



ENEBOGEN



PORT MATERIAL HANDLER

WITH A REACH OF UP TO 40 m

Destate / 3pprox. 420 t / 40 m / 1585 kw / 10 t 500 kw

Stage V

BBSE Hybrid The port gian

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Groundbreaking dimensions for the port – the world's largest material handler impresses with its enormous reach of up to 40 m, has a proud operating weight of around 420 t and is also extremely economical to operate thanks to proven, large-scale recuperation technology. All of this makes the green material handling giant ideally qualified for heavy-duty operations in steelworks and ports.

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A long-term investment

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

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ENEEDGEN

Modular variety

Unique machine variety – we build the perfect machine to meet the needs of your port.

Maximum comfort

The spacious Portcab is designed with the needs of the operator in mind – comfortable and spacious with sophisticated features.

Maintenance & service

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

Occupational safety

Thanks to the precisely controlled movements and the numerous safety features, you can work effortlessly and safely throughout your day.

Energy efficiency

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

AN INVESTMENT THAT PAYS OFF.

The durability and reliability of the SENNEBOGEN Green Line 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.



4 SENEBOGEN

* The specified handling capacity is a reference value that can be achieved with the appropriate grab for the machine (see Attachments catalog). Actual handling capacities depend on the individual loading and unloading situation in the port and are the result of various parameters (e.g. lifting height, angle of rotation, ship shape, grab fill level, grab).

This 895 E only requires **BCYCLES**to fully load trucks

selvebogen

SENEBOGEN 5

NIEBOGEN



Advanced. The E series.

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 temperature

SOPHISTICATED, STATE-OF-THE-ART TECHNOLOGY

In the 5th generation – decades of experience in designing and constructing material handlers

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SIMPLE TO MAINTAIN AND SERVICE

- Manageable technology and no overengineering
- Ideal accessibility to all components for easy maintenance

ENVIRONMENTALLY-FRIENDLY DRIVE TECHNOLOGY

- State-of-the-art engine, drive and emission systems in line with the latest technology standards (stage V)
- Large-scale pipes and valves for maximum efficiency





up to **500%** saving in operating costs by significantly reducing energy consumption

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SENNEBOGEN – WORLD LEADER IN ELECTRIC MATERIAL HANDLERS.

Over the last **35 years**, we have implemented by far the most electrical applications

- A complete solution direct from the manufacturer detailed route analyses and individual power supply project planning, tailored specifically to your application
- A variety of solutions for power supplies, voltage types and emergency operating units ex works
- No fueling stops or need to store fuel always ready for use
- Service intervals twice as long and lower service costs: No need for fuel/oil filter and oil changes compared to a diesel engine
- High value retention and significantly longer service life
- No exhaust gases good for the environment, good for people
- Low-noise and vibration-free operation for greater working comfort
- 📕 Cleaner engine compartment even after long operating period



895E Hybrid

THE SENNEBOGEN **POWERPACK**

B95E| Hybrid



DIESEL OR ELECTRIC DRIVE THE DECISION IS YOURS!

Efficient diesel technology or economical electric engine – the choice is yours. With its folding roof, the almost identical, spacious Powerpack offers sufficient space for maintenance work - easily and safely accessible. The ventilation system (forced ventilation) also ensures a dust-free engine housing through overpressure filtering of the outside air.



895E | Hybrid

- ① Oil cooler
- ② Fresh air intake
- ③ Diesel engine
- ④ Diesel engine cooler
- (5) Electric drive
- 6 Air conditioner
- ⑦ Control cabinet
- 8 Central lubrication system
- (9) Hydraulically controlled Powerpack roof



GREENHYBRID – THE MOST ADVANCED ENERGY RECOVER TECHNOLOGY ON THE MARKET

Niebogen

GREEN HYBRID ENERGY RECOVERY TECHNOLOGY



Energy recuperation through safe & smart design: watch the video to find out how the SENNEBOGEN Green Hybrid system makes port handling even more efficient.

www.sennebogen.com/895-green-hybrid

Save up to 555% energy with two hybrid hydraulic cylinders



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



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
- System is optimally adjusted to the individual machine configuration





ONE MACHINE THREE MODES OF USE

OPTIMIZED FOR **SPEED**

The 895 E-Series combines speed and efficiency

Especially when handling bulk materials, fast loading or unloading times are required to save money. As standard, the port giant therefore operates in a speed-optimized handling mode for fast work cycles.



