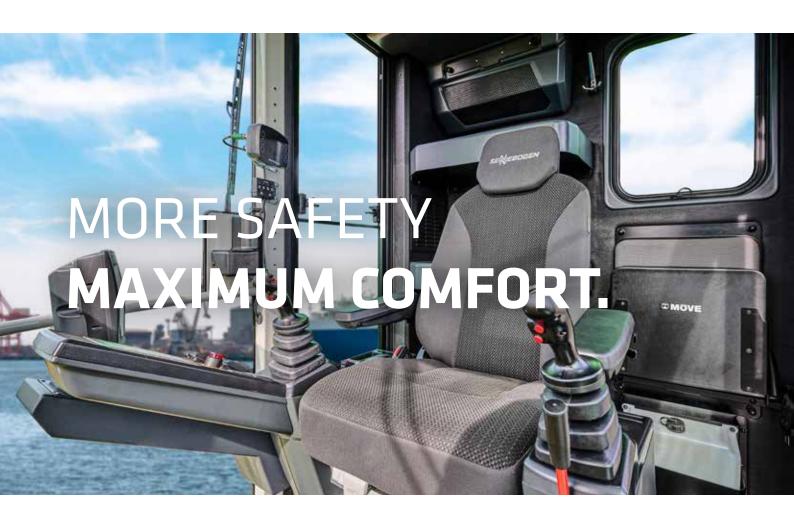
## A MODULAR DESIGN. NUMEROUS APPLICATIONS.







www.sennebogen.com/versatility



#### Everything in view

The spacious cab with panoramic view gives you a practical overview of your work area. The window in the floor makes it possible to carry out precise loading operations even in close proximity. The safety cameras provide support and allow you to monitor the critical areas conveniently via the monitoring system in the cab.

#### Easy control

The intelligent SENcon control system gives you quick and easy feedback on the machine's condition. Thanks to the intuitive user interface, it has never been easier to monitor energy consumption and utilization, control the desired working modes and contribute towards reducing operating costs.

#### For your health

Operators spend many hours in their working position. The backfriendly comfort seat, adjustable armrests, joysticks that sit comfortably in the hand, and the optimally arranged controls make daily work as easy as possible.

