



75 % LESS PLASTIC WRAP THANKS TO ANTISLIP GLUING

In 2020, Swissmill's oat and hull mill installed an adhesive application system from Robatech to stabilize cardboard boxes on pallets in an environmentally friendly way. The result is sustainable: less plastic film and significant time savings.

Previously, Swissmill's oat and hull mill used 100 % plastic wrap to stabilize its pallets for transport by truck and rail. Since 2020, it has been 25 %. In just eight months, the idea to test AntiSlip Gluing evolved into a showcase project for environmentally friendly palletizing of cardboard boxes.

Filling, Packing, Palletizing

Swissmill, a company of the Coop Group, is the largest grain mill in Switzerland. More than 200,000 tons of grain are ground into more than 100 different products at the company's headquarters in Zurich - the basis for muesli bars, crackers, cereals, and crusty bread. Erwin Waldvogel, head of Swissmill's oat and hull mill, is in charge of the professional production and packaging of cereal flakes. The flakes are filled into 500-gram foil bags for private labels and packed in 12-packs in a secondary carton at his packaging line. A palletizing robot stacks 84 cartons in seven layers crosswise onto a pallet at the end of the line. If needed, the pallet can be stabilized with plastic film at a wrapping station located some distance away and used by several areas. This was not always the case, as all pallets used to be wrapped.

Test System Makes Investment Decision Easy

When Robatech introduced pallet stabilization to Swissmill in 2019, Erwin Waldvogel immediately recognized the savings potential of the system. "Two weeks later, Robatech brought me a test system for hot melt adhesive application with a hand applicator. This allowed me to quickly see for myself how well the PSA-based hot melt adhesive stabilized the cardboard boxes on the pallet," recalls the oat mill manager. "Depalletizing the cartons was easy as well." Shortly after that, the logistics partners tested the transport safety of the pallets and gave the go-ahead.

A short time later, Swissmill decided to purchase a fully automatic pallet stabilization system. Martin Berli, Area Sales Manager Switzerland at Robatech, is pleased: "With the test systems, we make investment decisions easier for our customers. Buying a new system right away is not easy to implement. However, if requesters can show positive test results, it's a different story: they have valid arguments."



THE CUSTOMER

Switzerland's largest mill grinds up to 1,000 tons of grain daily. Swissmill supplies flours, semolina, and flakes for the production of breakfast cereals, soups, and baked goods. In the oat and hull mill, carton boxes have been palletized fully automatically with AntiSlip Gluing since 2020.



"We were able to test the AntiSlip Gluing pallet stabilization quickly and without complications using manual spray application. So, switching from plastic wrap to fully automatic hot melt adhesive application was only a small step."

Erwin Waldvogel

Head of the Oat and Hull Mill, Swissmill

Easy Retrofit

Since the beginning of 2020, two AX Diamond spray heads apply two adhesive curls each directly to the top of the collated cereal flake boxes. The cartons of the last layer are not sprayed. This is ensured by the integrated palletizing function in the control electronics of the Concept melter. It communicates directly with the control system of the palletizing robot. "Robatech's pallet stabilization was quickly installed and ready for use. Our control expert and Robatech worked together very well," Erwin Waldvogel says with a laugh. "I am glad I had nothing to do with it. This is really not my area of expertise."

Partial Wrapping for Rail Transport Only

But not everything went smoothly at the beginning. A customer complained about collapsed cartons in the lower pallet layer of some deliveries. What had happened? It is well known that even when using shrink-wrapping, damage is possible due to strong movements. Carton thickness plays an important role in load distribution, especially when pallets are subjected to greater shear forces during transport. "However, we quickly found a good solution," reveals Erwin Waldvogel. "For pallets transported by rail, we wrap the pallet with stretch film after hotmelt adhesive application,

but only halfway. This is sufficient to ensure an even load distribution and prevent carton collapses.”

Substantial Time Savings

In addition to the savings in plastic film, the operating personnel particularly appreciated another positive effect. Previously, line operators would pick up the pallet at the packaging line, take it to the wrapping station, bring it back to the packaging line, and pick up the finished wrapped pallet again later. With 25 to 30 pallets a day, that meant a lot of walking back and forth. “With AntiSlip Gluing, the line operators’ daily half marathon has been shortened to a sprint,” sums up Erwin Waldvogel. “That is at least 1.5 hours more time per day for core tasks.” The fully automatic pallet

stabilization has paid off for Swissmill. “The investment is not big,” adds the oat mill manager. “It has paid for itself in just a few months for us.”



Two AX Diamond spray heads during adhesive application



Palletizing secondary packaging with self-stick adhesive

ROBATECH

Robatech optimizes the industrial hot melt and cold glue application with sustainable and innovative adhesive application systems. Since 1975, Robatech has been developing and producing high-quality control systems, application heads, melters, and dosing systems that make gluing processes more environmentally friendly, safe, and straightforward. The Robatech Group, headquartered in Muri/AG, Switzerland, is represented in more than 80 countries. More than 670 dedicated employees worldwide provide personal and fast customer support in a wide range of industries.

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