

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.

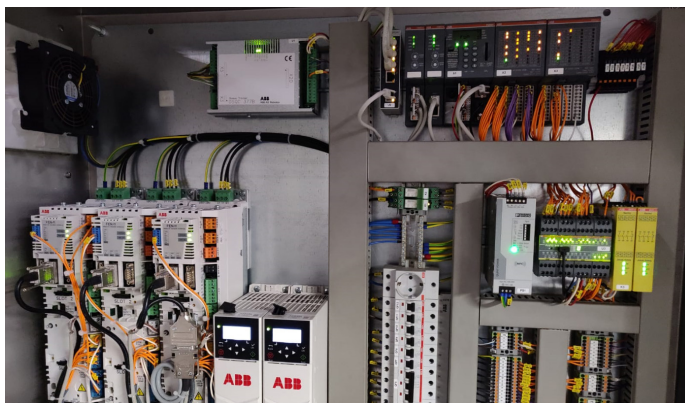
The Flexpickers detect incoming packages with PickMaster machine vision (camera) and place the packages in carton boxes. 35 conveyor belts transport the chips packages to and from the Flexpickers.

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.

Products used

Type	Order code	Quantity
Pluto B46 v2 Safety-PLC	2TLA020070R1700	5
Pluto B20 v2	2TLA020070R4600	1
Sentry BSR10 24VDC	2TLA010040R0000	12
Magne 4 DYN-Info M12-8	2TLA042022R3400	35
Eva General code	2TLA020046R0800	35
IRB360 Industrial robot (FlexPicker)	3HAC020536-015	5
PickMaster 3	3HAC023767-001	5
Compact HMI 800 6.0	3BSE084262R60	5
AC500 PLC		6
ACS380 drives		45
ACS880 drives		15



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 Latvia'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 received 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 Latvia's Technical Department Manager Mārtiņš Velmeris.

Note

ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document. We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents - in whole or in parts - is forbidden without prior written consent of ABB.

Copyright© 2020 ABB
All rights reserved

ABB AB

Jokab Safety

Varlabergsvägen 11
SE-434 39 Kungsbacka
Tel. +46 (0) 21-32 50 00

www.abb.com/jokabsafety