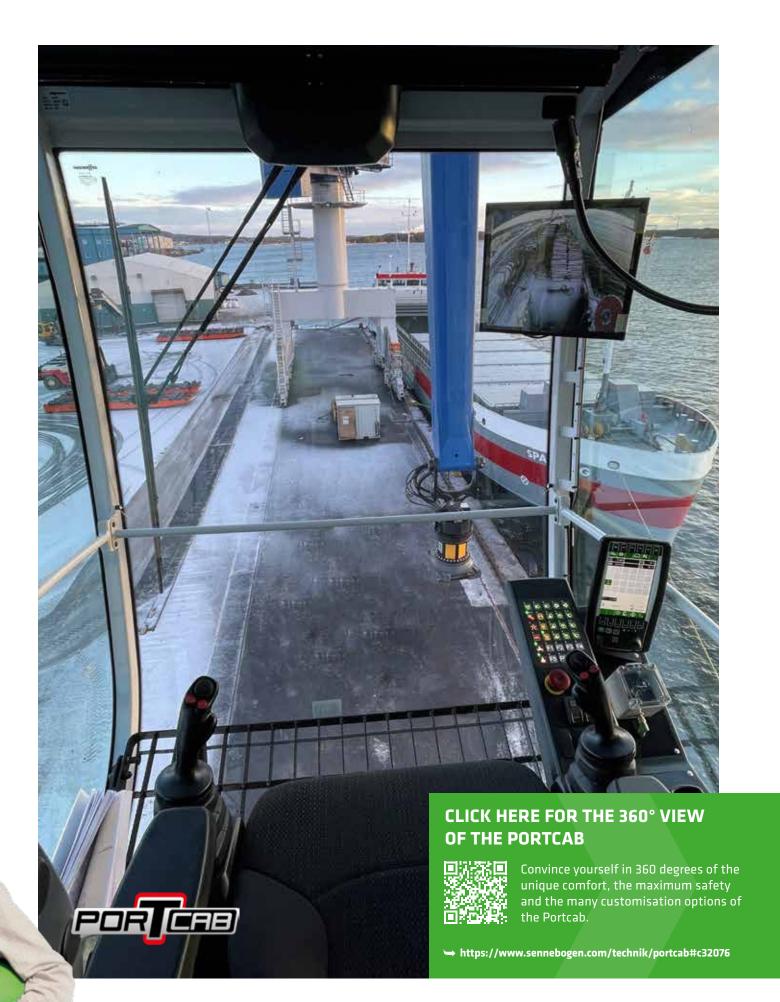
#### Pleasant indoor climate

Whether in warmer areas or in ports with sub-zero temperatures, you can enter a work space with a comfortable temperature on the essentials of work thanks to automatic heating and air conditioning.

"The development of the machine is based on user feedback in order to create the best operating experience."

ALI GÜLYAZ, Designer Material handling machines







# **SEN**con The machine control of the future.

The modern SENcon control system offers comprehensive comfort for operators, fleet managers and service personnel.

Assistance systems increase work safety, make work processes more efficient and remote diagnostics quick and easy. Through the analysis of machine data, you can optimize the operation and reduce the  ${\rm CO}_2$  footprint of the machine.

## 1. Driver comfort of tomorrow thanks to modern assistance systems

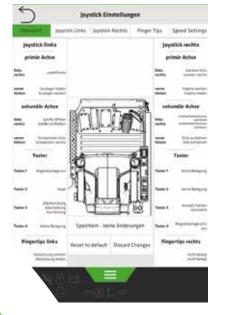
- ✓ Quickly setup & access to comprehensive driver profiles
- Integrated safety systems (e.g. work area limitation)
- Safe machine movements thanks to semi-autonomous movements
- Preparation for remote control and fully automated operation movements



## 2. Effective remote service reduces costs and saves time

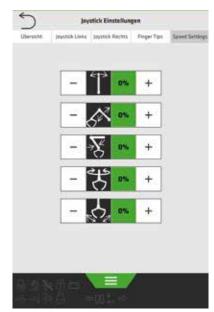
- Extract and analyze machine data from any location
- State-of-the-art diagnostic tool for effective remote diagnostics
- Guarantee of the best possible machine availability and operating safety





Machine data

Software updates



Quick access to all important functions via the large 10-inch touch display

## 3. Always up to date: Software updates over-the-air (SOTA)

- Efficient installation of new functions of the machine control system remotely without physical intervention in the machine
  - Continuous work with the latest technology
  - The machine remains maximally available and flexible in use



#### 4. Intelligent analysis of machine data

- ✓ In combination with the telematic system SENtrack the machine data from SENcon becomes valuable information about work processes and the condition of the machine
- Integrated functions such as the excavator scales ensure view of the current achieved handling performance
- Optimization of machines in use: simple and effective





## **CAB** HIGHLIGHTS





) Indust	ry
Ł	b Indust

IN SERIES		
ENTRANCE	Sliding door incl. sliding window	Sliding door incl. sliding window
WINDSHIELD	Tinted safety glass	Undivided windshield made from bullet proof glass, rigidly glazed
SKYLIGHT	Sky light made from bullet proof glass	Sky light made from bullet proof glass
FLOOR WINDOW	-	-
WIPERS	Wipers for skylight	Wipers for skylight
	Wipers and washer system for front windshield	Wipers and washer system for front windshield
AIR CONDITIONER	Automatic heating/air conditioning with fresh air and recirculating air filter	Automatic heating/air conditioning wit fresh air and recirculating air filter
FLOOD LIGHTS	Floodlights integrated into roof	Floodlights integrated into roof
FOLDAWAY SEAT	-	-
RADIO	✓	✓
SENCON CONTROL AND DIAGNOSTIC SYSTEM	✓	✓
OPTIONS		
AIR-CONDITIONED SEAT	✓	✓
RADIO	✓	✓
COOLING BOX BEHIND THE OPERATOR'S SEAT	✓	✓
PROTECTIVE GRILLE ON SKYLIGHT AND WINDSHIELD	✓	✓
SUN PROTECTION PACKAGE	✓	<b>√</b>





