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ARCO's Triple Deck System

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ARCO's triple deck system

Pre-packaged fruit and vegetables – such as tomatoes, radishes, strawberries, and pears – have become an intrinsic part of the agricultural and food chain. Retailers and consumers alike are pleased with this practical, hygienic, and easily transportable solution. But for producers, the marketing of packaging with a minimum weight poses a constant challenge: ‘How can we package products as quickly and efficiently as possible, with as little giveaway weight as possible?’ After all, packaging fruit and vegetables in small packages is a time-consuming process. ARCO has developed a total logistics solution especially for this issue: the Triple Deck System.

Over the last decade, ARCO has become a leading international supplier of smart weighing systems for the food industry. And one of these innovations is the triple deck system. Keep reading to find out more about the application, operation, and advantages of ARCO's optimal weighing and packaging solution – the triple deck system.



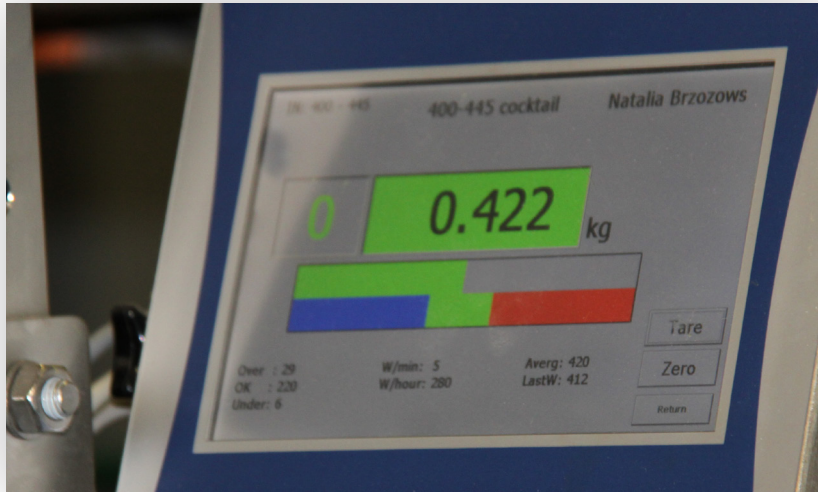
**A lack of productivity and
too much giveaway weight**

Operators dependent on each other

Products such as tomatoes, grapes, and strawberries come to the warehouse fresh from the field in large crates. These products need to be placed in smaller punnets or trays to prepare them for the market. Operators work by hand to ensure that the right amounts of fruit and vegetables are transferred from large crates to the smaller packages. If several operators are working on this process at the same time, it is a challenge to keep the system running in such a way that each operator can work at their own pace and the fast workers are not slowed down by having to wait for the others. Packaging lines are often designed in such a way that the operators cannot work independently of each other – which means that the line is only as fast as the slowest operator.



Giveaway weight



Additionally, when it comes to boxes containing fairly large products such as tomatoes, cucumbers, and mandarins, it is important that each box meets the set weight requirements, without giving away too much weight for free. After all, this means that the producer doesn't get paid for the excess product.

The challenge is to develop a line where products are weighed and packed as quickly and efficiently as possible, while at the same time ensuring that the weight in the punnets is as close to the minimum as possible. All producers want their products to be packaged carefully, accurately, and quickly – with as little giveaway weight as possible.



The triple deck system as a solution

Three decks in **one system**

ARCO has developed a system in which full crates of freshly harvested products are automatically transported to the work tables by via roller conveyor. An operator removes a full crate from the conveyor and hand-fills smaller packages with the required amount of harvested product. These smaller packages are weighed efficiently using a digital scale with LED display. The triple deck system is suitable for different types of packaging, such as punnets, flat trays, and boxes. These smaller packages are transported via a conveyor belt to the next station in the line, where further processing takes place. As soon as the operator has emptied a crate, it can be placed on the top conveyor of the triple deck system.

The empty crates are automatically transported to a crate stacker or to the packing side where the packed product is put back in the same crate. The operator can remove a full crate from the line, after which the system automatically fills the empty space with a new crate full of harvested products.



Four-part conveyor belt

One of the things that makes the triple deck system unique is the four-part conveyor belt. The four belts operate independently of each other, so operator speed is no longer limited to the slowest link in the packaging process. Operators can keep working at a continuous pace, as the products are automatically transported to the middle two belts. The packages then proceed through the inliner, which ensures that the packages are arranged on the belt one after the other, after which they can be further processed.

The triple deck system can be equipped with Line Control, which facilitates very fast product changes. With Line Control, connected scales can be reconfigured for a different recipe simultaneously. This system also generates insights into performance such as weighing results, operator performance, operating times, and downtime. Line Control features an LED display and can result in time savings of up to 25% compared to a basic scale. An additional benefit is reduction of the 'give away'. Automatic software adjustment ensures that no capacity is lost.

**Efficient and accurate
weighing and**

Optimal product flow

Thanks to ARCO's triple deck system, producers can weigh and pack their fresh produce as efficiently and accurately as possible. The triple deck system ensures that empty crates are conveniently directed to crate stackers or the end of the packing line. Full crates are automatically ready to be added to the line, which minimizes the downtime for retrieving a new crate. The triple deck system's four-part conveyor belt enables the product flow to continue independently of each operator, allowing each worker to keep working at an optimal pace.

Experience and expertise

The triple deck system has been in the ARCO product range for a lot of time, which means that our engineers have been able to completely optimize the system in recent years. The result? A customized solution that draws on both our experience and expertise – so that your line can keep running as efficiently as possible. We understand that a product line cannot be integrated in the same way in all situations. That's why we offer a customized solution that is adapted to the customer's needs and optimizes the operation of the system.



Need help with a technical issue?



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