

# BOOM

Information for customers, distributors, staff and friends



bauma edition 2019

**SENEBOGEN** at the **bauma 2019**






## Dear Customers, Sales Partners, Staff & Friends,

Recently an employee asked us what we are looking forward to the most at bauma 2019, and we didn't have to think long. It is the intensity of personal interaction with so many different people in such a short time.

On Sunday there will be an instruction with all dealers from over 50 countries, on Monday a press evening with journalists, then every evening at Nockherberg conversations with up to 250 customers and interested visitors, finally on Wednesday we will welcome 600 guests on the stand evening. In addition to all the technical content, it is the intensive personal experiences, also with drivers, suppliers and employees that make bauma a unique experience. This intensive week will be rich in a variety of new ideas and emotions. We are very much looking forward to it - especially to getting in touch with you.

In this sense...

**Erich & Walter Sennebogen**

A large green Sennelager crawler crane is the central focus of the image. The crane's boom is extended upwards, and its lattice structure is clearly visible. The Sennelager logo is printed on the side of the boom. In the foreground, the crane's tracks and counterweights are visible. The counterweights are stacked and feature the Sennelager logo. In the background, other construction equipment and a building with a green facade are visible. Several people in business attire are standing around the crane, looking at it. The overall scene is a trade show or exhibition.

# 60 years of SENNEBOGEN at bauma:

a success story for the green



In 2019, SENNEBOGEN will celebrate its 60-year trade fair anniversary. The family company has been continuously represented at bauma since 1959. In 2019, the industry will once again meet up in the green heart of bauma.

# heart of bauma



SENNEBOGEN has been exhibiting at bauma since 1959. Initially at Theresienwiese as in this picture taken in 1961, and then later at the exhibition site in Munich Riem.

**World trade fair bauma's success story started in 1954 with just 58 exhibitors at Theresienwiese in Munich. To this day the exhibition area and the number of exhibitors have increased 50-fold. SENNEBOGEN, as one of the very first, has been there since 1959 and is celebrating its 60 year bauma anniversary in 2019. A success for the family company from Straubing in Lower Bavaria.**

As Straubing and Munich are only 150 km apart, bauma is almost like an in-house trade fair for SENNEBOGEN and close enough to home to be closely linked to the development of the family company. Founded in 1952, it was only seven years later that Erich Sennebogen sen. decided to become an active exhibitor. During the first years of the trade fair the Munich fair established itself as the world's leading trade fair for construction machinery and equipment with a growing number of international exhibitors and became an important industry meeting point.

## Industry highlights and product innovations - bauma's key features

Alongside the growing importance of the fair, SENNEBOGEN was also expanding and new developments were traditionally presented in

Munich. For example, in 1969, the first fully hydraulic crawler crane attracted a lot of interest at the SENNEBOGEN stand. In 1972, the first SENNEBOGEN hydraulic excavator with plastic bodywork caused quite a stir.

Since 1977 the trade fair changed to a three year cycle. SENNEBOGEN made history at the 1980 bauma with the world premiere of the hydraulically adjusting, articulated boom (GAUH). This groundbreaking innovation changed the world of hydraulic excavators and, to this day, remains the global standard. The machine manufacturer from Lower Bavaria has also been a market leader when it comes to environmental protection and emissions reduction. In 1989



# OGEN



SENNEBOGEN's product innovations are always presented to the public at bauma in Munich. For example, the quietest excavator in the world in its day was awarded the blue environment angel in Munich in 1989.

the Bavarian State Minister for Environment Protection awarded SENNEBOGEN the blue environment angel for the most silent excavator in the world. Where? At bauma, of course, and in time for the fair's 35th anniversary!

## Present for 60 years & the green heart of bauma once again in 2019

The solidarity with bauma is evident, not only from the fact that the company has been a loyal and continuous attendant at the fair for 60 years, but also from its significance at the heart of the construction machinery industry.

In 2019, SENNEBOGEN will once again be the green heart of bauma. In April, the central outdoor area of over 2,000 m<sup>2</sup> will be filled with a total of 11 exhibits ranging from small telehandlers to large crawler cranes. Once more, for one week, the Munich trade fair will be the meeting point for construction machinery enthusiasts, customers and manufacturers from the global construction machinery industry.



2 years of planning · 11 machines · 54 trucks for transport  
· 8.000 meals · 20.000 drink orders · 12.000 satisfied customers



# bauma FACTS



- 8 weeks of booth assembly · 200 persons booth staff
- remarkable order income!





**Michael Ibarth**  
*Director Marketing & Corporate Communications*

# The heartbeat of the industry

## „Our internationality and diversity makes us unique“

*Interview with Michael Ibarth*

**Every three years, the bauma fair is an industry event as well as a deadline for developments and a major project. How do you prepare, when does planning begin and what must never be forgotten?**

There is a principle that applies in football that works equally well for the bauma fair in particular: once the bauma fair is over, it's time to prepare for the next bauma. You can tell this from the fact that we have to book the hotel rooms for the next bauma fair right after the bauma's doors have been closed - otherwise everything is fully booked.

You will also be well prepared if you immediately take notes of the things you want to improve the next time around. Our wealth of experience has enabled us to continuously develop and improve. But of course it is not just a question of planning hotel rooms - you also have to start planning the available fair ground space early, trying to anticipate any new developments. I recently had a conversation with our shareholder Erich Sennebogen about bauma 2022. We are already looking at what opportunities we may have to expand our presence. How are we going to manage more dealers, as well as a rise in visitor numbers in 2022?

There is one thing that must never be forgotten: A trade fair like bauma always involves an intensive partnership with the organizers, because it means maintaining close contact, since both the fair and we, the exhibitors, need to work well together. That's why close contact, even during the year, is an advantage.

**2019 is a significant year for SENNEBOGEN at bauma, marking 60 years as an exhibitor. What is different today compared to previous years? Were some things easier back then?**

60 years ago the bauma was not as international in character. At that time, we were also more regionally focused; the bauma did not claim to be a leading world trade fair and the industry was not yet so well developed. Here's a simple example: when we presented the hydraulic mobile excavator for the first time in 1964, our heaviest machines weighed less than 20 tons. Now, in 2019, we are presenting a machine with an operating weight of almost 400 tons - a 20-fold increase! Of course, the same also applies to the dimensions, complexity and technology found in our world today - that's a major difference.