## ALWAYS THE **RIGHT VIEW**

The large capacity cab for the best all-round view of the port

IN SERIES	POR <b>T</b> CEE
ENTRANCE	Easy access through wide cab door
OPERATOR' SEAT	Air suspended, with lumbar support, headrest and plenty ergonomic adjustments, heated
ARM AND FOOT RESTS	Easily adjustable, according to the user
CONTINUOUS FRONT-/ FLOOR WINDOW	Large, curved pane made of tinted safety glass, providing optimal visibility of working environment without visual obstructions
WIPERS	Parallelogram wipers for harsh weather conditions on the windshield
	Wipers for skylight
AIR CONDITIONER	Automatic heating/air conditioning with fresh air and recirculating air filter
LARGE 10,2' MONITOR	Camera-supported monitoring of the danger area (rear, right)
FOLDAWAY SEAT	Additional trainer's seat with seat belt
RADIO	✓
SENCON CONTROL AND DIAGNOSTIC SYSTEM	✓
OPTIONS	
AIR-CONDITIONED SEAT	✓
RADIO	✓
COOLING BOX FOR FOOD AND DRINKS	✓
SPEAKER SYSTEM	✓
SUN PROTECTION PACKAGE	✓





#### 1. Reduce service costs

The dashboard is used to monitor the machine and its main operating parameters (temperatures, consumption). If key figures deviate significantly from the target value, the user is informed immediately.

#### 2. Reduce consumption

You will receive daily updated insights into your fleet processes: Easily identify and optimize times when machines are idle or change set parameters when machines are underloaded to reduce consumption.

"What if you could receive real-time data from all your machines with just one click and so increase your productivity? SENNEBOGEN's SENtrack telematic system makes this possible. With the G series, you get the benefits of the monitoring tool as standard!"

#### 3. Improve productivity

With just a few clicks, you can identify and optimize machine capacity, analyze routes if required and thus make your port processes more profitable.

#### 4. Safeguard your investment

Practical alarm messages inform you about critical machine conditions. In the event of irregular movements, the machine can also easily be deactivated remotely.





## MAINTENANCE AND SERVICE.

## KEEP IT SIMPLE. WITH MANAGEABLE TECHNOLOGY.



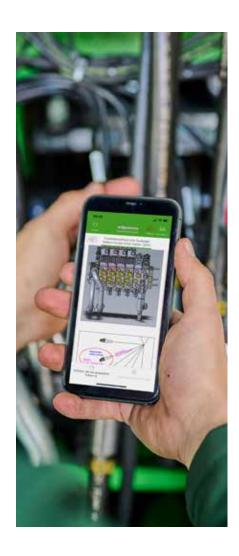
Reliable and practical technology makes life easier. We rely on hydraulics, electrics and electronics where they are most useful.



We make you happy, not reliant. With cost-effective components and fewer process steps, you can take care of the machine on your own.



The central electrical distributors and electronic modules facilitate maintenance, service and, if necessary troubleshooting.



The SENNEBOGEN Troubleshooter is a guided troubleshooting tool for the fastest possible solution in the case of service.



All maintenance and service points are clearly arranged and easily accessible. The clear labeling of components makes finding your way around easy.



#### **MACHINE TYPE** MODEL (TYPE) 875 G Hybrid **DIESEL ENGINE** TYPE Stage V: Cummins X15 Rated power: 391 kW/1800 rpm Operating point standard: 391 kW/1800 rpm Operating point ECO: 374 kW/1650 rpm Stage Illa: on request Automatic idle / stop COOLING water-cooled, charge air cooling, coolant cooling DISPLACEca. 15 | (V) / ca. 15 | (IIIa) MENT NUMBER OF 6 **CYLINDERS BATTERIES** 2 x 210 Ah, battery disconnect switch 24 V **ELECTRICAL** SYSTEM Alternator: 160 A (V) / 150 A (IIIa) Starter: 9 kW (V) / 9 kW (IIIa) **OPTIONS** electrically heated fuel pre-filter water separator 24 V (IIIa)

UPPERCARI	RIAGE
DESIGN	Torsion-resistant box design, precision crafted, steel bushings for boom mounting. Service-friendly design, engine installed in the longitudinal direction, covered service area
COOLING SYSTEM	Cooling system with 3 cooling circuits and demand-based fan control, consisting of: charge air cooling, coolant cooling and hydraulic oil cooling, hydraulically driven, thermostatically controlled incl. fan reversal
OPTIONS	LED lighting package
	Fire extinguisher
	Maritime climate paint
	Low temperature packages
	Electrical hydraulic tank preheating
	Magnet generator 25/33 kW

