



Plast

How World PET Recycling minimizes material loss and maximizes product quality with Sesotec's RE-SORT solution



World PET Recycling (Portugal)
Iberacero Portugal

Product: RE-SORT

World PET Recycling, part of the Logoplaste Group, is a leading player in the recycling of polyethylene terephthalate (PET). Located in northern Portugal, the company has extensive experience in processing post-consumer plastic bales into food-grade recycled PET flakes and pellets. Annually, World PET produces around 12,000 tons of food-grade recycled PET (rPET), which is used for manufacturing eco-friendly packaging. These products play a key role in Logoplaste's global strategy, focusing on creating a circular economy for plastic packaging.

The combination of Logoplaste's leadership in innovation with the extensive recycling expertise of Ecoiberia and World PET allows the Group to offer its customers sustainable, circular packaging solutions. These solutions not only significantly reduce the carbon footprint but also minimize the environmental impact of plastic waste.

The Problem: Material loss due to metal contaminants in the recycling process

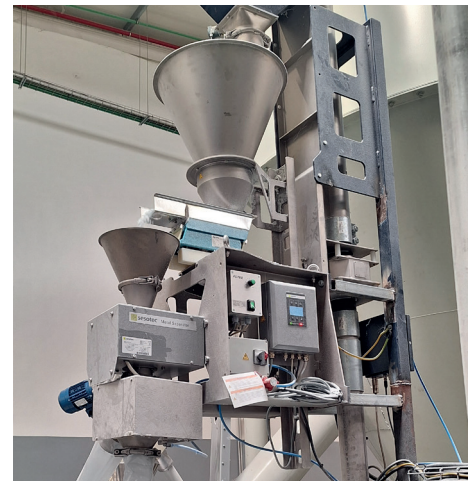
Like in most recycling processes, companies such as World PET Recycling face the challenge of removing contaminants from recycled PET to meet the strict quality standards for food-grade materials. A major source of contamination is metallic foreign bodies, which can enter the material during the collection, processing, and preparation of plastic waste.

To tackle this challenge, World PET previously used a GF metal separator to inspect PET flakes in the main material feeding line and remove metallic contaminants. However, this process led to significant PET material loss, as the entire contaminated fraction, including valuable material, was rejected. This resulted in an unnecessary loss of valuable material, impacting the company's efficiency and driving up production costs.

Against this backdrop, World PET sought a solution that would enable the recovery of high-quality PET material discarded with contaminants while ensuring that the end product remained free from metal impurities.

The Solution: Precise metal separation with the RE-SORT RV 070 Unit

Sesotec's partner in Portugal Iberoacero provided a customized solution to this problem with the installation of the RE-SORT RV 070 unit. This advanced metal separation unit was designed to inspect heavily contaminated material and separate reusable PET from impurities. The RE-SORT functions as a secondary filtering system, complementing the existing GF metal separator by re-inspecting the reject fraction from the initial separation.



The process works as follows: the material is fed into the RE-SORT unit via a hopper and is isolated through a vibratory feeder. It then passes through two key components of the system: the EXTRACTOR magnetic system and the RAPID VARIO-FS metal separator. Together, these technologies ensure that both magnetic and non-magnetic metal contaminants are reliably removed. This ensures that only pure, metal-free PET material remains for further processing, while any impurities are eliminated.

A major advantage of the RE-SORT unit is its high sensitivity, enabling it to detect and remove even the smallest metal particles, less than 1 mm in size. This ensures compliance with the strict quality requirements for food-grade rPET and minimizes the loss of high-quality material.

Customer Benefit: Enhanced product quality, improved efficiency, cost savings, and environmental friendliness with Sesotec technology

Thanks to the installation of the RE-SORT system, World PET Recycling has been able to significantly reduce material loss. Efficiently and precisely, the solution separates metal contaminants and allows the recovery of reusable PET material. This leads to increased profitability, as less material needs to be discarded, while product quality is guaranteed to be metal-free. Furthermore, reusing the material not only conserves resources but also protects the environment by reducing waste.

With Sesotec's solution and the support from Iberoacero, World PET Recycling has not only been able to reduce material loss in production significantly but also improve the quality of its recycled PET products. The RE-SORT RV 070 unit has become an indispensable part of the production process, providing not only economic advantages but also contributing to the sustainability and environmental responsibility of the company.

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Sesotec - an overview

The Sesotec group is one of the leading manufacturers of machines and systems for contaminant detection and material sorting. Product sales primarily focus on the food, plastics, and recycling industries.

www.sesotec.com



Metal detection systems



X-ray inspection systems



Sorting systems



Magnet systems