Of course it used to be easier to transport machines in the old days: you just put them on the low loader, drove them to the site, unloaded them and the job was done. At that time, you didn't need to think about a reliable end-to-end supply of parts for dealers and customers - there were no evening events and no parties hosted at the booth. These days we have to consider all our target groups - distribution partners, customers, journalists and suppliers, and of course our staff members. Meeting the needs of every target group is not that easy, but that's what our company aims to do these days. The expectations of trade fair visitors have also changed. People now expect a perfect experience. Infotainment requires more than the simple presentation of machines. That's also why we will have virtual reality applications on the booth for the first time and much more besides. A trade fair visit must offer customers a top-class experience and exceed their expectations, which is certainly different than in the past.

**Good planning is half the work – does this principle also apply to trade fair preparations? How many people are involved at SENNEBOGEN? Who does what?**

Of course planning is essential: this is particularly true when SENNEBOGEN manages complex events like this. Our trade fair checklist alone comprises around 20 A4 pages and every item listed covers several sub-items that have to be planned, implemented and covered in both financial and staffing terms. We already set to work two years before the fair. The entire marketing department of more than 10 people gets involved 10 months before the start. They are joined at a later point by all our sales staff and colleagues from Testing & Development, who are responsible for the new products. Our assembly staff ensures that all prototypes are ready on time. Finally, our colleagues in Shipping and Construction and many other departments turn the bauma into a corporate project involving up to 200 people. All of this would be impossible without structured planning. However, maximum flexibility and the willingness of all departments to work together as a team are also vital.

**This year, 11 machines will again be on view at the Munich Exhibition Center, providing the highlights around which all our efforts revolve. What is involved in transporting and setting up heavy machinery? What is different from a construction site?**

*Eight weeks of assembly, one week of fair, then three weeks of removal and then all the fun is over.*

Actually, the Munich trade fair give us only four weeks to set up. But that's nowhere near enough for our large machines. On the one hand, that's because the 11 machines require a total of around 30 transport operations, as large-scale machines such as crawler cranes are loaded in up to 8 trucks per machine, including special transports. On the other hand, we don't have unlimited personnel resources we can use for the Munich set-up. Otherwise we would have to set aside a great deal of our work in our plant in Straubing. So, we have to try to work in a way that will not bring regular operations in the company to a standstill. As a consequence, we also transport machines in a pre-assembled state

- for example, with crawler tracks already fitted. The downside is that this makes the machines heavier and we need more transport permits, however it also means we can cut on-site set-up times. That is the essential difference from a regular construction site. Eight weeks of set-up, one week of the fair, followed by three weeks of removal and then it's all over.

**There will be around 3,500 exhibitors at the bauma - what makes SENNEBOGEN special and why is a visit to our booth worthwhile?**

Our guests and visitors provide the best impressions of our booth - your own vision is always blurred by a corporate perspective and a subjective viewpoint. I think I can say that our character as a family-run company is particularly evident at our booth. Everyone is known by name and all visitors have the chance to talk to Erich or Walter Sennebogen. The big tent means that the decision-makers are always in view and available. Everyone gets a warm welcome. We do all we can to make sure that nobody has to wait for long, everyone is offered a seat and something to eat or drink, and each visitor gets the information they're looking for and has a point of contact.

Specifically this means: We do not force press representatives to attend a press conference, but instead host a modest evening event with food, drinks and music. We demand of our caterers to deliver restaurant quality, but at the speed associated with a beer tent. We have the best scale models in our shop. The



variety available in our machinery range is comprehensively presented in the 1:50 scale models, which will delight collectors. Visitors to our booth will encounter a vibrant, green culture. Everything revolves around a central hub. A Turkish port operator will be found sitting over a snack next to a Dutch scrap merchant, or a German specialist civil engineer will meet an Asian crane hire operator at the bar. It is this international quality and the diversity of our products, sectors and visitors that makes a visit to our booth so special.

**People say that „everything is different in a bauma year“. Is that true? – What happens after April 15, 2019 - is it all over by then?**

Yes, a lot of things are different in a bauma year. Everyone is working towards this deadline. It's like a light-house on which everyone is focused and toward which

everyone is heading. We are all following the same objective, the same final destination and the same direction. Everyone works to identify industry trends, presents new developments and sets their own agendas, which is what makes bauma the central landmark for our industry.

The fair also provides a stimulus for the market and this has a lasting effect over time. The innovations presented at the bauma in one week will continue to have an impact for many months. This lasting effect is probably unique to the bauma, which actually sets trends and influences developments. The bauma always serves as a business barometer: who has grown stronger, who is weaker and who is no longer on the scene? People pay a lot of attention to this, which is what makes the bauma so important. The things shown in 2019 will remain anchored in many people's minds until the next bauma in 2022.

*It's nice that we can rely on our instincts and haven't regretted any bauma yet.*



**What about you personally: what is your favorite place at the bauma, what are you looking forward to and what are your hopes for bauma 2019?**

To be quite honest, I love being right in the middle of it all. For me that means standing right in front of our booth, because we are actually right at the center of the bauma where the north / south and east / west axis meet, which is why we can say that we are the green heart of the bauma and represent the beating heart of our industry. A host of well-known brands and manufacturers from the industry are ranged around us. They are all bigger companies than we are. Nevertheless, as a medium-sized company, we are in excellent company there.

It gives me the greatest pleasure when new interested parties turn up at the booth who have no idea who we are, or who have a preconceived image in their heads, which they completely revise during their visit. A host of positive experiences will ensure they leave our booth again impressed by what they have seen, as well as a little greener. It's nice to be able to inspire

*All other well-known brands and manufacturers in the industry have their places around us.*

people. For 2019, I hope that I and the entire staff of 150 people work together really well as a team, particularly because this is not an ordinary 40-hour week. You've got to perform well - mentally, physically and with personal commitment. I also hope that everyone has so much fun that they will want to come back in three years time.