ELECTRIC DRIVE	
OPTIONS	<b>Type:</b> 390 kW, Standard with frequency converter
	<b>Power:</b> Total connected load 720 kVA, machine side fuse 800 A (also with generator) at 400 V - motor start via frequency convertert
	IP protection class: IP 55 standard, (IP 65 optional)

TANK CAPA	CITIES
FUEL	2100 l
AD BLUE	105 l
HYDRAULICTANK	1200 l
COOLANT	ca. 110 l
ENGINE OIL	ca. 80 l (V) / ca. 68 l (IIIa)
CENTRAL LUBRICATION SYSTEM	Automatic central lubrication for equipment and slewing ring, display of fault and empty message via SENcon
	Lubrication pump with 16 kg reservoir (for min. 400 operating hours)

Engine block heater
Engine oil preheating
Electric fuel pump





HYDRAULIC	SYSTEM	
Load-sensing / LUDV hydraulic system*, pre-controlled work functions, Operating modes: Normal Lift, Heavy Lift, Precision Mode		
DELIVERY RATE	2x 417 l / min and 1x 460 l / min for slewing drive in the closed circuit	
OPERATING PRESSURE	up to 350 bar	
CONTROL SYSTEM	Electrohydraulic actuation of work move- ments, additional functions via switches and foot pedals	
SAFETY	Emergency lowering of the equipment in the case of engine standstill	
	Pipe-fracture safety valves for lift and stick cylinders	
OPTIONS	Bio-oil filling	
	Tool Control for programming pressure/ rate of up to 10 tools	
	Load torque warning with capacity display	
	Overload safeguard with shutdown	
	High-performance filtration with longterm change interval, SENNEBOGEN HydroClean micro-filter system with water separator	

CAB <sup>2</sup>	
CAB TYPE	Maxcab Industry, can be elevated by 2.9 m and moved forward by 2 m
CAB FEATURES	Maxcab Industry with sliding door incl. sliding window and undivided, flat windshield made from bullet proof glass, rigidly glazed, roof extended forward, bullet proof skylight, wipers, and wash system for windshield, lower windshield wiper with washer nozzle, wiper for skylight, vibration damped, radio with antenna and loud speaker, 2 floodlights integrated into the front of the roof, SENcon control and diagnostic system
OPTIONS	Portcab large capacity cabin
	Skylift cab elevation (elevation 9 m)
	Skylift cab elevation (elevation 7 m)
	Safety glazing made of polycarbonate
	Protective roof guard, FOPS if applicable
	Protective front guard
	Carbon filter for circulation/outside air
	Auxiliary heating system
	Air-conditioned seat
	Radio
	Cooling box

SLEWING D	RINVE
GEARBOX	Compact planetary gear with bent-axis hydraulic engine
PARKING BRAKE	Spring-loaded multi-disk brake
SLEWING RING	Strong, 3-row slewing ring, sealed. Externally geared slewing ring with 360° protection and pinion lubrication
SLEWING SPEED	0-4,3min <sup>-1</sup> , variable
TORQUE	420 kNm



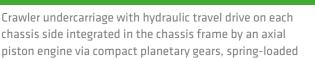
\*with 3 hydraulic circuits





UNDERCAR	RIAGE MOBILE H-H
MOBILE	Mobile undercarriage MS210 with integrated 4-point outrigger, four planetary axles with integrated steering cylinders, two axles driven by variable-displacement hydraulic engine with directly mounted, automatically acting brake valve, all-wheel steering.
UNDER- CARRIAGE WIDTH	4.450 mm
TIRE TYPE	Solid rubber 14.00-24 (16-times); Option: 16.00-25
BRAKES	hydraulic
SUPPORT PLATE SIZE	Ø 1.300 mm
TRAVEL SPEED	0 – 6 km/h (mobile)

