



PURPOSE-BUILT

Waste and recycling
material handlers

SENEBOGEN®
Thinking Beyond the Machine



A productive, efficient and safe solution for waste

For decades, Sennebogen has supplied material handlers to industry sectors that include waste, scrap, ports and logging. Our business has grown within these diverse sectors by listening to our customers' needs—increasing production, providing standard safety features that go above and beyond our competitors' and offering electric-driven green solutions that support their company visions.

Operators in the waste, postconsumer recycling and C&D processing sectors often have believed that material handlers were not for them. We've shared the story here of an industry leader who learned otherwise and benefitted.

Our machines help to lower costs, increase production, reduce downtime and improve safety. We have a complete line of material handlers purpose built for use in tipping floor operations and at processing facilities.

As a family-owned and customer-driven organization, we appreciate that our customers move our company forward. By listening to our customers, we have learned how important it is to respond quickly to machine service needs. When your machine is down, your operation stops.

For this reason, Sennebogen is continuously enhancing our support network. We have a network of world-class heavy-equipment dealers and nearly 100 additional authorized service providers (ASPs). Additionally, we have a team of factory technicians ready to fly out, at no cost, to any customer site in the event they are needed.

Sennebogen material handlers and heavy demolition machines deliver lower operating costs per hour and incorporate safety features that lead the industry. Our lower operating costs are achieved through faster cycle times and optimal fuel efficiency to maximize profitability.

Hydraulically lifting cabs ensure superior visibility, allowing operators to prevent unwanted material from entering process equipment and delivering unmatched job site visibility. Our extended reach eliminates unnecessary machine movement, increasing flexibility and productivity.

We continue to invest in supporting our customers. Sennebogen North America, headquartered in Stanley (Charlotte), North Carolina, carries \$48 million in spare parts inventory and maintains 98% same-day parts availability!

Our facility boasts a technician training center. We remain the only manufacturer of material handlers that offers the same level of training to our customers as we provide to our dealers and ASPs, free of charge. With hydraulic-over-hydraulic controls, no laptops or software are needed to troubleshoot a Sennebogen. This allows customers to service their own machines, increasing uptime and lowering operating costs.

We invite you to explore the Sennebogen product portfolio and to tour our North American headquarters. It would be an honor to be considered when next upgrading your material handling capacity. We look forward to earning your business and forming a long-term partnership.

Sincerely,
Constantino Lannes
President & CEO
Sennebogen LLC



Leading Through INNOVATION

SENNEBOGEN HAS A RICH HISTORY AND, IN JUST OVER HALF A CENTURY, HAS DEVELOPED INTO A WORLD-CLASS MANUFACTURER.

Sennebogen has been active in North America for more than two decades, delivering innovative machinery driven by a uniquely simple design approach. Since the early 2000s, Constantino Lannes, president, has led the company through years of continued growth.

We offer a customer-centric vision focused on building a world-class service and support network, heavily investing in parts inventory, implementing free customer technician training and keeping the Sennebogen product simple to work on and free of electronics.

The company's thirst for knowledge pushes it to learn about its customers' needs and what's required for them to be profitable. Standard machines often are adapted to meet those requirements, ensuring an unusual return on investment.

Sennebogen has adhered to a simple hydraulic-over-hydraulic operating system. No computers mean the machines are easy to troubleshoot and service, minimizing the need for costly dealer service calls.