**When a fair like this demands so much of a company and the industry, and requires such a big budget, don't you sometimes wonder if it's all really necessary?**

We ask ourselves this question every time. Occasionally we start to doubt things, because everything is getting more and more expensive. Nevertheless, we always come to the conclusion that the bauma is not just worthwhile in terms of positioning and business. We have also found that the trade fair always provides a stimulus for the company itself. You learn a lot, inspire others and benefit in the long term. Long-term investments are difficult to calculate and depend heavily on a good feeling. It's great that we at SENNEBOGEN can rely on gut instincts and, in hindsight, that we have never regretted exhibiting at a bauma trade fair. «

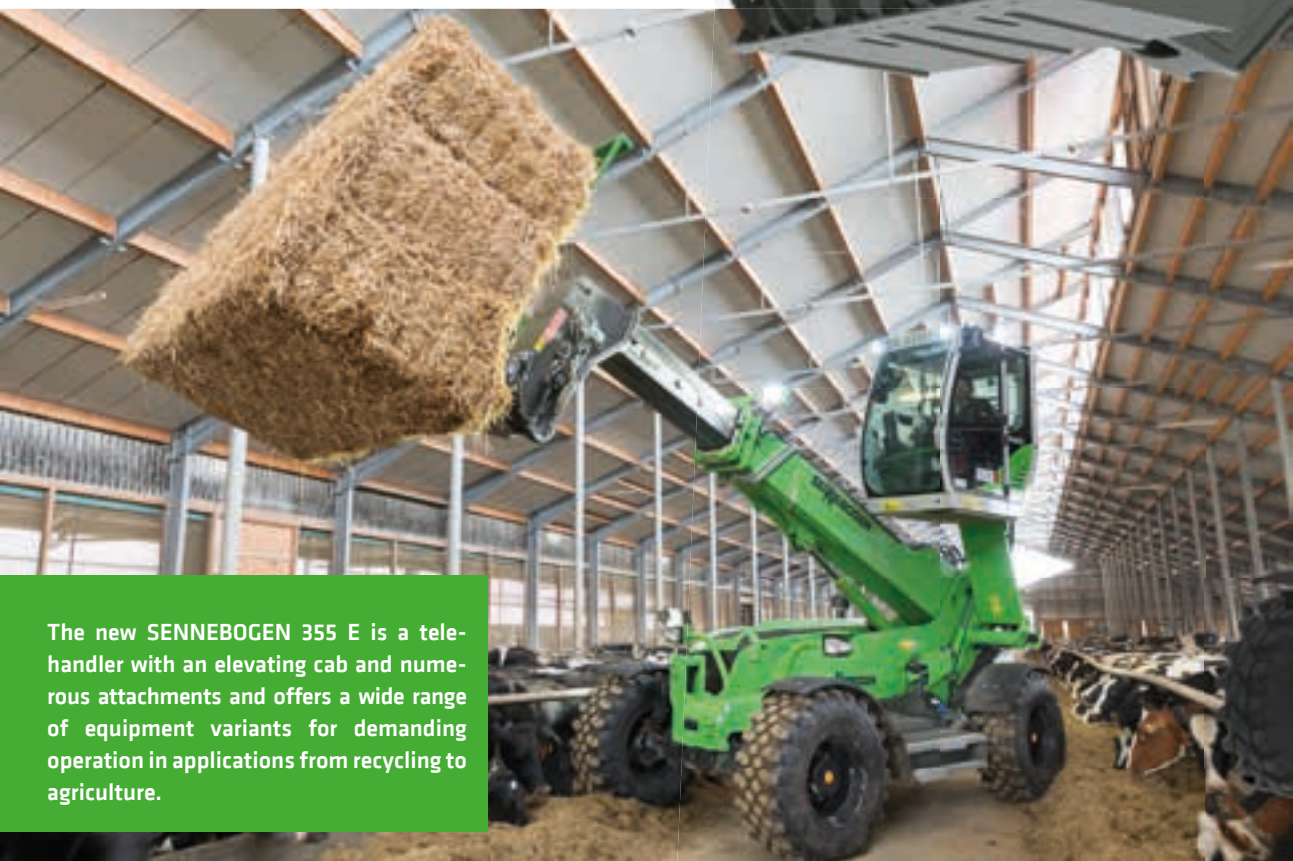




# GO SHOPPING!

[WWW.SENNEBOGEN.COM/SHOP](http://WWW.SENNEBOGEN.COM/SHOP)





The new SENNEBOGEN 355 E is a telehandler with an elevating cab and numerous attachments and offers a wide range of equipment variants for demanding operation in applications from recycling to agriculture.



# Small machine - big potential

## 355E

### »FACTS



103 kW



5.5 t



8.5 m

With the SENNEBOGEN 355 E, the new Multi Line will also be represented at bauma. The 355 E is far more than just a telehandler and sets standards in heavy material handling - ideally suited for the demanding use in recycling and for handling of secondary raw material.

One of the best features of the 355 E telehandler is the unique all-round view in the elevating Multicab. The cab height can be continuously adjusted to an eye sight of 4.2 m at the touch of a button as standard - this globally unique feature is only available from SENNEBOGEN and gives the driver an unobstructed view of the working environment. With its particularly robust construction and high-quality components, the SENNEBOGEN 355 E is designed for the challenges of continuous operation. All of its components are optimized for uncompromising durability. One of its special features is the Z kinematics of the boom head - a familiar feature of wheel loaders. This hugely increases the breakaway torques in scooping operation, making the machine a reliable powerhouse in recycling and biogas applications in particular. A 103 kW diesel engine keeps the perfectly coordinated compact drive transmission running smoothly. The transmission distributes the drive power to suit the requirements of the application in question - either more torque for high push and pull forces or higher driving speed. «



### Industrial loader

- Made for tough applications
- Multi-shift operation possible
- Not a „standard“ telehandler

