



Plast

A custom system for better management of production waste at Plastiques ZD

Plastiques ZD
MAT Technologic
(Vietnam)
Produkt: ELS, GF

Founded in 1989, Plastiques ZD is located in the heart of the Plastics Valley in Saint-Martin-du-Frêne and specializes in plastic processing through injection molding. With 35 years of experience, Plastiques ZD draws its strength from the know-how acquired over the years and the use of cutting-edge technologies to meet the specific requirements of its customers.

The company now operates a machine park with 18 presses ranging from 100 to 2500 tons, producing plastic parts.

MAT Technologic, a partner of Sesotec, based in Nantua in the Ain department, has been distributing equipment for the plastics industry and the recycling sector since 1992. MAT Technologic's activity goes beyond offering industrial equipment, extending from consultation by qualified experts to a complete examination of the final product to ensure turnkey installation of complete systems. The components are modified and adapted as needed to integrate them into existing systems or machines. Services also include installation and configuration, with training provided by a technical team.

The problem: Inefficient recycling of defective parts and production waste

As Plastiques ZD grew, it became necessary to find an environmentally friendly and cost-effective solution for recycling defective parts and production waste.

The company turned to its long-time partner, MAT Technologic, for a solution.

The MAT Technologic team analyzed the problem in detail to recommend the most suitable recycling system for the production line.

Several challenges needed to be addressed:

- Available space: A room had already been allocated.
- The wide range of parts to be processed: Shredding first, then grinding to the desired final size (two separate steps).
- Packaging the final material into Big Bags.

The solution: Recycling plastic waste with a custom plastic recycling system

MAT Technologic has a plastic recycling department that helps industrial companies improve their waste management. A team of specialists advises, sells, adapts, and installs individual components or complete systems for plastic recycling: sorting, shredding, storage, etc.

The experts at MAT worked closely with the teams at Plastiques ZD, taking the time to understand the needs, challenges, and specifics of this project. The goal was to offer an individual, tailor-made solution that met the customer's exact specifications. Several of the previously mentioned constraints and challenges were taken into consideration for this project.

After a thorough assessment, the chosen solution was a recycling system combining a shredder and a plastic granulator into a single machine. This all-in-one solution has a small footprint while achieving the desired volume reduction. To complement the selected system, several peripheral devices were required, including metal detectors and separators from Sesotec.

The recycling system includes a conveyor belt equipped with an ELS surface metal detector, which is mounted under the belt to detect both ferrous and non-ferrous metal contaminants. The ELS surface metal detector is suitable for installation in conveyor belts and material slides. The single-layer surface detector is used for inspecting piece goods and bulk materials on a conveyor belt or material chute, preferably with low material height.

It detects all magnetic and non-magnetic metal contaminants (steel, stainless steel, aluminum...) even if they are embedded in the product. If metal is detected, a signal can trigger a separator system or send an alert to the process control.



After the extraction fan, a Sesotec GF metal separator was installed in the pipeline to separate even the smallest metal particles before the material is filled into Big Bags. The GF metal separator is used in vacuum or pressure conveying lines to protect injection molding machines and processing equipment.

It detects all magnetic and non-magnetic metal contaminants (steel, stainless steel, aluminum, etc.), even if they are embedded in the product. Metal contaminants are ejected via the separation unit („Quick-Flap“) without interrupting the material flow and with minimal material loss. All components are pre-assembled, and the mounting frame and quick-connectors ensure fast and easy installation and integration. The compact design minimizes space requirements. As experts, the MAT team is familiar with the capabilities, reliability, and precision of Sesotec equipment, which allows them to guarantee customers that the machines meet specifications and requirements.

Customer benefits: The system meets all customer expectations

Thanks to MAT Technologic’s technology, Plastiques ZD can consistently pursue its goal of sustainable development: defective parts and production waste are directly reintroduced into the production cycle. The recycling system also ensures higher profitability and better control of raw material costs.

The recycling solution for defective parts and production waste, developed by Plastiques ZD in collaboration with MAT Technologic, guarantees a high-quality product free of metal contamination and prevents production downtimes. This results in clear financial advantages: less material waste, the production of top-quality recycled material, and the establishment of a closed internal recycling loop.

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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.



Metal detection systems



X-ray inspection systems



Sorting systems



Magnet systems

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