

SWEDISH PLASTIC RECYCLING'S SITE ZERO PROJECT WILL SET A NEW BAR FOR PLASTIC RECYCLING THE WORLD OVER.

COUNTDOWN TO ZERO

PROJECT MANAGED BY: HAYDEN TURNER

Swedish Plastic Recycling, or Svensk Plaståtervinning as it is known at home, provides Sweden with a nationwide system for the collection and recycling of plastic packaging. The service, which the company offers to companies with an extended producer responsibility, is carried out through Europe's largest and most efficient plant for the recycling of plastic packaging. This plant alone has enough capacity to handle the packaging waste of every household in Sweden.

The recycling firm is owned by Plastbranschens Informationsråd, Dagligleverantörernas Förbund, Svensk Handel and Svensk Dagligvaruhandel, and in turn owns FTI (Förpacknings- och tidningsinsamlingen) together with four other materials companies- Metalkretsen, Pressretur, Returkartong och Svensk Glasåtervinning). From its head office and recycling plant in Motala, the company's 35 employees are play a critical role in Sweden's national recycling infrastructure.

But it is about to take the next step.

Swedish Plastic Recycling has just invested the equivalent of US\$116 million into a new recycling plant, known simply as "Site Zero". When it is complete and operational, Site Zero will be the world's largest plastic recycling facility.

The new site will use the most advanced recycling technologies and have the capacity to recycle any plastic used in Sweden. What is more, this plant will be run entirely using renewable energy, achieving the ultimate sustainability dream- a completely circular plastic economy for the entire country.

Construction on the project, which will be based in Motala, is expected to conclude in 2023. Site Zero will be an expansion of Swedish Plastic Recycling's existing plant, which has already been dubbed the "most efficient on Earth".

"We are doubling our capacity and will be able to handle 200,000 tons of plastic packaging per year. This creates the conditions needed for receiving and eventually recycling all plastic packaging from Swedish households," >>



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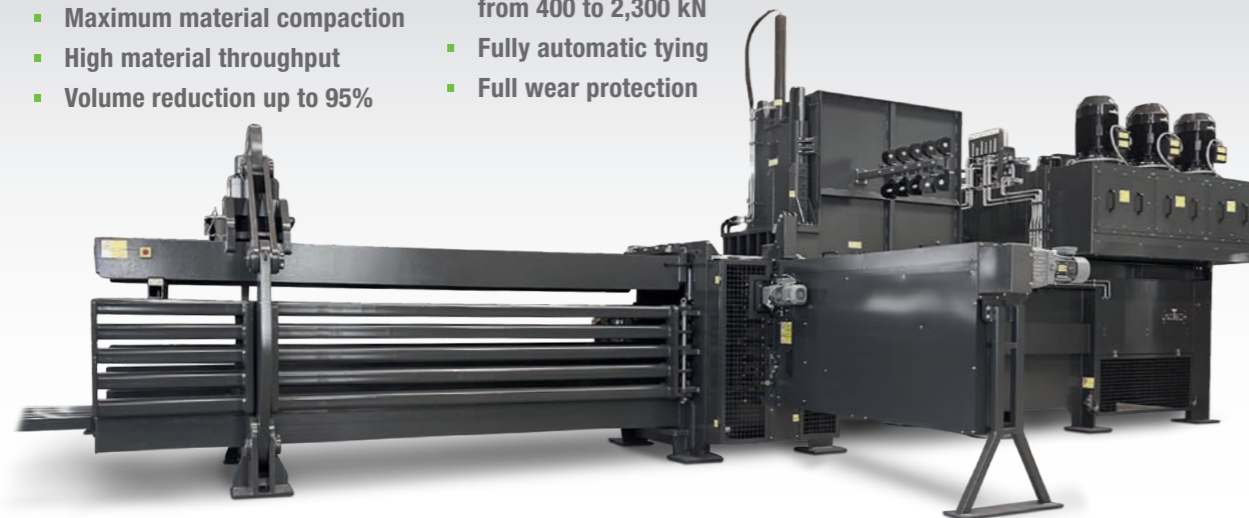
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SUTCO® RECYCLINGTECHNIK GMBH

With more than 480 reference plants worldwide, Sutco RecyclingTechnik GmbH is one of the largest international manufacturers of sorting and treatment plants for the recycling industry. For more than 35 years, the plant manufacturer has been involved in the development, production, assembly, commissioning, after-sales, and maintenance of sorting and treatment plants for various types of waste with the central aim of further increasing the recycling rate.

Together with its six subsidiaries, Sutco has successfully established itself worldwide. Experienced employees and state-of-the-art production facilities realize a wide range of differentiated recycling solutions on this basis.

With the order to build the second plant "Site Zero" in Motala, Sweden, Sutco will realize the largest and most modern plastics recycling facility in the world. Together with the Norwegian engineering firm Mepex Consult and the customer Svensk Plaståtervinning (Swedish Plastic Recycling), the plant manufacturer developed the concept for "Site Zero" over a period of about 10 months, a recycling facility that doubles the current annual capacity with 200,000 tonnes of plastic packaging per year.