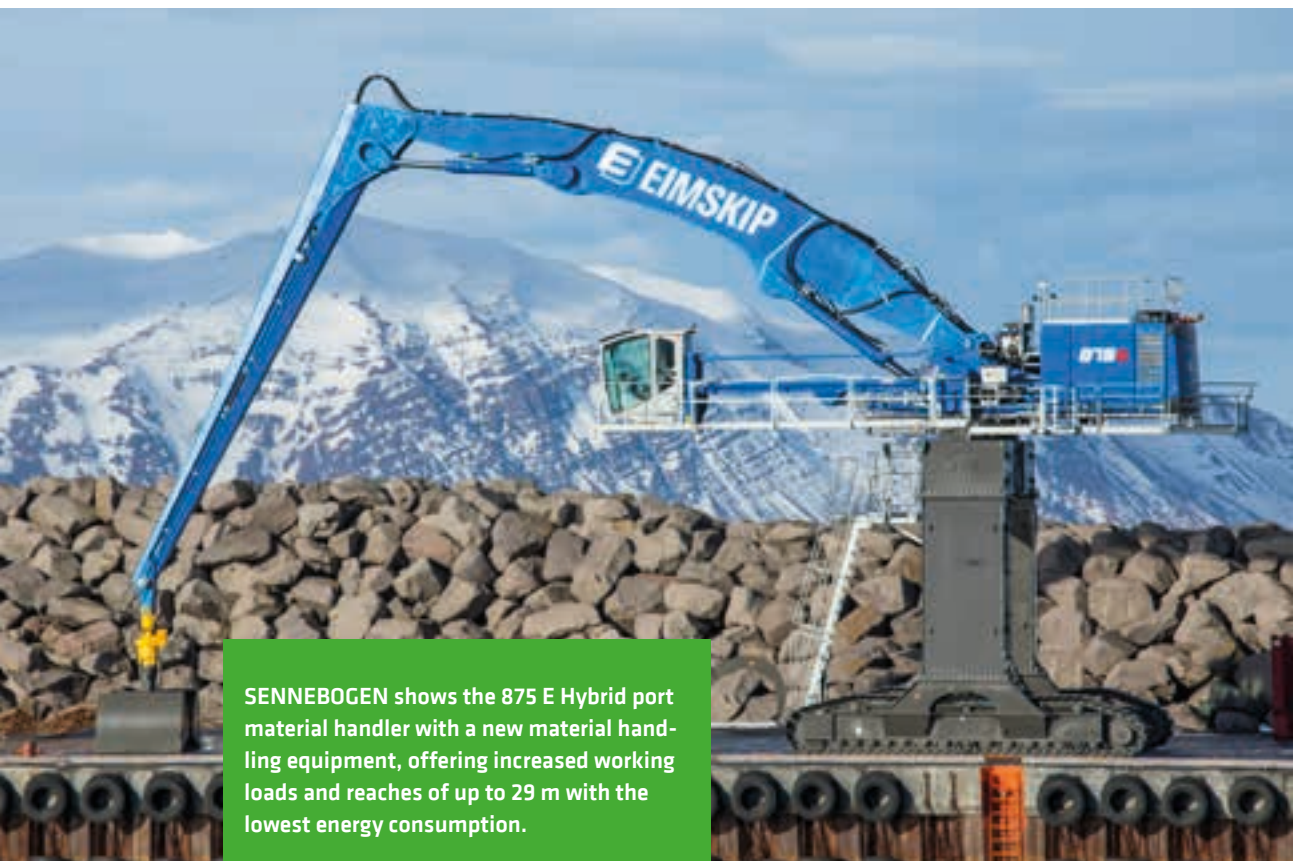
### Real USPs

- The only elevating cab on a loader in the market
- Extremely robust steel design - especially for the boom
- Z-Kinematics for wheel loader break-away forces

### Strong & multifunctional

- Small turning radius, flexible in tight conditions
- Multifunctional use (hydraulic functions)
- High-torque engine
- Organized engine compartment with perfect service-access

# SENNEBOGEN GreenHybrid



SENNEBOGEN shows the 875 E Hybrid port material handler with a new material handling equipment, offering increased working loads and reaches of up to 29 m with the lowest energy consumption.

# The Port Handling Expert:

Achieve now even more with the SENNEBOGEN 875 E Hybrid

## 875 E

### »FACTS



**395 kW** (Stage IIIa)

**391 kW** (Stage IV)

**390 kW** (Electro)



**140-165 t**



**21-29 m**

#### Hybrid

- 30 % Energy savings
- Using standard hydraulic components

#### Equipment

- Up to 29 m reach
- Durable, robust box design
- Optional with port stick  
Big choice of cabs and cab elevations Maxcab,
- Maxcab Industry or Mastercab
- E270, E300/260 or Skylift 700/9000  
Modular:  
Big choice of variations for the customer's needs

The SENNEBOGEN 875 E Hybrid is on display at bauma. It is the latest generation with an new boom concept and the tried and tested Green Hybrid System.

There is a newly developed boom concept that, thanks to optimized strength and efficient weight reduction, provides even more potential for use in handling bulk and general cargo. The SENNEBOGEN 875 E Hybrid now also has three equipment configuration options: 26 m, 27 m and the longest at 29 m. The advantages of the new working load optimized boom systems for customers are clear. On the one hand there is the increased reach for obtaining a proved, higher working load and, on the other hand, the shorter equipment options can be used with significantly raised working loads to move even heavier loads. Customer-specific equipment options, such as the comfortable, spacious cabs, cab elevations and the Green Hybrid energy recovery system, remain unchanged. Operating cost savings of up to 30 percent have been verified over many years. <<





In cooperation with Bosch Rexroth, SENNEBOGEN has developed a new electric drive concept for its Pick & Carry material handlers. At bauma, the SENNEBOGEN 735 E will be the first machine to feature the innovative Green Efficiency Drive.

**At bauma 2019, SENNEBOGEN will be showing a world premiere in the field of electrification: a Pick & Carry material handler with electric drive. The prototype is currently being tested in real operation and will be ready for series production by the end of 2019.**

The machines of the 7 Series are designed for continuous operation. Electrical solutions have therefore not yet been efficiently practicable due to the long travel distances. SENNEBOGEN is presenting a new drive concept at bauma. All work processes continue to function hydraulically, driven by an efficient Stage V diesel engine, while the undercarriage is driven electrically. Bosch Rexroth and SENNEBOGEN, two long-standing partners in the field of drive and application technology for material handlers, have formed a cooperation for the development of the electric travel drive. The system solution based on Bosch Rexroth components was jointly developed into a marketable product and will be launched on the market by SENNEBOGEN under the name <Green Efficiency Drive>. The Pick & Carry 735 E will be the first machine to receive the new technology for electric driving. In addition to increased efficiency and lower fuel consumption, the development team achieved noise reduction and more dynamic driving and braking with this concept in the pre-production series. In the first applications, efficiency increases of up to 30 % were achieved compared to the previous diesel-hydraulic drive. The new drive concept is currently undergoing intensive testing and will be ready for series production for the first models by the end of 2019.



