EiCO: robots and conveyors in seamless interaction

EiCO, one of the largest suppliers of eggs in Switzerland, has optimized material flow processes at its distribution center in Märstetten. The project for automating the transportation of fragile products was realized by systems integrator Flück Fördertechnik from Kirchberg. It entailed implementing an advanced solution that integrated Interroll's Modular Conveyor Platform (MCP) with systems from robotics maker KUKA.

The project included the installation of a new sorting system in Märstetten that is capable of handling the growing diversity of products and batch sizes. The downstream processes called for a tailored material flow solution to maximize efficiency and flexibility as well as lowering operating costs. In addition, the sealing of the packages and their palletization were to be fully automated.

Flück Fördertechnik planned, integrated, delivered, installed and commissioned the ready-to-use automated solution for EiCO with the necessary control technology. The Swiss company is an official partner of the global Interroll Group's Rolling On Interroll program and a KUKA robot system partner.

The MCP in Märstetten was designed to automatically convey up to 1,200 cardboard cartons and crates with up to 130,000 raw eggs per hour, connecting the seven picking stations with the two KUKA robots responsible for automatic palletization. High Performance Diverts (HPD) ensure that certain cartons identified by barcode are sent through an integrated sealing machine prior to palletization. Additionally, the seven picking stations are supplied with empty cartons for manual filling by a further MCP conveyor system.

For the automated palletization prior to shipping, Flück Fördertechnik integrated two advanced KUKA robot systems into the flow of goods. The robots can remove several crates or cardboard cartons from the roller conveyor at a time and distribute them on pallets. They are able to complete 480 work cycles per hour while flexibly palletizing cartons and crates.