#### **UNDERCARRIAGE CRAWLER**



parking brake, hydraulically ventilated multi-disk brake

UNDER- CARRIAGE WIDTH	6.800 m	
TRACK WIDTH	5.800 mm	
PLATE WIDTH	1.000 mm	
UNDER- CARRIAGE LENGTH	8.500 mm	

UNDERCAR	RIAGE MOBILE GANTRY	$\mathbf{I}$
TRACK WIDTH	5.850 mm	
TIRE TYPE	285/70-19,5 pneumatic tires, Option: 355/65-15 solid rubber tires	
BRAKES	hydraulic	
SUPPORT PLATE SIZE	Ø 1.600 mm	
TRAVEL SPEED	0-4 km/h / variable	

UNDERCAR	RIAGE CRAWLER GANTRY 🔲
UNDER- CARRIAGE WIDTH	7.210 mm
TRACK WIDTH	5.850 mm
PLATE WIDTH	900 mm
UNDER- CARRIAGE LENGTH	8.450 mm

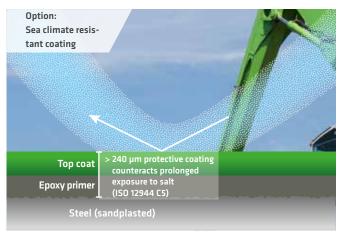
EQUIPMENT	
RANGE	up to 32 m
CYLINDER	Hydraulic cylinders with high-quality sealing and guide elements, end position damping, sealed bearing points; all cylinders coated, nickel-plated and chromium-plated in a way that is suitable for maritime climates
OPTIONS	Safety Boom lift for equipment
	Lift limitation/stick limitation adjustable to the stop settings
	LED lighting
	Stick mounted camera

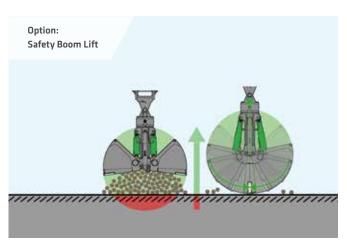
OPERATING	DATA	Ā
REACH	up to 32 m	
OPERATING WEIGHT	165 – 195 t, depending on model and equipment	
NOTE	Operating weight varies by model and equipment	















#### **LOAD RATINGS K21 HEAVY LIFT**

The specified load capacities are for information only. For a detailed project study, please contact our regional sales partners.

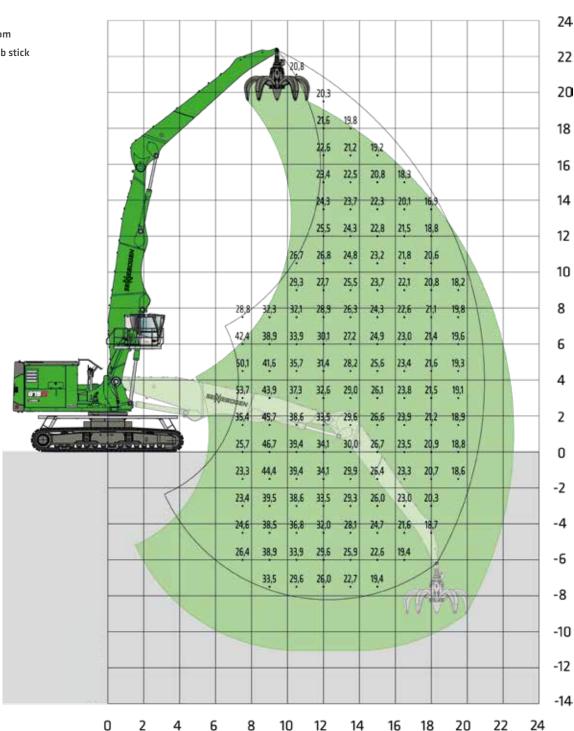


R 147/580



MAXCAB INDUSTRY 2.9 m elevating and 2.0 m extendable





Machine shown in mirror image

20241213161847

#### Notes:

All load ratings are given in tons (t) brought to bear at the end of the stick, without tools on firm level ground. Working tools such as grab, magnet, load hook, etc. are included in the specified load ratings. The stated values are 75 % of the static tipping load or 87 % of the hydraulic lifting force according to ISO10567 and apply at the required operating temperature in the Green Hybrid system. According to EU standard EN 474/5, hydraulic material handlers used for hoisting must be equipped with a pipe rupture safety device on lifting and stick cylinders and an overload warning device. The specified load ratings apply to maximum track width and 360° slewing.