# Pick & Carry timber handling with electric drive



## 735E

### »FACTS



231 kW (Stage V)  
228 kW (Stage IIIa)



43.9 t



11.3 m

### Pick & Carry machine

- Design, especially made for timber and log handling industry
- Smooth but powerful acceleration
- Robust undercarriage for trailer application

### Attachments

- 11.3 m attachment enables high timber stacks
- Perfect driving comfort due to boom damping

### Cab

- Robust protective grid ensures high safety standards
- Rigid cab elevation up to 1.0 m or 1.5 m
- Ideal overview in all directions, even to the right side

### Comfort and Safety

- Camera system for the right side and rear, with separate colour monitor
- Central lubrication for upper- and undercarriage
- Automatic steering- and driving direction control

### Uppercarriage

- Large sized cooling system incl. fan reversal
- Strong slewing ring with external teeth - 360° endless rotatable
- Low front and rear end radius for optimal manoeuvrability, especially in narrow alleys

### Undercarriage

- New electric drive concept for maximum fuel saving
- Smooth but powerful acceleration via all-wheel drive concept
- Preparation for trailer coupling
- Maximum stability due to 8-fold tires



## Recycling machine

- Designed for fast and direct sorting applications
- Compact thanks to 18 t operating weight for easy transport

## Availability

- Optimised coolers for 24/7 operations with full performance in dusty environment or indoor applications
- Reversible fan
- No „Over-Engineering“

## Attachments

- Harmonized with the machine's requirements to guarantee fast work cycles

## Operator comfort

- Multicab with continuous front window
- Up to 5.3 m eye level with the E240 cab elevation

## Equipment

- Up to 9 m reach
- Durable, robust box design
- Boom dampening system
- Safety check valves

## Cab

- Multicab with curved and continuous front window
- Joystick steering for the best view in the work area
- Cab elevation

## Undercarriage

- Robust undercarriage ensuring high stability even when working freely on wheels
- Optional: push blade
- Crawler or 4-point pedestal available



# 817 E: Compact, flexible, versatile - also electric!

## 817E

### »FACTS



92 kW (Stage IIIa/IV)



17.2 - 18.6 t



9 m

Specifically designed for the needs of recycling and waste management: the 817 E. Like all SENNEBOGEN material handlers, the 817 E is also available with various drive solutions.

With an operating weight of around 17 t and equipment lengths of up to 9 m, the 817 E is predestined for indoor applications. SENNEBOGEN has been a pioneer in electric drives for decades and always offers several options. For example, electric machines with powerpack can operate fully electrically and supply themselves with power via a diesel generator in the rear only to bridge the distance to the next supply point. The power supply via ceiling or via cable drums has also proven itself in numerous applications and can also be implemented for the 817 E at any time. ◀





For decades, SENNEBOGEN has established itself in the industry as specialist for electro-hydraulic drive concepts. At bauma, the 830 E electric material handler will be shown with cable drum and additional powerpack.





# Electric machines in material handling - maximum flexibility with powerpack

For around 30 years, SENNEBOGEN has been the innovation leader in electrically driven material handlers. In addition to savings of up to 50% on operating costs compared with conventional diesel engines, electric machines offer further cost and efficiency advantages. SENNEBOGEN is presenting the 830 E-series with 160 kW electric motor and integrated powerpack for maximum flexibility as a representative of its extensive model range.

Each machine from the current product portfolio can be fitted with a customer-specific electric motor ex works. The advantages of electric material handlers are obvious. Reduced wear enables considerably longer service intervals compared to diesel engines. At the same time, oil and filter changes are no longer necessary. In addition, the electrically operated machines are always ready for operation and work around the clock without any fuel stops. At bauma, SENNEBOGEN shows the 830 of the current E-series, one of the best-selling material handlers as electric version. Equipped with a 160 kW electric motor and mobile undercarriage, the machine combines maximum flexibility with the advantages of the electro-hydraulic drive. For this purpose, the cylindrical cable drum was mounted directly on the undercarriage. To bridge distances without a cable connection, SENNEBOGEN has developed a diesel powerpack installed in the counterweight and has already successfully established it in various machine types from 818 to 840. «



## 830E

### »FACTS



164 kW (Stage IIIa)

168 kW (Stage V)

132 kW (Electro)

160 kW (Electro)



38 - 43.5 t



14 - 17 m

### Sliding door

- for convenient entry and exit

### Ideal overview

- and safe working height thanks to stable cab elevation

### High stability

- due to the broad outrigger area

### Up to 50 % energy savings

- due to the electric drive

### Electro-Mobility

- with integrated Powerpack





SENNEBOGEN is showcasing their demolition material handler flagship at bauma, the 870 R-HDD.



# Even more reach in demolition:

## SENNEBOGEN 870 E Longfront material handler with 36 m



The 870 E demolition material handler is a uniquely special machine that can be called into action when high levels of reach and precision are required for the demolition of buildings and industrial plants. SENNEBOGEN are now offering, ex works, the 870 E with the original 33 m long attachment or, alternatively, featuring a longer 36 m version with a working load of 4 t.

The new, longer attachment consists of a 19.5 m basic boom with a quick-change system and a 2.5 m intermediate boom, along with the 12.5 m stick with reversing mechanism. This gives the equipment an overall vertical reach of 36 m and a boom range of 20 m. 33 m long equipment is also available. Special focus is also afforded to the particularly stable construction of the machine and the extremely robust finishing of all the components. Thanks to the telescoping crawler undercarriage, a 4.2 m and 2.6 m track width can be adjusted. The attachment and the rear ballast can be removed in order to transport the 155 t machine. This reduces the transport weight to 66 t. «

# 870E

## »FACTS



261 kW (Stage V)  
268 kW (Stage IIIa)



114 - 117 t



33 m / 36 m

### The demolition machine

- Reach up to 36 m
- Strong hydraulic system for attachments up to 4 t

### Mobile

- Simple transport in 3 parts

### Equipment

- 33 m und 36 m available
- Massive construction

### Attachments

- Up to 4 t load

### Cab

- Maxcab, 30° tiltable
- Slide door
- FOPS grid

### Undercarriage

- Can be telescoped hydraulically
- Transport incl. tracks

### Counterweight

- Removable
- Self-assembly system

# SENNEBOGEN 895 E sets benchmark:

We present the world's largest material handler

**SENNEBOGEN presents the new 895 E, the largest material handler ever built, at bauma 2019. The gigantic machine is impressive with its operational weight close to 400 t and a reach of up to 40 m.**

The Bavarian machine manufacturer SENNEBOGEN has taken things a step further with the world's largest material handler. The new giant bears the title 895 E and will lead the way for the green port material handler product range.

