

Best Practice

High-speed check weighing: Minebea Intec technology helps to keep up the pace in the packaging line



The food manufacturer wanted a reliable and versatile checkweigher that could handle high volumes of checkweighing for its long and narrow packs. Minebea Intec impressed with a tailor-made solution.

Key facts

Narrow packs of sweets with an extremely small supporting surface had to be checked for their integrity, contamination and reliably removed at high speed from the product flow where necessary. The weighing solution had to have an MID approval for high speeds.

Application

The packs are fed onto and discharged from specially designed conveyor belts, weighed, inspected and ejected from the product flow where necessary at a throughput of 430 pieces per minute.

Product

- Checkweigher Flexus® with metal detector Vistus®

Customer benefits

- Reliable checkweighing of up to 600 pieces per minute
- MID approval for process speeds of up to 3.0 m/s
- Reliable ejection of incomplete and contaminated packs of products
- Hygienic design to make it easier to clean

The customer

The customer is a leading global food company and is one of the 100 largest companies in the world in terms of turnover. The manufacturer has various areas of focus in the food and beverage sectors. In the confectionery segment, there are popular brands with long traditions that are not just recognised around the world by their taste but also by their packaging design.



Project goal and implementation

For its oldest brands in the confectionery segment, the food manufacturer was looking for a reliable checkweigher combined with metal detection in the packaging line. The project was challenging from the outset. The benchmark process speed of 430 pieces per minute and the fact that the product was to be used in the food sector called for a weighing solution with MID approval for high speeds. The weighing solution also needed to have the option of flexible customisation for subsequent transitions between products. And finally, the product's special packaging design posed an extra challenge. The sweets are packed loose in long, narrow cardboard packages, which have an extremely small supporting surface due to their design and are therefore not very stable.

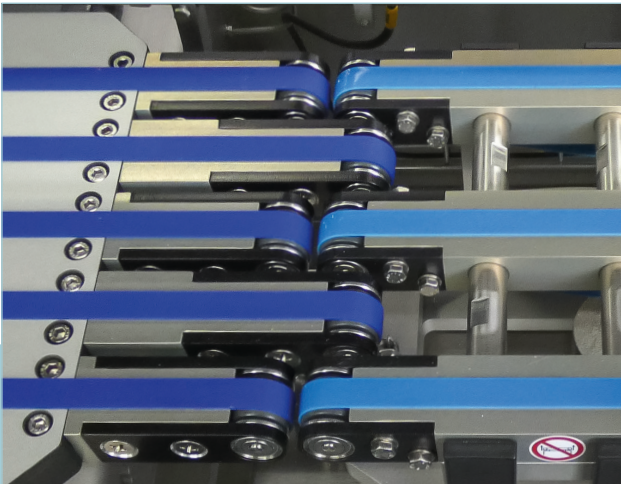
Minebea Intec tendered a proposal with the checkweigher Flexus and won the contract. The checkweigher was equipped with a customised feeder as an ETO (Engineering to Order) project, which helps to ensure that the packs of products always pass through the weighing area in the correct orientation, even at very high speeds. The complex feeding and discharging technology

effortlessly keeps up with the required pace. Reliable ejection of incomplete or contaminated packs of products is ensured by two high-speed separators, which push the cardboard boxes (which are oriented perpendicularly) out of the product flow. Separate, lockable run-off containers ensure that the ejected goods are stored securely.

The current net weight of the packaged sweets is less than 100 g. Subsequent transitions between products, for example to lighter products and combined with an increase in the volumes, are possible with the flexible weighing solution. The checkweigher Flexus also offers trend control, which can optimise the upstream filling process and help to improve efficiency. The hygienic design means that it can be cleaned quickly and easily. The Flexus is available with the new Minebea Intec load cell WZED as an Engineering to Order customization. The ultra-precise weighing technology has MID approval for applications where verification is required and with belt speed ranges of up to 3 m per second, including as a multi-track checkweigher.

“The outstanding performance of Minebea Intec checkweighers is proven once again at extremely high speed ranges. Their sophisticated, verifiable weighing technology ensures smooth processes that the customer can fully rely on.”

Stefan Meihöfer, Head of Sales Germany



Conveyor and weighing belts were mounted on separate base frames for optimum feeding of the wrapped products and more precise measurement results



The checkweigher Flexus is available with Vistus metal detection technology



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