

**Plastics**

## How a metal separator saved this plastics manufacturer 75% in maintenance costs and increased output by 20%

A Bulgarian company is one of the European Union's leading producers and suppliers of high-quality thermoplastic components for the automotive, electrical and home appliance industries. Since its foundation in 1992, the company has been dedicated to the same mission statement – continuous improvement in meeting the needs of its customers.

Technical plastic article  
manufacturer and processor  
(Bulgaria)

Product: **PROTECTOR**  
**SAFEMAG**

To achieve this goal, this company is committed to the implementation of innovative production technologies, continuous quality control, certification with common international standards, and compliance with regional legislation. Each stage of their production line, from raw material intake to shipping finished products, includes thorough quality control measures.

### **The problem: Hot runner systems get clogged, causing emergency stops and costly repairs**

While processing virgin glass-filled material together with regrind, the same problem was coming up over and over again. Metal inclusions were clogging the hot runners of the molds, leading to as many as 10 emergency stops and 2 to 3 costly repairs per month. This frequent issue was costing between 25 to 30 days of production and between € 4,000 to € 5,000 in annual maintenance costs.

### **The solution: A metal detection system installed at the feed of the injection molding machine**

After careful consideration of the production environment and manufacturing specifications, the metal detection system PROTECTOR 40 was installed along with the magnet system SAFEMAG at the feed hopper of the injection molding machine. This combination of metal detector and magnetic separator was ideal given the type of material processed and throughput. Furthermore, at the feed proved to be the most effective location for removing metallic contaminants and inclusions from the raw material before they entered the plasticizing molding unit.



PROTECTOR is a metal detector for applications that include slow-moving material columns. It is particularly well suited for granulate and regrind (< Ø 8mm) as well as glass fibers.

SAFEMAG is a sturdy and compact magnet separator for bulk material columns. It offers exceptional magnetic performance by means of high-energy neodymium and is ideal for pre-separating ferrous metals in extrusion and injection molding applications.

When combined, PROTECTOR and SAFEMAG are optimal for separating magnetic and non-magnetic metallic contaminants, preventing mold damage, reducing rejection rates, increasing overall equipment effectiveness, and minimizing the loss of good material.

## The outcome: Higher productivity, efficiency and profitability go hand in hand.

Prior to the installation of PROTECTOR and SAFEMAG, this plastics manufacturer was confronted with frequent unplanned downtime and many costly repairs to processing equipment. By installing these two Sesotec devices at the feed of the injection molding machine, this customer was able to significantly reduce these incidents and improve productivity.

“We have seen a dramatic reduction in problems caused by metallic contaminants since using PROTECTOR,” says their production manager. “Depending on the component being manufactured, this system rejects at least 10 to 12 contaminants per month, thus bringing our maintenance days down to just 4 or 5 per year. This extends our service intervals, giving us 20 to 25 more productive days annually and increasing output by 15 to 20 percent. These improvements have been confirmed by our departments for mold maintenance, planning, quality control, and the production.”

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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](http://www.sesotec.com)



**Metal detection systems**



**X-ray inspection systems**



**Sorting systems**



**Magnet systems**