Back in 2017, Sutco RecyclingTechnik GmbH designed and built Motala-I, at the time one of the most efficient and modern plastic recycling facilities in Europe. With the next-generation technology, "Site Zero" will now follow and thus, in all likelihood, the world's most modern plastic recycling facility. With "Site Zero", all plastic packaging that accumulates in Swedish households can be accepted and returned to the circular economy in the future. In addition, "Site Zero" will be completely climate-neutral and produce no emissions.

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SWEDISH PLASTIC RECYCLING

Mattias Philipsson, CEO of Swedish Plastic Recycling said of the plant. "The investment creates the prerequisites needed for making Sweden a world leader in plastic recycling. Being able to do it together with our producer customers and owners, who consist of large parts of the Swedish business community, is very inspiring."



UNOTECH® GMBH

Since 2007, the baler manufacturer unoTech® GmbH has been developing, building and distributing high-performance machines for maximum compaction of a wide range of materials worldwide. The baling presses are tailored to the different target markets and specific requirements of its international clients.

The fully automatic unoTech® balers for compacting waste materials such as paper, cardboard, plastics, household waste or tin cans work with pressing forces in a segment of 400 to 2,300 kN and thus achieve volume reductions of up to 95%. Thanks to this maximum material compression, loading weights can be increased by up to 20%.

Edged, durable and highly compressed - these properties form the economic basis for space-saving stockpiling, fast goods handling and cost-effective transport of recyclable materials in the recycling industry.

For the construction of the largest and most modern plastics recycling plant "Site Zero" in Motala, Sweden, unoTech® has again received an order for the delivery of channel baling presses, with which the 200,000 to of plastic packaging produced annually are compressed to the maximum and pressed into optimally transportable bales.

Two unoTech® channel balers of the UPAFLEX® 150 V4/H5 series have already been in use at the "Motala-I" sorting plant since 2018. With pressing forces of 1,500 kN, the presses - one with PET-wire and one with steel-wire tying system - manage bale weights of up to 800 kg of mixed plastic.

With the use of the unoTech® balers, the customer Swedish Plastic Recycling is a significant step closer to its goal of processing all packaging waste generated in Swedish households with "Site Zero".

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ZERO HOUR

The goal of Site Zero is to double Swedish Plastic Recycling's capacity using cutting edge technology and eventually triple the number of plastics the plant receives and recycles. As ambitious as it seems, Site Zero has set its sites no lower than recycling 100% of Sweden's plastic waste. It is a capability that no other recycling facility in the world can boast.

Site Zero's facilities will be able to take packages made up of multiple or composite plastic materials, separate them out and either chemically recycle them, or use them to create new composite products.

Swedish Plastic Recycling is also laying the groundwork to wash and granulate the plastic at the next stage of the plant's development. The goal is for this capability to be in place >>

by 2025, truly establishing Sweden as a cyclical plastic economy.

More than that, Swedish Plastic Recycling is going to use renewable energy sources and carbon capture storage to ensure that Site Zero is a completely climate-neutral, zero-emission recycling plant, even generating its own energy through solar panels on the building's large flat roof.

The site itself will cover approximately 60,000 square metres at the Motala Business Park and will have a receiving capacity of 200,000 tonnes of plastic packaging per year, including all kinds of plastic packaging generated by Swedish households.

The facility's stage of the art technology will enable fully automated processes, with 60 Near Infra-Red (NIR) sensors, roughly 5 kilometres of conveyor belt, and eventually fully washing and granulation capabilities.

A COMPLETE PLASTIC SOLUTION

Swedish Plastic Recycling's current facility processes four types of plastic. When Site Zero's construction is completed, it will have the sorting capacity for 12 types of plastic. These include polypropylene (PP), HDPE, LDPE, PET tray, PET bottles (both coloured and transparent), PP film, EPS, PS, PVC, two grades of Polyolefin mix, metal and non-plastic waste.

Its agglomeration output will include chemical recycling, composite products, and energy recovery with CCS.

Anything left after the sorting process, however small, will be separated out and sent to chemical recycling or will become part of new composite products. Swedish Plastic Recycling has stated that absolutely no packaging will go to incineration.

"There is today no other facility in the world that has that capability," Philipsson has said. "We are also preparing for washing and granulation of the plastic in phase two, which is planned for 2025. Then our entire plastic flow in Sweden can become circular."

In the rare instances that there are types of plastic or other materials that cannot be recycled by Site Zero's facilities, they will be sent to a carbon capture storage facility to prevent the carbon emissions produced during incineration from entering the atmosphere.

Site Zero represents a total investment, from 2019 to 2023, of 1 billion SEK on Swedish Plastic Recycling's behalf, combined with 180 million SEK in financing from the Swedish Environmental Protection Agency (Naturvårdsverket) through the climate investment aid programme known as Klimatklivet.

It is an investment that will set the stage for Sweden to become a world leader in plastic recycling, as well as an example for other nations to follow. More than that, however, what is inspiring about Swedish Plastic Recycling is that it has achieved this working together with its producer customers and owners, including a large part of the Swedish business community. ♻️

"WE ARE DOUBLING OUR CAPACITY AND WILL BE ABLE TO HANDLE 200,000 TONS OF PLASTIC PACKAGING PER YEAR."

