



How one mill achieved the best possible metal detection for all processing stages



Rubin Mühle (Germany)
Product: INTUITY THINK,
RAPID 6000

For more than 335 years and 14 generations, Rubinmühle has been managed by the Rubin family. Around 250 employees work between the three locations: two in Baden, one in Vogtland, Saxony. Customers in Europe and beyond benefit from their reliable and flexible supply of innovative, high-quality grain products.

Rubinmühle is continuously investing in its further development and state-of-the-art technologies. They owe their success in no small part to their flexibility to produce such a wide range of products in different qualities for different uses. Their innovative spirit and ability to quickly anticipate changes in the market has helped define the company as an enduring success story.

The problem: Physical contamination is possible during production

Rubinmühle has had metal detectors integrated into their production process for many years. As quality requirements have become more stringent over time, simply having controls for incoming goods is no longer sufficient. To rectify this, multiple critical control points along the entire production process were identified as ideal points for the use of improved solutions.

The Rubin family prides themselves on ensuring their facilities always use cutting edge technologies. For company management, this ranks among their most important tasks. A search commenced for a solution that could inspect grain flakes with the best possible detection rates. Sesotec offered a number of solutions to meet their requirements.

The solution: Highest metal detection performance with HRF technology and artificial intelligence



The RAPID 6000 metal separator is used to inspect grains and cereal flakes.

From conventional metal detectors, to high-resolution frequency (HRF), to artificial intelligence – Sesotec offers a comprehensive portfolio of technologies suitable for a wide variety of products, conveying methods, and processing stages.

The sensitivity requirements at Rubinmühle are very high. For free-fall applications, the requirements are 0.794mm for ferrous metals, 0.8mm for non-ferrous metals, and 1.3mm for stainless steel. For conveyor belt applications, the requirements are 1mm for ferrous and non-ferrous metals, and 1.3mm for stainless steel. The RAPID 6000 metal separator with HRF was chosen for the free-fall applications, and the INTUITY metal detector with THiNK artificial intelligence was chosen for the conveyor belt applications.

The RAPID 6000 metal separator is used to examine coarse, flakey, light, fibrous, brittle, and moist bulk materials. It can be quickly and easily integrated into existing pipelines. Using innovative HRF technology, these devices offer the highest tactile sensitivity to all types of metals. The detection signal is transmitted and analyzed with a special frequency. In addition to ferrous and non-ferrous metals, tiny particles of non-magnetic stainless steel can also be detected and separated in a fully automated process.



The INTUITY tunnel metal detector is installed in conveyor belts and uses THINK software.

The INTUITY tunnel metal detector is installed in conveyor belts and uses THINK, an AI software. Similar to conventional metal detectors, INTUITY applies multiple frequencies simultaneously to inspect the product. The AI technology helps to create multiple detection thresholds, and all signals that fall outside of these thresholds are detected as foreign metallic contaminants. This greatly increases the sensitivity of the system, and therefore also its accuracy.

The customer benefit: Improved safety throughout production

Sesotec's unique metal detection solutions make it possible to achieve the highest detection performance throughout every processing stage. Rubinmühle tests all products several times over the course of production, which has a positive effect on the purity of their grain flakes.



“When it comes to future-proofing production facilities,” says Pierre Adam, Head of Projects at Rubinmühle, “THiNK metal detectors with AI are the tool of choice for a food manufacturer like Rubinmühle. This technology helps us improve the safety of our products, simplify our processes, and increase profitability. In other words, this is a future-proof investment.”

THiNK

„THiNK“, the latest innovation from the Sesotec headquarters, is a metal detection system equipped with artificial intelligence. Sesotec's THiNK metal detectors for the food industry apply artificial intelligence in order to virtually eliminate the interference caused by product effect, even in the most difficult food products.

<https://www.sesotec.com/emea/en/lp/think>

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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