Orkla

Packaging line with robots and safety

Segment: Food and beverage and packaging industry
Application: Automated packaging line with multiple doors and conveyors
Customer: Orkla Latvija

**Customer and application description**
Orkla Latvija is one of the leading food and beverage companies in the Baltic States. They were looking to modernize and automate their manual chips packing shop.

**Problem and requirements**
Orkla had limited available space for the planned packaging line, which had to be integrated in the existing production at the factory. Delivery time requirements were also very tight from project start to full speed production.

**The ABB solution**
Taking advantage of the robotics and safety competence within the company, ABB could put together a team that worked hard to deliver a tailor-made, safe and reliable solution for Orkla. The solution is based on five IRB 360 Flexpicker robots working in parallel, which optimized the infeed speed to 65 chips packages per minute.

The Flexpickers detect incoming packages with PickMaster machine vision (camera) and place the packages in carton boxes. 35 conveyor belts transport the chips packages to and from the Flexpickers.

The safety solution is based on a Pluto B46 for each robot cell and Magne process locks for the doors. Since each robot cell has 7 doors/hatches, the use of the DYNlink system decreased wiring drastically. Connecting the Pluto outputs to STO (Safe Torque Off) functions on ABB frequency converters and using Sentry safety relays to expand the number of outputs, Pluto could control the safety of the complete packing cubicle.

For the conveyor control system, Pluto B20 was used together with Sentry expansion relays and an AC500 PLC system controlling the conveyor drives.
Safety and protection
The safety solution from ABB guarantees the highest level of safety while being flexible to allow simple changes in the future.

Cost effective solution
Orkla gets a cost-efficient modern solution to replace a labor intense manual production.

Speed up your projects
With good internal cooperation between different departments ABB was able to deliver a complete solution within a very tight time frame.

Conclusion
With ABB’s range of automation and safety products Orkla gets a tailor-made, modern and reliable solution.

“We selected ABB as the supplier by evaluating price, how the solution complied to our requirements, project technical task and possibility to use existing equipment” says Orkla Latvija’s Project Manager Edgars Balodis. “The new solution has eliminated the need of stacking empty boxes, and the tiring manual routine labour of 24 persons in 3-shift has been replaced with advanced robotization equipment.”

“We have recieved a thoughtful and compact design solution, predominantly using stainless steel products, which was implemented without production interruption as requested. This allows us to plan the next automation step in the same packaging workshop” says Orkla Latvija’s Technical Department Manager Mārtiņš Velmeris.

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### Products used

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