

ISHIDA ENSURES HIGH QUALITY FOR PREMIUM ICE CREAM

Case Study **Florida Eis**

Facts and figures

- » By analysing image data over a number of generations, the machine achieves an extremely high level of inspection accuracy.
- » Up to 100 programmable pre-sets permit rapid product changes.
- » The high-speed loadcell has an accuracy of 0.2 grams.

An X-ray inspection system and checkweigher from Ishida Europe are helping to maintain the highest quality standards for a new luxury ice cream. The X-ray provides protection against foreign bodies, while the checkweigher ensures the correct weight. “König Ludwig Glace Royale” is the name of a new ice cream for the luxury sector, produced by Berlin-based Florida-Eis Manufaktur. King Ludwig II was not only the passionate owner of castles and palaces but also a gourmet with a penchant for ice cream specialities.

Challenge

For reliably detecting foreign bodies, a metal detector was out of the question because an aluminium coating has been applied to the paper cups to give them a silver lustre. In addition, not all foreign bodies that could potentially enter the production process are necessarily metallic – some are stones or plastic.

Solution

All these different types of potential contaminants can be reliably detected by the Ishida X IX-GA-4075 X-ray inspection system, which is installed at the end of the line. The machine is also capable of detecting very tiny foreign bodies made from different kinds of metal in the -7°C ice cream. The inspection function operates regardless of the temperature and water content of the food.

The easy-to-use IX-GA-4075 features an automatic set-up function and is ready for operation within 90 seconds. Precision adjustments can be made during ongoing production. A hygiene-friendly, IP65 open-frame design means that it can be easily cleaned. Up to 100 programmable pre-sets permit rapid product changes.





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The patented technology behind Ishida's X-ray inspection system is based on software featuring an intelligent genetic algorithm. By analysing image data over a number of generations, the machine achieves an extremely high level of inspection accuracy. Since similar contaminants are usually found again and again in ice cream manufacture, the system can, with each inspection procedure, create an increasingly accurate comparison log. A data log collects valuable visual and numerical information and helps to eliminate recurring sources of contamination. In this way, Florida-Eis Manufaktur can demonstrate that its production and packaging processes are properly and correctly performed.

To ensure the correct weight, the ice cream pots – once they have been manually filled and then automatically covered – are sent to a DACS-W checkweigher from Ishida. The machine's compact design means that it can be easily integrated in the line.

The high-speed loadcell has an accuracy of 0.2 grams, while a special system compensates for floor vibrations. Sundaes that are not the correct weight are reliably separated by a pneumatic arm. A range of useful diagrams and histograms are used for monitoring production.

Largely maintenance-free, the checkweigher is operated via a touch screen, and the 100 product parameter settings allow rapid product changes. The conveyors can be removed for cleaning without the need for special tools.

The "König Ludwig Glace Royale" has proved a big hit in terms of sales and Florida-Eis Manufaktur is already looking to expand production. In addition to switching to two-shift operation, it is also planning to procure new machines, with the QC systems again being purchased from Ishida.

“ The future is in X-ray inspection technology in particular, and the procurement costs are more or less the same as for metal detectors. ”

Florida-Eis Manufaktur owner Olaf Hohn explains why he was so keen to make these investments in the QC system. "Thanks to Ishida systems, I can sleep easier at night. As a manufacturer of premium products, we are subject to special scrutiny. For us, quality assurance is an ethical matter, too. The future is in X-ray inspection technology, and the procurement costs are more or less the same as for metal detectors.

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