

The next sustainable generation



The Package Maker PKD is one of the newest innovation of packaging solutions from Syntegon.

SYNTEGON INTRODUCES A NEW ITERATION OF THE PACKAGE MAKER PKD, A UNIQUE HIGH-SPEED SOLUTION FOR VACUUM COFFEE PACKAGING CAPABLE OF HANDLING RECYCLABLE MATERIALS.

When developing new packaging machines, German manufacturer Syntegon looks to combine what has been successful in the past with exciting innovations that best prepare its customers for the future.

The Package Maker PKD is a product of this concept. Designed this year, Syntegon Business Development Manager Marcus Velezmoro says the coffee packaging machine utilises the same proven technology as previous generations of Syntegon machines together with a dedicated focus on sustainability and the materials it uses.

“Packaging materials over time have changed dramatically,” Velezmoro says. “We’ve not changed the basic concept of the machine, but we have introduced new features which are relevant for new requirements to the packaging materials.”

“The machine can operate conventional materials such as aluminium, but it can also cope with recyclable mono-material structures. These have completely different processing windows, so we have worked to allow the machine to cope with both styles since our customers tend to run with both.”

This alteration has allowed Syntegon to best prepare itself for whichever direction the market leans while maintaining a clean and wrinkle-free package design which best suits branded packs.

Velezmoro says the packaging machine manufacturers expect to see more of a pivot towards recyclable materials from customers, in order to reach legal requirements and green solutions moving forward.

To accommodate these changes, Syntegon has focused on the sealing component of the Package Maker PKD, ensuring coffee bag packages are made with more recyclable materials, and are

sealed twice at lower temperatures.

“The sealing systems are essential when processing these new packaging materials,” he says. “With the Package Maker PKD, we have added additional sealing stations.”

The sealing system runs mostly on remote-controlled thermal energy, which requires less power compared to other energy solutions. Less packaging material is also needed due to a shorter cut-off length of the vacuum process.

The Package Maker PKD’s versatility extends to the types of coffee it packages.

“There are different degrees of ground coffees, and the machine can handle all those different kinds,” Velezmoro says.

According to Velezmoro, one of the more exciting features of the Package Maker PKD is its dosing system, which ensures accuracy of quantity when filling a bag. This is a result of a weight measurement system and feedback control, which provides a double-stamp system to ensure the right amount of coffee goes into each bag.

“In a high-volume process with an expensive product like coffee, you want to minimise giveaways and overfills,” he says. “We have a staged a filling concept that allows us to achieve the highest possible fill accuracy.”

Syntegon’s evacuation wheel is then used as a fast solution to remove oxygen from packaged coffee.

“[The Package Maker PKD] is a high-speed vacuum line that produces the bag, fills the bag, and ultimately evacuates the bag [of oxygen],” says Velezmoro.

The wheel uses a rotary system of 28 chambers that evacuates one bag in each round. The open bag, once filled with coffee beans, is introduced

The machine produces packages as evacuated packs, which the company says is ideal for certain coffee markets.



into the chamber, after which the pressure level drops and the air is taken out of the wheel before the bag is completely sealed, leaving a brick-like package. For compact bags, the machine has a long vibration section and a plunger.

“In Central and Southern Europe, where they have a large production of coffee, they’re always looking to get rid of more air. With an evacuated pack, you can stack [large volumes] while evacuating oxygen,” Velezmoro says.

“There are markets in the world where this has become the standard.”

Velezmoro says a focus on this form of packaging has become even more of a priority for Syntegon in recent years.

“Historically, the brick type offers a perfect utilisation, allowing a way to pack more product than any other pack style,” Velezmoro says.

This prioritisation is one of many market demands Syntegon caters to. The Package Maker PKD was developed with large roasters in mind, meaning efficiency and speed is an important consideration.

“[The Package Maker PKD] is a high-speed solution for larger coffee roasters that need 24/7 production,” Velezmoro says. “Everything is made to perform at the highest possible speed.”

Velezmoro adds that this packaging solution is suited to constant operations that demand high-volume output. As such, the Package Maker PKD can pack 130 bags per minute, an output which Velezmoro says is usually only achieved by two machines working together rather than the one unit.

“We’re always trying to challenge the limit,” he says. “This rate is still a benchmark in the industry, but it’s a level that is required by our largest customers.”

Due to added components such as the additional sealing stations, the Package Maker PKD is one of Syntegon’s largest packaging machines which is why it won’t be seen at any international expos.

The Package Maker PKD also features Synexio Empower, a smart machine IoT solution that monitors energy and resource consumption through condition monitoring, data acquisition and visualisation in real time. In this way, Synexio Empower realises the intelligent self-optimisation of the PMX machine.

Thanks to detailed OEE analytics and predictive maintenance, manufacturers are also able to improve plant efficiency and reduce costs. An on-premise system architecture provides the necessary data security. If required, the solution supports the secure data supply to Syntegon’s Synexio Cloud.

The cloud-based or on-premise solution is just one of the Package Maker PKD’s additions, as Syntegon continues to look for ways to develop its machines to best help its customers.

“We always want to be pioneers, which is why we’re always looking to have a strong collaboration with our customers and their needs,” he says. “And we accompany our customers in every step of the process and offer a comprehensive service.” **GCR**



Marcus Velezmoro is the Business Development Manager for Syntegon.

For more information, visit www.syntegon.com