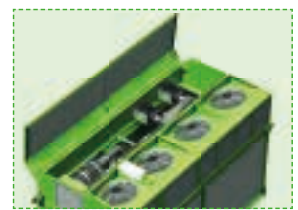
The development of the new material handler has focused particularly on energy efficiency and the driver comfort that SENNEBOGEN is known for. The 895 E comes, therefore, with an energy recovery

system and in multiple drive versions. Multiple, adjustable levels of the cab elevation are possible to give drivers the optimum view over the work environment.

Interested customers can register for a factory tour and a transfer to Straubing via their corresponding SENNEBOGEN sales and service partner. Incidentally, there is another advantage of paying a visit. As well as the 895 E, the latest version of the 9300 E mobile harbour crane will also be on display in Straubing. «



**Diesel  
or Electro**






Picture showing maintenance roof opening



Visit machine  
in Straubing!

# 895E

## »FACTS

-  563 kW (Stufe V)  
568 kW (Stage IIIa)
-  ca. 390 t
-  28 - 40 m

### World`s biggest material handler

- with more than 705 kW system power

### Specialist for all harbour applications

- Bulk handling up to 40 m
- Container handling up to 28 m
- Coil-Handling up to 50 tons in close-up range
- New walk-in Powerpack-unit with excellent accessibility to all maintenance points

### Modular setup

- Working equipment K28, K32, K35, K38, K40
- Crawler-, mobile-, railway gantry
- Diesel or Electric powered

### Skylift 1100

- Best overview at 22 m eyelevel

### GreenHybrid

- Up to 35% energy savings

### High load capacity, reliable working

- Up to 40 m reach and 15 t load capacity

### New walk-in Powerpack-unit

- Walk-in engine compartment includes all drive and control components
- Excellent accessibility to all maintenance points

SENNEBOGEN presents the world's largest material handler, the 895 E, during bauma and it will be on display at the factory premises in Straubing.

With the **SENNEBOGEN 9300 E** we offer a modern mobile harbour crane with a reach of 40 m and comfortable lifting capacities of up to 90 t. We show the current generation of the 9300 E at our premises in Straubing.

As a mobile harbour crane, the SENNEBOGEN 9300 E is designed for the demanding handling of general cargo and bulk goods. The machine can be equipped with both 2-rope and 4-rope technology. With a working radius of 40 m, the crane serves ship sizes up to the Panamax class for bulk cargo handling as well as standard and feeder ships in container handling. With an eye level of 21.2 m, the driver has an ideal view from his comfortable and spacious Portcab. The ascent is even more comfortable, as the driver already enters the cab at a height of just under 9 m and can easily reach his ideal working height thanks to the Skylift 1100 cab elevation. The Powerpack, which accommodates all drive components in addition to the engine, is not only easily accessible and offers sufficient space for all service activities, the roof can also be opened for safe and easily accessible maintenance of large components. The engine itself is available in two versions as a Stage V diesel engine with 563 kW or an efficient electric motor with 615 kW output. «

### Focus on simplicity, security and reliability

- Maintenance friendly powerpack
- Reliable and proven hydraulic components

### General

- 4-rope grab or with 2-rope motor grab
- Max. jib working radius 40 m
- Max. load capacity 90 t (metric)
- Designed for cargo and bulk handling

### Comfort cab

- Optimal view, variable height
- Userfriendly access height of 9 m
- Eye level max. 21.2 m

### Powerpack

- Interior ventilation with generously dimensioned filter mats
- Powerful diesel-hydraulic or electro-hydraulic drive
- standardized component arrangement
- Air-conditioned control cabinet installation

### Boom

- 2-piece flanged
- Central lubrication standard
- Boom adjustment by hydraulic pressure cylinder

### Undercarriage

- Steering by synchronized hydraulic cylinders
- Min. steering radius: 5.6 m
- Hydraulically adjustable outriggers

Visit machine  
in Straubing!

# 9300E

## »FACTS



563 kW Diesel (Stage V)

570 kW Diesel (Stage II)

615 kW (Electro)



90 t



41 m

Diesel  
or Electro

# Mobile Harbour Crane 9300 E:

## Flexible use combined with optimum ease of maintenance

### Port crane

- Designed for harbour application
- 90 t load capacity with up to 19 m reach
- Designed for 2-rope and 4-rope grab



Picture showing maintenance roof opening



The 9300 E from SENNEBOGEN scores with its high load capacity over the entire working area; the mobile undercarriage with all-wheel steering with 14 wheel sets ensures manoeuvrability and low ground pressure.

With the Skylift 1100 cab elevation, the 9300 E from SENNEBOGEN is a novelty in the field of Mobile Harbour Cranes. Thanks to the adjustment, the driver moves comfortably and safely to the optimum working position, and in the lower position the machine is moved safely in the harbour area.

In addition to the engine, the Powerpack contains all the relevant machine components and is easily accessible for maintenance and can even be reached via a roof opening.

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# 200 t Star-Lifter Crawler Crane:

## SENNEBOGEN 5500 in the new G-series

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**With the 5500 G, SENNEBOGEN is bringing its first G-series model to market. The new 5500 G will be available in two versions with either a 180 t or a 200 t maximum working load.**

These modifications to working load and engine generation, as well as the new Maxcab, are the start of the G-series launch. The new 5500 crawler crane comes with a powerful 283 kW Stage V diesel engine that reliably drives the two 160 kN winches. Depending on the boom configuration, the working load values

can be increased by between 15 and 50 percent, thanks to the newly developed and strengthened boom construction and the increased ballast. The new 5500 G, therefore, offers all customers an even wider range of applications.


