MASTERPACK ensures longer shelf life of products in FIBCs through to its new technology

A major European producer of baby milk adopts innovative FIBCs for storing powdered milk in various bag presentations. Several fishing vessels working in the South Atlantic krill fishery pack oil-rich krill meal in 25kg bags. Seed producers worldwide use innovative packaging solutions to preserve it valuable crop. All have in common new MASTERPACK system. "***It is a reliable and accessible way to use modified atmosphere up to a big-bag level***", says Dimitri Sclabos, representing Masterpack Group in Chile. "***It extends the shelf life of foods from months to years, preserving the quality of the product.***"

Since two years Dimitri Sclabos is representing MASTERPACK GROUP in Chile. Dimitri is a highly experienced manager, specialised in improving customer supply chains, packaging included. Dimitri and MASTERPACK's goal are to reduce product waste, enhancing a truly circular economy with the help of an excellent packaging, especially in the area of flexible bulk packaging and modified atmosphere packaging (MAP).

High-quality foodstuffs in **Flexible Intermediate Bulk Containers** (FIBC) have the longest shelf life at extreme low oxygen levels. And this is exactly what Masterpack Modified Atmosphere does: Reduce the oxygen content in the bag (25k or 1ton big bag and more), to 1 percent or less, which also means that applying chemicals to the product is no longer necessary. Sclabos: "***It doesn't matter how long the storage lifespan is, the quality remains at its best for a longer period of time, so food waste is reduced at its minimum.***" The system also contributes to better eliminate contamination and pest control.

Mobile System

Applying modified atmosphere is traditionally done with a large, expensive machines. MASTERPACK has reduced that to a handy and mobile system. "***You can already do it with light terrestrial transport, making it interesting for example to a farm cooperative to jointly purchase, install and operate the machine.***" The complete system consists of an automatic sealer, a vacuum and gas injection machine, including the FIBC liner itself, a shut-off valve and a smart sensor. A worker can operate the machine easily by means of a touch screen. Within minutes the bag is vacuum drawn, a leak test performed, and nitrogen or carbon dioxide introduced. "***It is an entire fully automatic process. An no matter the size of the bag, as MASTERPACK manufactures custom-made.***"

Sensors to Measure the Product Inside the FIBC

The latest development is a valve sealed to the liner with a wireless sensor that monitors on-line oxygen, temperature and humidity levels in the bag. "***Previously, the oxygen content was measured with a needle. This required a lot of manual work and entailed a high contamination risk because the needle goes directly into the product. Continuous measurement is carried out with the new valve and sensor without puncturing the FIBC.***" The sensor turns on itself automatically once turned around and the bag is closed. The electronic probe measures automatically after 6, 12 and/or 24 hours. Perform a manual measurement in between is possible. The data from the sensor goes through a LoRa gateway (an energy efficient communication system) to the customer portal. Sclabos: ‘***’You can see in the dashboard what the current situation is inside the bag. In the unlikely event that something is wrong, the system advises, for example, to use the contents of the bag sooner, or repackaging it to avoid waste. When we speak about circularity, avoid food waste, and sell a packaging system that offers a negligible environmental footprint…. we mean it***"

MASTERPACK Group Chile
info@masterpackgroup.com
d.sclabos@masterpackgroup.com
www.masterpackgroup.com