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QUOTE OF THE MONTH

“With the pressure to launch new products we have to collaborate

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Plus... The Contract Packer with this issue, **jobs** and **services** from **page 39**

HIDER FOOD

Cotswold rises to Hider's filling challenge

Within the space of just nine weeks, Cotswold Mechanical specified, tested and commissioned a six-head automatic weighing system at client Hider Foods' contract packing factory. *Lynda Searby* discovers more

Who Hider Food

Aim To find a piece of equipment that could automatically present and fill a 400g compartmentalised plastic buffet tray with six different savoury snacks

Spend Undisclosed

When Summer 2013

Challenge

When Hider Food Imports needed a means of automatically presenting and filling a 400g compartmentalised plastic buffet tray with six different savoury snacks it struggled to find a supplier who was willing and able to take the job on.

"We contacted a number of suppliers of automated filling lines regarding this project but were consistently told that due to its complexity, it couldn't be done," says Duncan Hider, managing director of the East Yorkshire foods wholesaler, which also offers contract packing services.

Admittedly, the application wasn't straightforward. As the 260mm diameter, 45mm deep trays had a pentagon-shaped middle compartment surrounded by five equally spaced kidney-shaped compartments, each recess was either a different shape or orientation.

Each of the six product variants needed to be pre-weighed to its own target weight prior to being deposited into the designated compartment, and it was imperative that the filled products did not protrude above the top of the tray as this could potentially interfere with the film seal.

Also, under no circumstances was there to be any cross-contamination of products from one compartment to another.

Strategy

After several fruitless enquiries, an internet search threw up Cotswold Mechanical (CM), a Gloucester-based manufacturer of conveyors and automatic linear weighing systems. "As soon as we spoke to CM, they said it was 'exactly what they do' and immediately set about running successful product trials to prove it," says Hider.

Implementation

From receiving the initial enquiry during the first week of July 2013, CM had just nine weeks to specify the design of the system, run product trials to prove the principle to Hider Foods, submit the tender, build the system and carry out pre-delivery trials prior to installation.

CM pulled out all the stops to meet these deadlines, and installation and commissioning was completed in the second week of September.



Pulling out all the stops: Cotswold Mechanical was up against a tight deadline to complete the project for Hider Food

The machine at the heart of the turnkey system was the CMW4000 automatic linear weigher, a precision weighing machine that is fully constructed in stainless steel with a fully enclosed (IP65) loadcell weighing mechanism and two-vibrator tray feed system.

According to Doug Phillips, sales director at CM, the fragile nature of the product meant a linear weigher was more suited to the task than a multihead weigher. "There are not only fewer product drops in a linear weigher, but the drop heights are also much lower than those of a multihead," he explains.

Hider Foods was also impressed by the quick strip down time – another benefit of linear versus multihead weighers.

"They particularly liked the stainless steel construction and open design, including the simple key slot for clip-on contact parts, which allow the machine to be totally stripped down for cleaning in under five minutes and without the need

for any tools at all," says Phillips.

Six CMW4000 weighers were deployed on the line, enabling 900 trays to be filled every hour.

A flighted belt indexing conveyor feeds the plastic trays to each of the six weighers in turn.

After filling, the trays are taken manually from the line and fed into a semi-automatic film lid heat sealer. Cardboard sleeves are also applied by hand.

Each weigher was fitted with a pneumatic rise and fall chute to overcome the cross-contamination problem and the finished tray were gently shaken to settle the products below the seal area.

The snack buffet trays were being packed for a seasonal contract which has now come to an end, which was why Hider Foods wanted a system with the flexibility to be redeployed for other contract packing jobs.

"As a contract packer we needed to find a company that was willing to work with

us to supply an automatic tray indexing and filling line that would not only allow us to complete the existing contract but was flexible enough in its design and function to enable us to use it to pack different products and packaging formats for other clients," says Hider.

Results

Phillips says that the system was designed such that the linear weighers could be quickly removed from the line and used elsewhere in the factory to fill manually presented containers of varying types and styles or taken off the floor stand and temporarily positioned over a vertical form, fill and seal machine. When Hider Foods has another tray filling contract to fulfil, the original system can be quickly re-assembled to incorporate the indexing conveyor. Overall, CM was able to rise to the challenge for Hider Food. The redesigned system has worked well for the company and boosted efficiency. ■