A modular boom design permits numerous equipment variants with lengths up to 104 m including luffing jib. The crawler tracks can be easily removed for transport, after which the base machine, at just 3.0 m wide, can be easily transported. 

Illustration shows 180 t version of the E-series







# 5500 G

## »FACTS



283 kW



180 t / 200 t



104 m

### Self-assembly system

- Quick and easy mounting/demounting in just a few steps

### 180 t or 200 t lifting capacity

### Best overview and safety

- Cab hydraulically tilttable by 20°

### Counterweight options/inclination load charts

- Option: additional crane test and LMI program for operation with reduced counterweight or with/without carbody counterweight
- Option: 2°/4° inclination load charts
- Option: Offshore load charts

### Very low service costs

- Easy and well-arranged design
- No „Over-Engineering“ / service friendly
- Good accessibility to the components

As the first machine in the new G - series, the SENNEBOGEN 5500 G not only boasts an increased working load of up to 200 t, but also comes with the latest stage V engine technology just in time for bauma 2019.

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# Largest Telecrawler in product range:


## SENNEBOGEN 6133 E new at bauma

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**SENNEBOGEN expands the telescopic crane product line in 2019 with an additional top-of-the-range model. The new SENNEBOGEN 6133 E is initially launching as a telescopic crawler with a reach of 52 m and a maximum working load of up to 130 tons. Despite its size, the flexible telescopic crane is impressively easy to transport thanks to its telescoping undercarriage and simple self-assembly system.**

In contrast to the boom system used to date, the new 6133 E is fitted with a 6-piece boom as a result of its equipment length. As is usual in the industry, the individual elements move within a cylinder cycle system. This then results in the new machine with a maximum boom length of 52 m. The vertical reach can be extended to almost 70 m with the optional 15 m fly boom. The new SENNEBOGEN 6133 E is equipped with two powerful 125 kN winches and a Maxcab comfort cab that can be tilted by 20 degrees.

The telescopic crawler undercarriage means that it can be retracted to a total machine width of less than 4.0 m for transport and travel. When extended, the machine has excellent stability and good maneuverability thanks to its 6.30 m track width. With the aid of the innovative self-assembly system of the Starlifter telescopic undercarriage, the machine can be set up and taken down in a few steps, within a short time and without the need for an auxiliary crane. Once the traveling gears and the ballast have been dismantled, the transport width is a mere 3.0 m. «



**SENNEBOGEN's new flagship telescopic crane will be showcased for the first time at bauma: the SENNEBOGEN 6133 E has a reach of 52 m and can handle a working load of up to 130 t.**



## Strong load and lifting capacities

- Max. load capacities: 130 t at 3 m
- Max. boom capacity: 52 m
- Max. boom length with jib: 67 m

## Powerful Boom System

- Pin-Boom
- 5 telescopic sections
- Fast telescoping

## Strong crane winches

- 120 kN line pull in 7th layer
- Rope speed: 0-115 m/min

## Outstanding maneuverability and terrain performance

- Strong drives for higher travel speed
- High gradeability

## Maxcab Operator cab

- Hydraulic 20° rear tilt
- Option: Hydraulically elevating cab by 2.7 m

# 6133E

## »FACTS



164 kW (Stage IIIa)

186 kW (Stage V)



130 t



52 m + 15 m

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# New 100 t class Duty Cycle Crane

For demanding applications beyond special foundation

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With the new SENNEBOGEN 6100 E, we are expanding our product portfolio to include a new class with an operating weight of 100 t and a wide range of applications from special civil engineering and mining to soil compaction and drop ball and demolition operations. The machine thus ranks between the existing 70 t and 140 t duty cycle cranes.

The two 20 t free fall winches of the SENNEBOGEN 6100 E already provide impressive pulling force in their standard version. As an option, the winches are also available in the heavy 27.5 t and 30 t versions. The SENNEBOGEN 6100 E can be individually configured to customer specifications with a wide range of equipment options. Thanks to the telescopic crawler undercarriage with removable undercarriages, not only different track gauges can be easily achieved, but the transport weight can also be reduced to less than 40 tonnes.

The machine is being launched on time for bauma in the latest engine generation of exhaust stage V. In addition to the 451 kW stage 5 engine, a stage III engine variant with 447 kW is also available. Safety for the driver and operator is also a top priority in the new 6100 E. Numerous catwalk options, a fall guard on the boom or a surrounding upper carriage railing are just a few examples of the equipment available. 

## 6100E

### »FACTS



451 kW (Stage V)

447 kW (Stage IIIa)



100 t



63.5 m



### **Versatile use**

- Diaphragm wall grab
- Casing oscillator
- Clamshell / Dredging
- Leader application
- Drop Ball
- Dynamic Compaction
- Crane work

### **Different counterweight options**

### **Special-purpose solutions upon request**

### **Tele-Undercarriage with removable tracks**

- Different track variants
- Crawlers removable: Transport weight approx. 59 t with crawlers
- Transport weight approx. 39 t without crawlers

### **Minimal swing radius**

- Shortest in this class: 4600 mm

### **Different winch options**

### **Safe access**

- upper carriage railing
- Walkaways with railings
- Fall protection on the boom

The new SENNEBOGEN 6100 of the E-series convinces with a wide range of applications from special foundation engineering to mining and impresses with the highest safety equipment.



The new SENNEBOGEN 670 of the E-series convinces with a wide range of applications from special foundation engineering to mining and impresses with compact transport dimensions.

### Versatile usable

- HD-Operation: diaphragm wall, casing oscillation, dredging, dragline, leader operation

### High diversity in accessories

### High rope speeds

### Different winch options


### Special-purpose solutions upon request

### High slewing moment for HD applications

- Two slewing gears
- Option: reinforced slewing ring

# 670E

## »FACTS

 321 kW (Stage IV)

 70 t

 56.9 m

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# Flexible Multitalent:

## 70 t Duty Cycle Crane for maximum versatility

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With the SENNEBOGEN 670 of the E-series, SENNEBOGEN is expanding its product portfolio to include a new 70 t duty cycle crane, which is particularly impressive due to its easy transport and versatile job applications.