Sennebogen's philosophy is to understand its customers and to provide comprehensive service and support to ensure maximum uptime reliability and performance. ■



1965



1976



1996



1968



1987



2004

A glance at Sennebogen's history

- 1952** Erich Sennebogen founds the company at the age of 21.
- 1959** Sennebogen develops the S803 material handler for agricultural purposes and for the construction industry.
- 1969** Sennebogen develops the fully hydraulic duty-cycle crane, SK15, the first of its kind in the world.
- 1982** We release our first pedestal-mounted scrap handler.
- 1990** We introduce the first pedestal-mounted material handler on a crawler under-carriage.
- 1996** Sennebogen introduces the Green Line material handler; it is painted green and focuses solely on material handling.
- 2001** Sennebogen establishes its North American headquarters.
- 2002** We are formally acknowledged for 50 years of manufacturing innovation and excellence.
- 2003** Constantino Lannes joins as president & CEO of Sennebogen LLC.
- 2007** Sennebogen becomes the market-share leader in material handlers sold in the USA.
- 2009** Our 54,000-sq.-ft. headquarters, parts and training facility opens in Stanley, NC.
- 2013** Responding to continued growth and customer demand, the Stanley facility expands to 100,000 sq. ft.
- 2014** Sennebogen furthers its commitment to training by expanding one of America's premier OEM training centers for heavy equipment. We remain the only manufacturer to offer our customers the same free training we offer our dealers.
- 2019** Sennebogen launches the 895, the largest hydraulic material handler in the world.

SENNEBOGEN Photo Gallery

PURPOSE-BUILT WASTE AND RECYCLING MACHINES AT WORK ACROSS THE INDUSTRY



An **818** easily handles plastic bales in the storage area while another feeds an OCC infeed conveyor. The raised cab increases visibility and safety, while its reach allows easy bale stacking and presorting.

Purpose built for waste and recycling

Processors in the scrap recycling industry have long embraced the advantages of purpose-built material handlers, and their operations and profitability have benefitted as a result.

Operators across the postconsumer recycling, C&D processing and waste industries that continue to use skid-steers, front-end loaders and excavators to handle material and feed processing equipment also can benefit.

Sennebogen introduced the Model 821 in 2013 as a purpose-built material handler for waste and recycling applications. Smaller than traditional scrap handling machines, it was precision engineered for operation under roof.

The Sennebogen line of waste handlers has since been extended, reaching down to the 17-ton 817. These machines offer smaller footprints, lower heights and tighter reaches. At the same time, they deliver superior operator visibility,

▶
A wheeled
**SENNEBOGEN
821E**
electric purpose-built
waste handler.



◀ **SENNEBOGEN 818** in tracked and wheeled formats
equipped with a two-tine grapple and an orange-peel
grapple with 360-degree rotation for maximum control.



low fuel consumption and the agility to quickly sort material when needed.

Because these machines are designed from the ground up as material handlers, they are fast, smooth and efficient. Operators have visibility into processing lines or machinery they are feeding, which allows them to better manage input material.

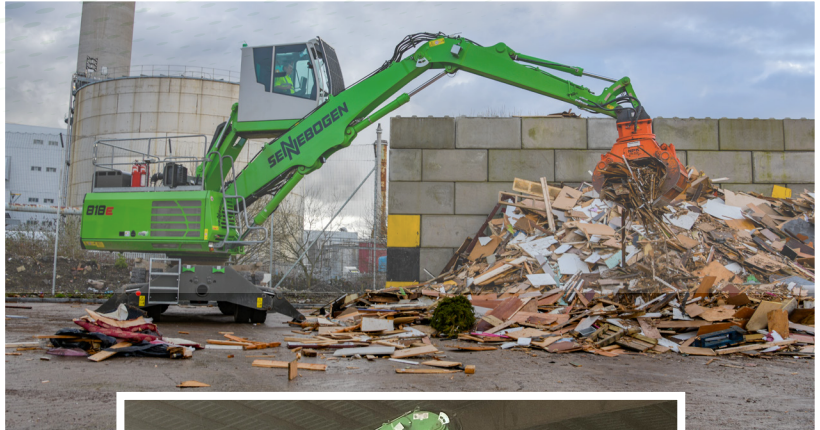
By being able to better control material feeding, operators avoid overloading, uneven loading and the introduction of

contaminants that can damage machinery.

Sennebogen material handlers are also ideal for truck load outs. Their elevated cabs provide a bird's-eye view into trailers to ensure even loading and to prevent damage to trailers during the process.