### **LOAD RATINGS K32 PORT**

The specified load capacities are for information only. For a detailed project study, please contact our regional sales partners.



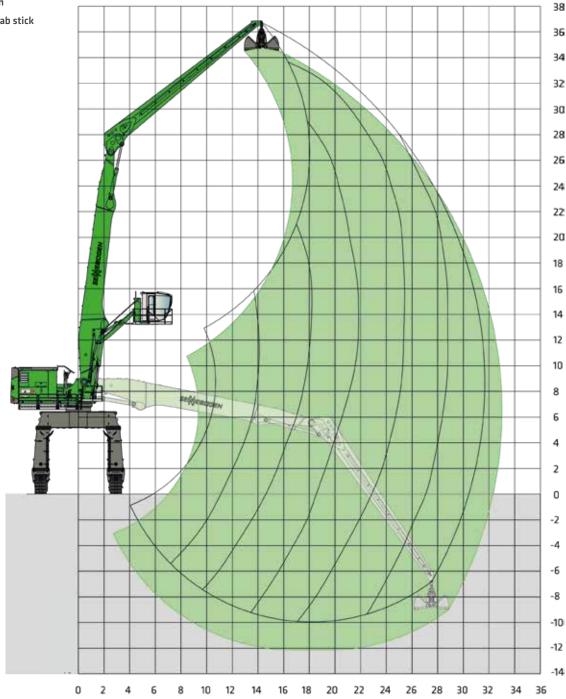
PR 150/585



SKYLIFT G1300/700 hydraulically elevating (optional)



18 m boom 15.5 m grab stick



Machine shown in mirror image

20241213155448

#### Notes:

All load ratings are given in tons (t) brought to bear at the end of the stick, without tools on firm level ground. Working tools such as grab, magnet, load hook, etc. are included in the specified load ratings. The stated values are 75 % of the static tipping load or 87 % of the hydraulic lifting force according to ISO10567 and apply at the required operating temperature in the Green Hybrid system. According to EU standard EN 474/5, hydraulic material handlers used for hoisting must be equipped with a pipe rupture safety device on lifting and stick cylinders and an overload warning device. The specified load ratings apply to maximum track width and 360° slewing.



### **LOAD RATINGS B26 PORT**

The specified load capacities are for information only. For a detailed project study, please contact our regional sales partners.



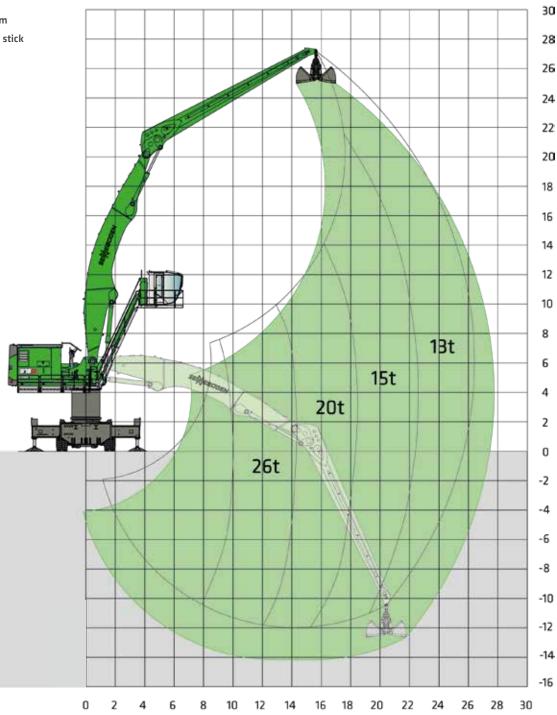
MS210



SKYLIFT G1100 hydraulically elevating (optional)



14.5 m boom 13.5 m grab stick



Machine shown in mirror image

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#### Notes:

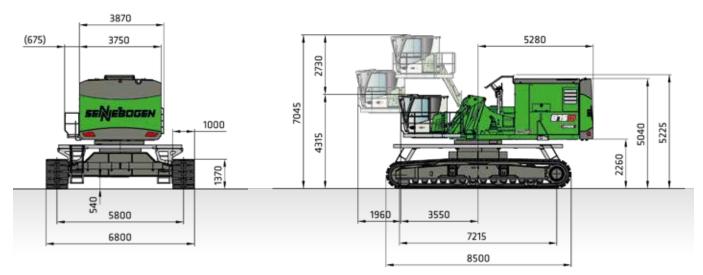
All load ratings are given in tons (t) brought to bear at the end of the stick, without tools on firm level ground. Working tools such as grab, magnet, load hook, etc. are included in the specified load ratings. The stated values are 75 % of the static tipping load or 87 % of the hydraulic lifting force according to ISO10567 and apply at the required operating temperature in the Green Hybrid system. According to EU standard EN 474/5, hydraulic material handlers used for hoisting must be equipped with a pipe rupture safety device on lifting and stick cylinders and an overload warning device. The specified load ratings apply to maximum track width and 360° slewing.



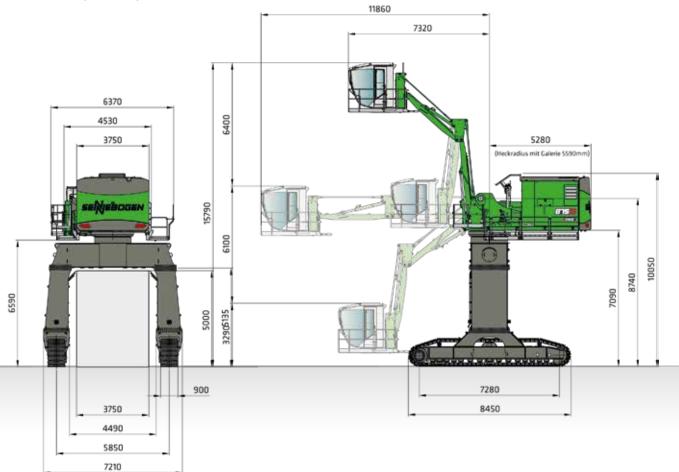




#### **DIMENSIONS CRAWLER**



875 G CRAWLER WITH UNDERCARRIAGE R147 AND ADVANCING CAB G290/200 MAXCAB INDUSTRY (SERIES)

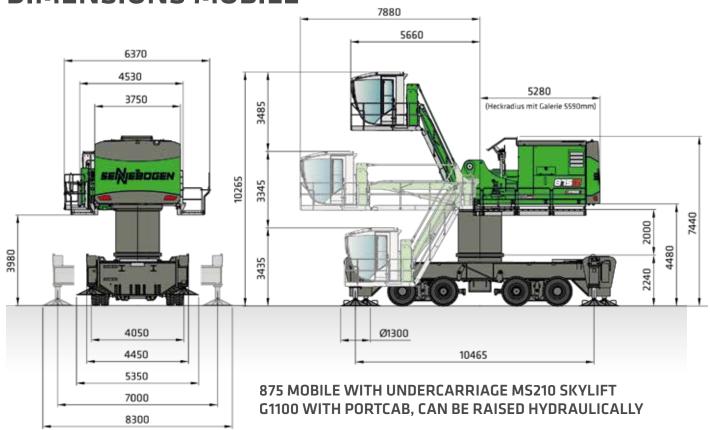


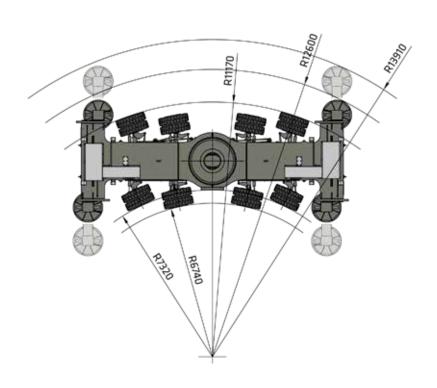
875 G CRAWLER GANTRY WITH UNDERCARRIAGE PR150/585 AND SKYLIFT G1300/700 WITH PORTCAB, HYDRAULICALLY ELEVATING