OPTIMIZED FOR **PRECISION**

General cargo handling is all about accuracy

The 895 E-Series moves pulp packages, Big Bags or other loose-loaded goods carefully and precisely – simply at the push of a button on the joystick and without interrupting work.





OPTIMIZED FOR LOAD CAPACITY AND PRECISION

TNO

"Heavy Lift" means getting the most out of the 895 E-series

This function supports you in particular when handling heavy general cargo such as containers or coils. Working in heavy lift mode significantly increases the load capacity of the machine and at the same time the machine controls its target even more sensitively.

CHILD.



SAFETY FIRST.

Enjoy a safe work environment thanks to numerous safety features developed especially for port use. Protecting people, port and machine.

HOW TO OPERATE THE SAFETY BOOM LIFT

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This video will show you how the SENNEBOGEN Safety Boom Lift works.

www.sennebogen.com/safety-boom-lift



Safety Boom Lift

Grab automatically lifts as it closes, protecting ship hulls, port surfaces, equipment and the grab itself

Bio oil

For extended oil change intervals, with safe environmental compatibility

SENtrack

Maintain fleet management safety by monitoring the condition of your machines

SENIEBOGEN

Safe & ergonomic

optimum cab and machine component accessibility via stairs and ascents

Component safety

maximum service life thanks to the robust steel construction - produced in our very own subsidiary



for optimal illumination of the work area

Load moment limitation

EBOGEN

protection of equipment by switching off in the event of an impermissible load

Optimal camera monitoring

of all safety-relevant areas*

* Cameras are installed as standard on the right-hand side and to monitor the rear area. Additional cameras, e.g. on the stick, are available on request.



Today general cargo, tomorrow bulk cargo – working in the port means staying flexible from day to day. The entire range of 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.)

895 | Hybrid



Scrap handling



Timber grab

B95E | Hybrid



Big Bag loading



Timber spreader/wooden pallet loading



Pulp spreader



Steel coils



Container handling



Vacuum lifter

QUICK AND EASY GRAB CHANGE



Watch the video to see how quick and easy it is to change the grab with the quick change system on the stick!

www.sennebogen.com/quick-coupler



A MODULAR DESIGN. NUMEROUS APPLICATIONS.

B95E | Hybrid



20 SENEBOGEN

* Dimensions according to customer requirements. Subject to technical changes. Additional options available upon request.

WHAT DOES YOUR MACHINE LOOK LIKE?

Configure your individual machine from our modular system. The great variety of solutions that we can implement in this way is unique anywhere in the world.



CUSTOM CONFIGURATION

More than 16,000 unique material handling solutions can be delivered through SENNEBOGEN's modular machine design – watch the video now!

SELVEBOSEN

www.sennebogen.com/versatility



895E | Hybrid

B95E | Hybrid



Clean diesel technology or highly efficient electromobility – with the help of the modular machine concept, you can choose the right solution for your application

Zable-supplied power for linear routes on the quay

- Rail concepts adapted to existing tracks
- Auxiliary engines for bridging short distances to the nearest power source
- Impressive agility with mobile gantry undercarriage thanks to all-wheel steering and crab steering





DISCOVER MOBILITY



Crawler, mobile or rail gantry: thanks to the different undercarriage designs, you remain flexible in the port – whether with diesel drive through optional additional tanks in the portal supports or sophisticated power supplies on the quay. The undercarriage's track gages and clear portal height can be optimized to suit your needs at any time thanks to a variable clearance profile. You can also raise the

uppercarriage with pylon by up to 6 m for additional visibility inside the ship!

www.sennebogen.com/895-mobility





Everything in view

B95E | Hybrid

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 every day and concentrate on the essentials of work thanks to heating and air conditioning. "We welcome regular feedback from operators to ensure the work space is configured perfectly."

ROBERT AUMÜLLER, Head of the Port Business Unit





+ Tolly

THE BEST WORKPLACE IN THE PORT



Come with us and experience the unique overview that the Portcab has to offer in the video!