The Sennebogen line of waste and recycling material handlers delivers flexibility and efficiency while also increasing safety, productivity and profitability.

▶
The **SENNEBOGEN 818** making light work of handling C&D materials.



▶
The pedestal-mounted **SENNEBOGEN 818** is a purpose-built C&D and waste handling machine. Electrical power allows quiet, cost-effective and emissions-free operation.



▶
An electric-power **SENNEBOGEN 821** loading containers.



The **SENNEBOGEN 355** is a uniquely powerful and versatile waste handling machine. Its raised cab and extendable boom increase safety and deliver reach to manage stockpiles and loadouts.



PAYING DIVIDENDS

CHANGING FROM EXCAVATORS TO SENNEBOGEN WASTE HANDLERS PAYS OFF FOR CHAMPION'S MRF OPERATIONS.

A Sennebogen 818 manages incoming OCC at Champion's Dallas facility.

In 2015, Paul Kuhar was deep into opening his new MRF designed specifically for processing C&D materials. It's no coincidence this was the same year he started to switch his loading equipment from traditional excavators to Sennebogen 821 M purpose-built material handlers.

Kuhar, vice president of Champion Waste & Recycling Services, put his first Sennebogen at the firm's commercial MRF in Dallas. Two more Sennebogen machines were quickly deployed to the new C&D plant north of the city. "With an excavator, you're basically at ground level," says Kuhar. "So, you're having to lift material high up in the air to load inside a trailer or into a conveyor belt. Even if you have spot mirrors and things like that, you really don't have the visibility an operator needs."

BIRD'S-EYE VIEW

Champion, a family-owned business, has been operating for more than 20 years. Kuhar has worked in the waste and recycling industry for 27 years, and he continues to explore ways to improve his processes.

"We did everything we could to ensure the guys had some good visibility. We tried putting the excavator on a pad 4 feet high. We put in some big spot mirrors. But you still have that level line of vision, so you really can't see up and above."

Kuhar continues, "Having a Sennebogen cab raise the operator up gives him a really good bird's-eye view inside the trailer and inside

the loading hoppers of the conveyors. He also gets a good view of the tip area and the processing areas. He can be really meticulous on pre-sorting material; if he sees something like a big piece of concrete in the waste stream, he can pull it out."

A "NO-BRAINER" TO SWITCH

Switching to material handlers also opened up new choices for the "business end" of the machine. Champion uses three types of attachments on its Sennebogen material handlers, which can be exchanged quickly: a clamshell grab; a small, fixed grapple; and a larger orange-peel grapple with 360-degree rotation.

Kuhar says operators initially were skeptical about changing from equipment they were familiar with but now appreciate the flexibility.

"What the guys really like about the rotating grapple is they can essentially fluff material to tidy it as they load. If we get material wrapped with banding or plastic wrap, for instance, they can spin and get it to a point [where] it can be loaded safely and correctly.

"We have great people; they can pick out a piece of cardboard the size of a small Amazon box from a pile," he adds. "I mean they're really, really that good. With the elevated cab and the flexibility of the grapple attachments, it was a no-brainer for us to switch."

MAKING A DIFFERENCE

The first three Sennebogen units Champion purchased were used machines, which since have been upgraded with new models leased

from Sennebogen. Kuhar says the company's investment is paying off in several ways.

"The biggest difference is at the infeed. We could be running 25-plus tons an hour. With an excavator, either you're going to overload the screen or underload it. You get a lot of empty conveyor belt going through the plant. With the Sennebogen, we're able to keep the infeed consistently loaded, which loads the screen evenly, maximizing the input feed. As the operator is moving material, he can feather out the stream," Kuhar says.

"On the outbound side, loading residuals, metals and woods, you see a noticeable difference," he continues. "Moving-floor trailers have crossbeam bars up top, and if you're using an excavator, you can't see them. But in the Sennebogen, you can see up and over, and it's literally just hand-in-glove. You can really finesse the loading in those things. We've run over 6,000 tons a month out of one plant."

