

FORTRESS HELPS NUT SUPPLIER CRACK METAL CONTAMINANT FALSE READINGS

Replacing its existing metal detectors with five Fortress Technology's Stealth Vertex systems has yielded a 40% improvement in sensitivity and eliminated the issue of false rejects for a leading UK nut and dried fruit processing and packing company.

From its BRC (British Retail Consortium) Grade A-accredited factory the company supplies processed nuts and fruit & seed mixes to major blue chip manufacturers, retailers and food service operators. These are marketed under their own brand as well as customers' private labels, and include everything from snack pots to individual and sharing pouches and bagged peanuts popular with the pub trade.

In 2015, the independently-owned business decided to upgrade its metal detectors on five packing lines. Weighing and filling bags of peanuts and treenuts ranging from between 50g and 1kg, one of the company's older detectors was generating false rejects, resulting in frequent downtime. Similarly, the other units were not as efficient or as sensitive as they needed to be to underpin the snack producer's market-leading reputation for safety and quality.

"We were getting a lot of false rejects on the one machine, so we had to replace that, but it was also a commercial imperative for us to upgrade to a higher specification of detection equipment," explains an engineering manager at the company. "We operate to the highest BRC standard and wanted to further enhance our market position by investing in the capability to reliably detect the tiniest metallic particles."

Having purchased metal detection equipment from several different suppliers over the years, the company saw this as an opportunity to rationalise its sourcing approach. It turned to Fortress, whose technology had previously proved reliable. The mini Vertex units could also be fully integrated with their existing multihead weighers and vertical baggers.

"It didn't represent value for money to replace the multihead weighers and packaging machines that continue to work well for us. What we needed was to get more productivity out of them by retrofitting them with reliable in-line metal detection units,"

continues the company spokesperson. "The small, compact Vertex head fitted beautifully within the available envelope, and we liked the fact that Fortress offered full installation and integration with our existing kit."

The ultra-slim Vertex from Fortress detects metal contaminants in free-falling product prior to final packaging. The sensitive unit uses digital signal processing technology to ensure detection of the smallest ferrous, non-ferrous and stainless steel contaminants. Complying with stringent HACCP regulations, the built-in data collection software with USB data transfer establishes the Vertex as an effective critical control point.



The processor reports a 40% improvement in sensitivity and has eliminated the issue of false rejects

PRODUCT WASTE FREE FALLS TO ZERO

Screening a variety of nuts immediately prior to bagging at speeds of 80 packs per minute, the new detectors have eliminated false rejects altogether. What's more, detection sensitivity has almost doubled; the Vertex systems are capable of detecting ferrous and non-ferrous particles as small as 1.0mm and stainless steel particles down to 1.5mm, compared with 2.5mm previously.

The new detectors have also reduced product changeovers to less than a minute. Rationalising the benefit of having equipment that's easy to use and set up, the engineering manager said: "We change products three or four times a day on most lines. Our previous metal



The Ultra Slim Stealth Vertex metal detectors screen a variety of nuts prior to bagging at speeds of 80 packs per minute

were installed individually so the other four lines could continue to run as normal.

The value the detectors have brought to the fruit and nut processing and packing company has been two-fold. In addition to improving the line performance, having the latest inspection technology on-site fills its customers with even greater confidence claims the company:

"The benefits of switching to one supplier that can offer compatible kit are multiple. As well as solving the issue of products being wasted as a result of false rejects, having access to common spare parts, ongoing support and minimal training equates to a better total cost of ownership and faster return on investment."

detectors required manual set-up. With the new Fortress units it's a simple case of selecting a new product recipe via the control panel."

Installation of the five Vertex detectors took place in autumn 2015 over two days. To minimise disruption to production, the units



Since installation, detection sensitivity has almost doubled on the peanut and treenut packing lines