www.sennebogen.com/895-portcab



CAB HIGHLIGHTS

B95E|Hybrid



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IN SERIES	POR CAB
ENTRANCE	Easy access through wide cab door
OPERATOR'S SEAT	Air-suspended, with lumbar support, headrest and numerous settings for optimal ergonomics, heated
ARM RESTS AND FOOT SUPPORTS	Easy to adjust to suit each user
WINDSHIELD	Generous windshield, tinted double glazing for safety windows
FLOOR WINDOW	Large floor window made of safety glass for the best view into the hull
WIPERS	Parallelogram windshield wipers for harsh weather conditions
	Wipers for skylight
AIR CONDITIONER	Heating/air conditioning system with fresh air and recirculating air filter
LARGE 10.2" MONITOR	Camera-supported monitoring of the danger zone (rear, right)
FOLDAWAY SEAT	Additional trainer's seat with seat belt
RADIO PREPARATION	✓
SENCON CONTROL AND DIAGNOSTIC SYSTEM	\checkmark
OPTIONS	
AIR-CONDITIONED SEAT	✓
RADIO	✓
COOLING BOX FOR FOOD AND DRINKS	✓
LOUD SPEAKER SYSTEM	\checkmark
SUN PROTECTION PACKAGE	\checkmark

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



ALWAYS THE RIGHT VIEWING ANGLE

SELVEBOSEN

ENJEBOGE

The name 'Skylift' can be taken literally! Depending on the version and undercarriage being used, the flexible cab adjustment allows you to look into a ship's hull from up to 22 meters. Thanks to a sophisticated system of steps, ascents and railings, access to the cab and maintenance points on the uppercarriage is safe and comfortable.

895E | Hybrid



SENtrack

EFFECTIVE FLEET MANAGEMENT

I. 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."

3. Improve productivity

With just a few clicks, you can identify and optimize machine capacity, analyse 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. Where electronics add no value, we rely on hydraulics and electrical systems.



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 most important components, such as the accumulator module or the electrical distributor, are all easily accessible from a central point for straightforward checking and troubleshooting.





The SENCON control system supports you with diagnostics and makes troubleshooting easier. So your machine is back in action more quickly.

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

MACHINE T	YPE	UPPERCA	RRIAGE
MODEL (TYPE)	895 Hybrid	DESIGN	Torsion-resistant box design, precision crafted, steel bushings for boom mounting, service-friendly design, sea climate resistant coating as corrosion protection, camera package (right/rear), SENtrack telematic system
Stage V: CAT C18 EM0217 ¹ Rated power: 597 kW / 1800 rpm Operating point standard: 585 kW / 1600 rpm Operating point EC0: 562 kW / 1500 rpm	COOLING SYSTEM	Compact 3-circuit cooling system with large cooling capacity, thermostatically regulated fan drive for oil and water coole reduces energy consumption and noise emissions Fan reversal for easy and regular cleaning	
	Stage II:	OPTIONS	LED lighting package
	On request		Swing bearing brake via foot pedal
	Both: automatic idle/stop		Fire extinguisher
COOLING	Water-cooled incl. fuel pre-filter		Low temperature packages
DISPLACE- MENT	18.11		Electrical Hydraulic tank preheating
NUMBER OF CYLINDERS	6		Magnet generator 30/33 kW
BATTERIES	2 x 210 Ah battery disconnect switch		
ELECTRICAL SYSTEM	24 V	ELECTRIC	

ELECTRIC	
OPTIONS	Type: 500 kW, standard with 400 V / 50 Hz
	Transformer
	Cable reel

TANK CAPACITIES		
FUEL	2250 l, additional tanks optional	
HYDRAULIC TANK	2170 l	
COOLANT	approx. 120 l	
ENGINE OIL	approx. 40 l	
CENTRAL LUBRICATION SYSTEM	Automatic central lubrication for equipment and slewing ring, display of fault and empty message via SENCON	

Engine block heater Electric fuel pump



EBOGEN SE 30

OPTIONS

HYDRAULI	C SYSTEM	САВ	le la constante de la constante
Load-sensing/ LDUV hydraulic system, hydraulically		CAB TYPE	Portcab, elevates up to 11 m
operated work		CAB FEATURES	SENNEBOGEN Portcab – large, special cal with excellent all-around visibility, large
RATE	4x 570 l/min (load sensing) and 2x 380 l/min	TEATORES	floor window at the front and powerful
OPERATING PRESSURE	up to 320 bar		heating and climate control
CONTROL SYSTEM	Proportional, precision electrical control of work movements, joysticks for work functions, additional functions via switches and foot pedals		Air-suspended comfort seat and seat bel additional trainer's seat, control element in accordance with the latest ergonomic standards, roof and floor window made o bulletproof glass, sun protection for roof
SAFETY	Hydraulic circuits safeguarded with safety valves		and side windows, control and diagnostic system SENCON
	Pipe fracture safety devices	OPTIONS	Bullet proof windshield
	Emergency lowering of equipment and cab		Safety side window and rear window
	in case of engine standstill		Polycarbonate safety glass
OPTIONS	Bio-oil filling		Wipers for lower windshield/skylight
	Tool Control for programming pressure/		Sunblinds on the side windows
	rate of up to 10 tools		Loudspeaker system with swan neck
	Load torque warning with capacity display		microphone
	Overload safeguard with shutdown		Radio