SAFETY AND SAVINGS

The precision and flexibility of the Sennebogen 821 material handlers also saves wear and tear on Champion's other equipment. The infeed suffers fewer jams, and awkward loads can be adjusted to fill the trailers perfectly level without hitting the sidewalls, maximizing capacity.

"That's a big advantage," Kuhar says. "An excavator using a thumb bucket or a three-over-two bucket is very two dimensional. You can't turn anything. You just drop. We run close to 20 moving floors ourselves and then we have third-party truck guys coming in. We don't want to tear apart our own equipment, of course, but for them, it's a huge deal. That's how they're making their money. The visibility in the Sennebogen with the grapple was a game-changer. It was a big thing for us to make sure their equipment was taken care of as well, and they appreciate it."

LEED BENEFITS

Kuhar and his colleagues are keenly aware of his company's role in environmental initiatives. Champion LEED Green Associates work

with clients to design, implement and divert building materials from landfills. Sennebogen equipment helps them meet their LEED goals.

The 821 M is a 52,800-pound machine powered by a 141-horsepower Cummins engine. Purpose-built, the handlers run with engines considerably smaller than excavators that are optimized to work below grade. "With the cost of diesel, you want to be as efficient as you possibly can," says Kuhar. "The horsepower and the size of the engine on the material handler are both a lot less than in an excavator." The aptly named green machines use fuel sparingly, which means lower costs per operating hour and lower emissions.

The picking and sorting capabilities of the 821s further serve the LEED goals of C&D customers, allowing Champion to increase recovery rates and to provide detailed documentation required to earn LEED benefits.

OPTIONS FOR THE FUTURE

Kuhar says he is open to equipment changes in Champion's future. The current Sennebogen waste handlers are diesel-powered, rubber-tired machines. When he spoke to Sennebogen's Texas distributor, ASCO, they discussed possibly mounting them on an elevated pedestal.

Kuhar says, "Our guys like the versatility and flexibility to move the machine out of the floor and take it over to a different part of the plant. So, we said we'll keep them mobile and keep them versatile."

As he considers an upgrade to the commercial MRF in Dallas and with plans to open an organics facility, changes in applications could lead to changes in platforms. Kuhar is open to pedestal-mounted or electric-drive versions of the 821. "If all it's going to do is load the system, then heck, we have juice here, so let's run electric," he says. "Obviously, there are a lot of benefits to that over diesel."

Whatever the future holds, Kuhar says the discussion of excavators versus material handlers is over at Champion. "I tell people all the time, you know, we've done both. I can tell you that I have zero hesitation about recommending a material handler."



SENNEBOGEN

Service & Support



FROM ITS US HEADQUARTERS CAMPUS IN STANLEY, N.C., SENNEBOGEN PROVIDES UNMATCHED CUSTOMER SUPPORT AND SPARE PARTS AVAILABILITY.

TRAINING FACILITY

Supporting customers is so fundamental to Sennebogen that when it constructed its first facility in 2009, it integrated a state-of-the-art training center. Equipped with multiple classrooms and a fully functioning service bay to work on Sennebogen machines indoors, the facility is one of America's premier OEM training centers for heavy equipment.

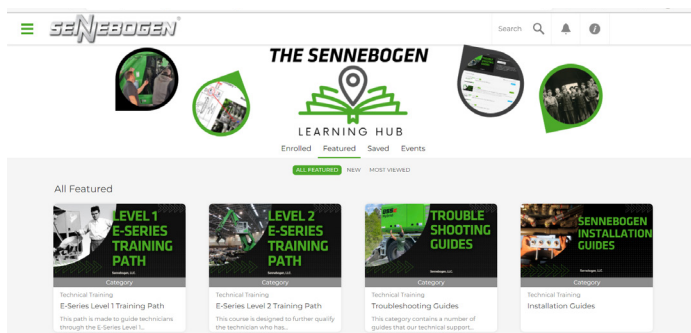
Sennebogen remains the only manufacturer that provides its customers with free training at the same level as its dealers. Training classes are held throughout the year at the Stanley facility.



