

ISHIDA DEVELOPS WEIGHING AND PACKING SYSTEM FOR DANONE YOGHURT TOPPINGS

Case Study
Danone

Facts and figures

- » Ishida developed the CCW-R-112PL to handle high-value applications with target weights as low as 3g.
- » The Ishida CCW-R-112PL runs at an impressive 169 weighments per minute with less than 1% deviation from these low target weights .
- » The shallow-gradient, linear layout allows more precise control of product flow rates, which contributes to weighing accuracy.

For Danone Hungary, Ishida and its local distributor have developed a fast and accurate approach to filling the toppings section of two-compartment yoghurts. It is based on a special linear multihead weigher and filling system.

Challenge

Two-compartment yoghurts offer consumers the chance to combine yoghurt with other favourite ingredients, mixing them together in exactly the way they want.

Yoghurt toppings such as oriole cookie pieces, chocolate balls and cereals present some manufacturing challenges, however. They need to arrive as fresh and crunchy as when first prepared. Fragmentation during the packing process is unacceptable, as undersized particles and debris will alter the consumer experience. Above all, the toppings must not disappoint in terms of quantity.

Solution

The Ishida CCW-R-112PL is an unusual multihead weigher in that pool and weigh hoppers and the troughs that feed them are arranged in parallel lines rather than radiating outwards as in a conventional, circular weigher. This has enabled Ishida to create a path through the machine over which the product slides rather than drops, removing the primary cause of breakage. Less breakage also means a cleaner, less dusty product, an important consideration when it comes to filling the pack without leaving traces on the sealing surfaces.





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Accuracy is extremely important because the target weight of topping is never more than 9g and the topping material is often of high value. The 112-PL also incorporates all the accuracy-enhancing advances of Ishida's R-Series multihead weighers, such as advanced combination calculation hardware and software, and fast 5-stage digital signal filtration.

As a result, the model at Danone Hungary runs at an impressive 169 weighments per minute with less than 1% deviation from these low target weights.

The toppings reach the Ishida weigher at below room temperature via a special Danone feed system. The weigher feeds the filling system which, along with associated conveyor and gantry work, was designed and installed by Ishida and its Hungarian distributor, MasterQuality Kft of Budapest. The toppings are deposited neatly into the appropriate compartments, six pots at a time, after the yoghurt compartments have already been filled and sealed.

The new toppings section handles both domestic and export demand for Danone's yoghurts of this type and typically operates three shifts a day, involving three or four product changeovers. Each changeover takes just 30 minutes, using air purge cleaning, and a complete washdown is carried out every week. The entire section is controlled by a single operator via an Ishida colour touchscreen multi-language interface.

Ishida developed the CCW-R-112PL to handle high-value applications with target weights as low as 3g. The approach was refined to suit yoghurt toppings in an earlier project with Danone in Poland.

Danone Dairy Production and Distribution Ltd is a leading manufacturer of dairy products such as sour cream, kefir, yoghurts, and desserts. Established in 1966 it has followed a policy of continual upgrading to maintain the highest levels of quality for its customers.

"We have been delighted with the speed, accuracy and reliability of the Ishida weigher and ancillary equipment, which have made a very important contribution to the success of this project," says Adam Kocsis, Investment and Utility Manager.

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