### **DIMENSIONS MOBILE**

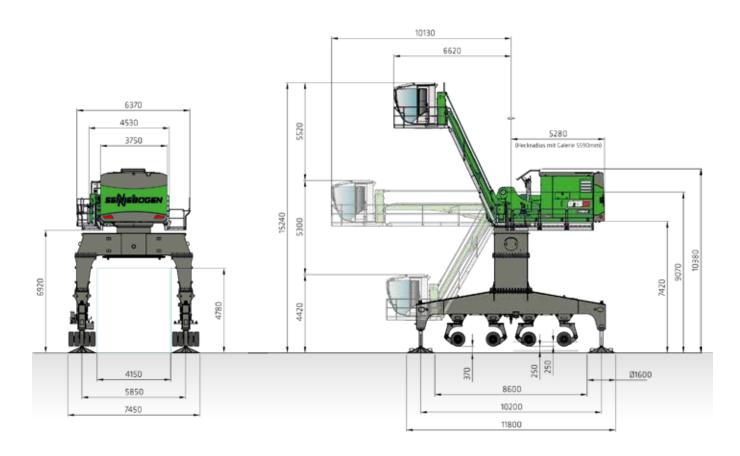




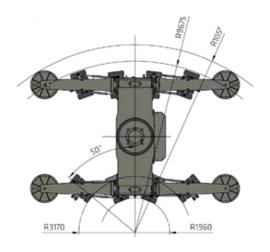
**MOBILE UNDERCARRIAGE MS210** 



## **DIMENSIONS SPECIAL**



875 MOBILE GANTRY WITH UNDERCARRIAGE PM150/585 AND HYDRAULICALLY ELEVATING CAB SKYLIFT G1100 AND PORTCAB

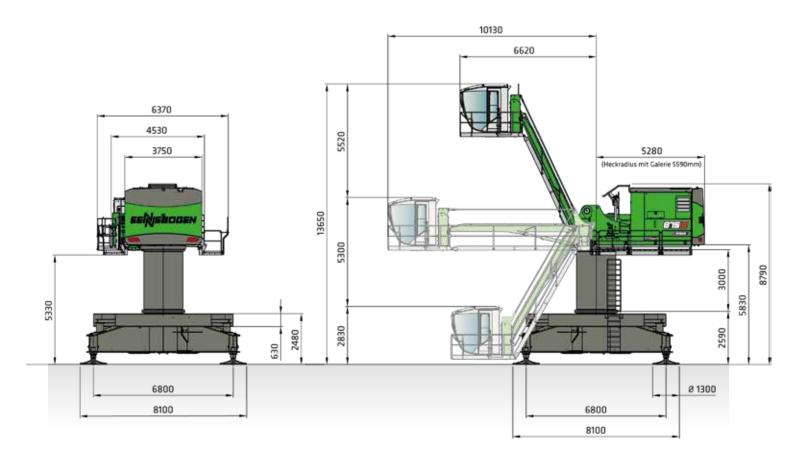


**UNDERCARRIAGE PM150/585** 





## **DIMENSIONS 4-POINT-PEDESTAL**



875 G STATIONARY ON 4-POINT-UNDERCARRIAGE ST98 WITH 3 m PYLON, HYDRAULICALLY ELEVATING CAB ELEVATION SKYLIFT G1100 AND PORTCAB





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Increase your knowledge because success is based on knowledge. In the SENNEBOGEN Academy we place great importance on ensuring it flows powerfully.

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Comprehensive customer service. And supply of spare parts. Service is a TOP priority for us.

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#### **SENtrack**

Efficient fleet management with SENtrack: Use information that would otherwise stay hidden and increase your efficiency.

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www.sennebogen-rental-used.com

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## MOVE BIG THINGS WITH US



over **73** 

years of experience

100%

family company

over **2200** 

experienced specialists worldwide

5

production plants in Germany

over 180

180 sales and service partners worldwide

**27** 

different material handlers



Telehandler 4.0-6.0 t

Balancer 130–300 t Material handler

Duty cycle crane 30–300 t

Crawler crane 50-200 t

Telescopic crane

Port crane 300 t



This catalog describes machine models, the scope of equipment of individual models, and configuration options (standard equipment and optional equipment) of the machines delivered by SENNEBOGEN Maschinenfabrik GmbH. Machine illustrations may contain optional and supplementary equipment. Actual equipment may vary depending on the country to which the machines are delivered, especially in regard to standard and optional equipment. All product designations used may be trademarks of SENNEBOGEN Maschinenfabrik GmbH or other supplying companies, and any use by third parties for their own purposes may violate the rights of the owners.

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