The 70 tonne duty cycle crawler crane with its robust construction, high-performance multi-circuit hydraulic system and powerful slewing drive is particularly suitable for special civil engineering applications. Applications with a leader or diaphragm wall grab up to 2.5 m<sup>3</sup> bucket capacity can be realised just as reliably as the operation of hydraulic casing machines with rope grabs in well construction or special civil engineering.

Two 16 t free fall winches ensure optimum pulling force. Optionally, these are also available in the heavy 20 t version. With maximum boom lengths of up to 56.9 m, optional jib head and fly boom, the crawler crane is also ideally equipped for crane operation. ◀





Compact dimension and flexible in use as mobile version...



... and easy to transport, thanks to 2.53 m transport width with retracted crawler undercarriage...



# The 613 E: 16 t Telescopic Crane

with elevating cab and minimum transport dimensions

## 613 E


### »FACTS

 92 kW (Stage IV)

 16 t

 24 m

With the SENNEBOGEN 613 E-series as a compact crane with mobile undercarriage or crawler tracks, the Bavarian machine manufacturer offers a unique machine class. The crane convinces with comfortable working loads up to 16 t, compact dimensions for use on construction sites and offers an attractive alternative to many other crane concepts thanks to the standard elevating multicab.

Its compact dimensions and simple and economical transport have made the SENNEBOGEN 613 a popular helper for many construction companies for many years and an interesting machine for the rental fleet. Whether in the mobile version or with crawler undercarriage, the machine impresses with its robust construction, the standard full-power boom, 16 t working load and 18.8 m boom length. With a transport width of only 2.53 m, the 613 E can be easily and cost-effectively transported by low-bed trailer. Of particular interest: the reduced width of the crawler undercarriage means that transport approval is no longer required. The height of the cab can be adjusted by 1.75 m and provides an excellent overview of the working area. 

#### Flexible in operation

- Main boom: 14.6 t / 18.8 m (+5.0 m fly boom)
- Working platform
- Fork
- Hydraulic Grab

#### Best overview and safety

- Radio remote control (option)
- Hydraulic elevating cab (1.75 m) for an optimum overview in series

#### Easy to transport

- Transport width: 2.55 m (Mobile) 2.53 m (Crawler)
- Transport height: 3.19 m (Mobile) - 2.85 m (Crawler)
- Transport length: 8.69 m (Mobile) - 8.39 m (Crawler)
- Transport weight: 19.7 t (Mobile) - 24.6 t (Crawler)

#### Extremely compact

- Rear radius: 1,990 mm (counterweight)
- Working width: min. 2.53 m - max. 4.40 m

#### Road use certification possible

# Operator license please!



Do machine drivers need training?

**Yes, not only does driver training make sense, it is also required by law. Although different rules apply across Europe, it is good practice for all employers to ensure their machine drivers are trained. A good option for doing this is the earth-moving machinery or crane operator's license available, for example, from the SENNEBOGEN Academy in Straubing.**

Every machine is only as good as its operator, and so for this as well as for safety and insurance reasons, they should have the best possible training.

**Do drivers really need to be trained in operating cranes and material handlers or will years of experience suffice?** This question is posed by owners and operators alike. There are, however, rules and regulations in Europe that are quite clear when it comes to the training of operators. Work Equipment Directive 2009/104/EC specifies the use of work equipment. It mentions the „reasonable instructions to be provided that must also indicate the risk associated with the use of the equipment.“ Thus, employers have an obligation to train their employees accordingly.

**Operator license for material handlers and cranes: theoretical and practical training** In its academy SENNEBOGEN offers regular opportunities to acquire a valid operator's license as a result of a two-day

seminar. Participants will gain the expertise and skills required to operate these machines and obtain their operator licenses for earth-moving machinery. Training is performed on a skill course and inclu-



On offer at the SENNEBOGEN Academy: operator license for material handlers and cranes. Individual training in theory and practice, as well as a comprehensive training site offer ideal conditions for successful training.

des both driving as well as the safe positioning of loads during handling operation. The training course follows the conventions of the German Industrial Safety Ordinance, Technical Rules for Operational

Safety (TRBS) 2111, German Social Accident Insurance (DGUV) Regulation 1, DGUV Policy 309-003 and DGUV Policy 100-500.

Upon completing a final theoretical and practical exam, trainees will obtain their operator license and will be considered „instructed persons“.

**What should I, as an employer, take into account if I need training for my employee?**

It is always worth taking into account, in particular, the required certification for operator training and licenses. The SENNEBOGEN Academy, for instance, is regularly re-certified to hold international operator training courses based on DGUV (German statutory accident insurance) policy 309 – 003 and ISO 15513 / SAE J 1238. Therefore, the certificate of professional competence issued is also valid internationally.

**Operator license with added value from certified trainer**

Driver training also offers the opportunity to test the machines in a wide variety of applications under real-world conditions. Topics such as fuel-efficient traveling, handling in a manner that goes easy on the machine, and efficient use of resources can be demonstrated in an understandable manner. «





# WE ARE HAPPY TO SEE YOU!

The SENNEBOGEN bauma team 2019





Already in February, we prepared for the trade fair together at a dealer meeting in Straubing, studied machine details, exchanged experiences and tuned ourselves for the big event. All this was done for you, so that we can give you the best possible service at bauma.



#greenheartofbauma



# GO SHOPPING!

[WWW.SENNEBOGEN.COM/SHOP](http://WWW.SENNEBOGEN.COM/SHOP)



SCALE MODEL 355 E

No. 299 239



SCALE MODEL 818 MOBILE

No. 299 237



SCALE MODEL 830 MOBILE

No. 299 238



SCALE MODEL 6140 HD  
WITH DRAGLINE BUCKET

No. 299 240



SCALE MODEL 6140 HD  
WITH DIAPHRAGM WALL GRAB

No. 299 242



SCALE MODEL 6140 HD  
WITH CLAMSHELL GRAB

No. 299 241

**10 new scale  
models at bauma!**



**SCALE MODEL 613 MOBILE**

No.

299243



**SCALE MODEL 613 CRAWLER**

No.

299244



**SCALE MODEL  
5500 STAR-LIFTER**

No.

299247



**SENNEBOGEN TRUCK**

No.

299249

# »IMPRINT

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