

# FRUIT AND NUTS PROCESSOR BOOSTS EFFICIENCY WITH ISHIDA

Case Study  
**Farmer's Snack**

## Facts and figures

- » Weighing speed is up to 140 packs per minute (40g size), delivering the high throughput levels needed.
- » Maximum weighing accuracy is 0.1g, with standard deviation (weighing consistency) under 1g.
- » Reliable operation and simple operator interface help keep downtime to a minimum.
- » Versatile selection of contact parts helps optimise flow for each type of product.

At one of the most modern fruit and nut processing facilities in Germany, Farmer's Snack GmbH produces over 60 product variants. To meet increasing demand for pocket-sized packs the company recently installed a new packing line with an Ishida multihead weigher at its core.

## Challenges

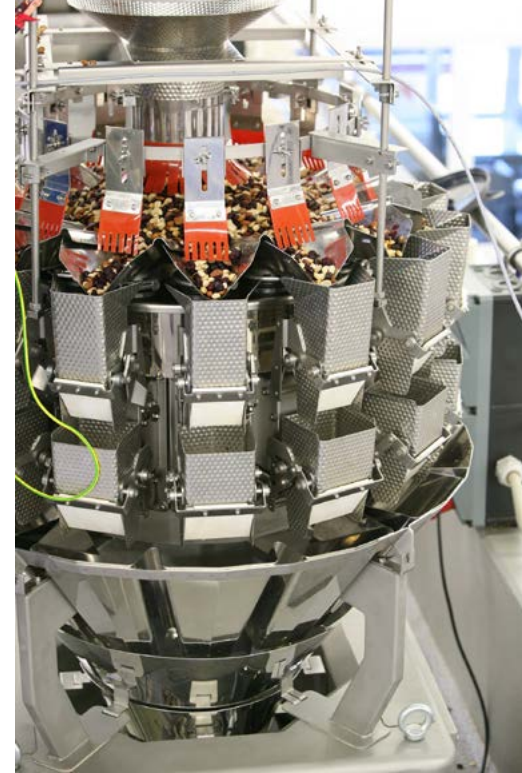
Packing a variety of products from simple nuts to sticky fruit, plus many different combinations such as trail mix, throws up so many contrasting challenges that one might expect to have to use several different weighers to meet them all. Farmer's Snack also needs to pack at speed, as the company fulfils large-volume discounter orders and airline snack business as well as packing its own branded products. With a major part of its business in small bags of high value products, accuracy is clearly essential for profitability.

## Solution

Farmer's Snack chose a 14-head Ishida CCW-R multihead weigher capable of filling 40g target weight small bags, as well as 150g flat bags. At high speed, this model can calculate three optimal weight combinations, double-check them and then select the one nearest to the target weight, all in a single cycle. This minimises error-discharges and increases efficiency, while also enhancing weighing accuracy and consistency.

A range of swappable contact parts enable Farmer's Snack to adapt the Ishida to suit the product being packed, so that a single weigher can handle many different products.





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Boie Karstens, Farmer's Snack management

For Farmer's Snack, the investment in packing technology has been a great success. "Before investing, we tested the weigher with our products and achieved an output that no other manufacturer could offer for an equivalent 14-head model," says Boie Karstens of the Farmer's Snack management team. "The fact that the machine was available for quick delivery was another advantage." Maximum weighing accuracy is 0.1g and the standard deviation (weighing consistency) for a filled bag is well below 1g.

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Compared with our other multihead weighers these are particularly good figures, achieved with very few adjustments.

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Boie Karstens

"We were also pleasantly surprised by how well it handles sticky snacks," comments Boie Karstens. He expects the Ishida, which operates in 2- or 3-shift mode, to pay for itself within three years.

Another benefit for Farmer's Snack has been the intuitive graphical user interface, which makes it very simple to operate the weigher. This contributes to reducing downtime, as daily product changeovers can be carried out simply by calling up a pre-set on the touch screen display. Application-specific dispersion tables and radial feeders can also be removed and replaced quickly, without the use of tools.

The snack products reach the multihead weigher from above, via a conveyor. A sensor below the dispersion table controls the supply to the vibrating radial feeder troughs and ensures an even product flow to the hoppers. The 14 pool hoppers, arranged in a ring, hold the product briefly, then feed a further set of 14 weigh hoppers.

As soon as a weigh hopper becomes empty and requires product, a signal is sent to the corresponding pool hopper. It takes just microseconds for the microprocessor to determine which weigh hoppers' contents to combine in order to come closest to the target weight. A timing hopper under the weigher ensures each collected weightment drops compactly into its bag.

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