SLEWING D	RIVE 💎
GEARBOX	Compact planetary gear with bent-axis hydraulic engine, integrated brake valves
SLEW BRAKE	Spring-loaded multi-disk brake
SLEWING RING	3-row slewing ring, sealed. Externally toothed slewing ring with 360° grease drip pan and pinion lubrication
SLEWING SPEED	0-3.6 rpm, variable
TORQUE	750 kNm



Cooling box

CRAWLER GANTRY

Crawler gantry undercarriage PR400/840 with hydraulic travel drive on each chassis side integrated in the chassis frame by an axial piston engine via compact planetary gears, spring-loaded parking brake, hydraulically ventilated multidisk brake, flat track shoes 1200 mm

TRAVEL SPEED	0-1.5 km/h
OPTION	max. 6 m pylon



MOBILE GANTRY

Stable and agile mobile gantry undercarriage PM400/840 with 20 wheel sets and integrated 4-point support, automatic load compensation via corresponding level control for even floor relief. Simple, reliable maneuvering thanks to all-wheel steering on all wheel sets and crab steering, small turning radii

TIRE TYPE	80 x 285/70 R19.5
BRAKES	hydraulic
TRAVEL SPEED	0-4 km/h
OPTION	max. 6 m pylon



RAIL GANTRY

Custom-manufactured rail undercarriage, dimensions according to customer requirements

TRAVEL SPEED	2.5 km/h
OPTION	max. 6 m pylon



EQUIPMENT	
REACH	up to 40 m
CYLINDERS	Hydraulic cylinders (incl. hybrid cylinders) with high-quality sealing and guide elements, end position damping, sealed bearing points Sea climate resistant coating of all cylinders, nickel-plated and chromium- plated, pipe fracture safety device (lifting cylinder)
CENTRAL LUBRICATION	Automatic central lubrication system
OPTIONS	Safety Boom Lift for equipment
	Lift limitation / stick limitation adjustable to the stop settings
	LED lighting
	Stick mounted camera

OPERATIN	G DATA	Ā
OPERATING WEIGHT	420 t	
NOTE	Operating weight varies by model and equipment.	









895E Hybrid

The load ratings are given as information only. Please contact our regional sales partners or portdivision@sennebogen.de for a detailed project study.



Notes:

895E Hybrid

LOAD RATINGS K32 PORT

The load ratings are given as information only. Please contact our regional sales partners or portdivision@sennebogen.de for a detailed project study.



Notes:



LOAD RATINGS K38 PORT

The load ratings are given as information only. Please contact our regional sales partners

or portdivision@sennebogen.de for a detailed project study.



Notes:



LOAD RATINGS K38 PORT

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Notes:



CRAWLER GANTRY DIMENSIONS



MOBILE GANTRY DIMENSIONS

MOBILE GANTRY PM400/840





The largest material handler in the world.

895 E Hybrid with mobile gantry undercarriage; Netherlands









SENNEBOGEN ACADEMY

Increase your knowledge because success is based on knowledge. In the SENNEBOGEN ACADEMY we place great importance on ensuring it flows powerfully. www.sennebogen-academy.com



SERVICE AND MAINTENANCE

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



SENtrack

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

www.sennebogen.com/sentrack



RENTAL & USED

Discover the unique range of rental machines available from SENNEBOGEN Rental & Used. Find your rental machine here:

www.sennebogen-rental-used.com

JOIN OUR OPERATORS' CLUB

The spotlight is on you and your machine! We focus on exclusive information, sharing experiences with other SENNEBOGEN operators as well as fun and enthusiasm.

All the benefits here 🛶 www.sennebogen.com/operators-club





MOVE BIG THINGS WITH US



over **70** years of experience

4

production plants in Germany

4-5.5 t

130-300 t

100 %

family company

over **180**

sales and service partners worldwide over **1800** experienced specialists worldwide

27 different material handlers



13.5-300 t

50-300 t

17-420 t

300 t

16-130 t

895E | Hybrid

Bestell-Nr. 299252 895-E-122110-102210

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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