Learn more about Sennebogen training.

LEARNING HUB

Reaching beyond classroom training, the Sennebogen learning hub is an online portal offering 24/7 virtual learning as well as troubleshooting. The hub is unique in the material handling industry, allowing customers to learn new techniques and procedures while also providing tools to troubleshoot operating issues. The Sennebogen learning hub is available to customers in North America entirely free.



The Sennebogen learning hub offers a variety of resources.



SERVICE & REPAIR PARTS

From major components to routine service parts, Sennebogen's 100,000-sq.-ft. warehouse maintains the largest inventory of material handler parts in the Americas. Sennebogen maintains stocks of every part for every model and type of machine currently in service, with a record of **98% order fulfillment** within 24 hours.

Sennebogen engineering relies extensively on industry-

standard parts for engines, hydraulics and electrical systems. Common service parts can be found easily and affordably through local industrial supply sources.

Sennebogen also works closely with its nationwide network of full-service dealers and authorized service providers to keep the most commonly required service and wear parts in stock for its customers' fleets.

“SMART PARTS”

Sennebogen offers two types of **pre-packaged parts kits** to simplify ordering and stocking and to streamline service calls. Uptime Kits and Preventive Maintenance Kits are all packaged to match specific machine model and series:

- One part number to order
- Save time sorting loose parts
- Ideal for stocking service trucks
- Save costs on common service parts

UPTIME KITS

Each kit combines all the parts and materials required to complete a type of specific maintenance task. Delivered in custom organizers, pre-sorted for easy identification. Its growing list of Uptime kits currently includes:

- Hydraulic service
- Electrical service
- Autolube service
- A/C service
- O-ring kits

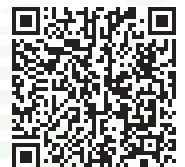


Learn more about Uptime Kits.



PREVENTIVE MAINTENANCE KITS

PM Kits start with a checklist of service parts specified by the factory for each scheduled service interval for your machine model and engine. Eliminate costly picking time to prepare for each service call—simply pull today's PM Kit off the shelf! Available for 250-hour, 500-hour, 1,000-hour and 2,000-hour intervals.



Learn more about PM Kits.

SENNEBOGEN

in the field

SENNEBOGEN HAS INDUSTRY PROFESSIONALS, FULL-SERVICE DEALERS AND AUTHORIZED SERVICE PROVIDERS ACROSS NORTH, SOUTH AND CENTRAL AMERICA.

FULL-SERVICE DEALERS

These sales and service locations are operated by leading independent heavy-equipment dealers. Their Sennebogen-trained sales representatives and service technicians have extensive product line knowledge. This ensures the right machine for the right job with new equipment investments and rapid, experienced machine service when customers need it.

AUTHORIZED SERVICE PROVIDERS (ASPs)

Sennebogen has adhered to a simple hydraulic-over-hydraulic operating system. No computers mean the machines are easy to troubleshoot, but sometimes support and preventive maintenance are required. Sennebogen ASPs offer support service, dispatching Sennebogen-trained technicians fully qualified to work on Sennebogen machines no matter what's required.

REGIONAL BUSINESS MANAGERS (RBMs)

Sennebogen RBMs and applications specialists are direct representatives dedicated to supporting industry operators in analyzing their equipment needs and supporting them in new equipment investments.

SENNEBOGEN LLC

From its North American headquarters campus in Stanley (Charlotte), N.C., Sennebogen stands ready to support clients with more than \$48 million parts inventory, a state-of-the-art technical training center and an extensive team of product, parts and industry professionals.



**ACCESS A FULL LIST OF
SENNEBOGEN CONTACTS.**

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