

ROBOTICS

Guldfågeln

Chicken products packed by robot



Guldfågeln production manager Tobias Abrahamsson and Andras Jonsson from Evomatic are very satisfied with the operation of the ABB industrial robot.

At the Guldfågeln chicken processing plant in Sweden, more than 86,000 chickens arrive each day from neighbouring farms to be transformed into the company's various product lines. "We have tough competition from imported chicken," explains production manager Tobias Abrahamsson. "If consumers think only of their wallets they will choose imported chicken. It is important to be able to show customers that Swedish chicken can be appreciated for other reasons."

Comprehensive animal welfare

Foodstuffs are more strictly regulated in Sweden than in virtually any other country, and the country's animal welfare programme is comprehensive. In fact, two of the National Food Agency's full-time veterinary surgeons are based at the Guldfågeln plant in Mörbylånga, on the island of Öland.

Guldfågeln bought its first robot 2011 after a tender was awarded to ABB's Value Provider Evomatic. The robot handles the palletisation of cardboard boxes in a cold storage facility (2 degrees Celsius) with high humidity.

A smooth production system at a Swedish chicken processing plant, helped along by an ABB industrial robot, produces chicken products that meet the country's high quality standards.

Two carton machines build the boxes before they are filled with chicken. Labelling and sealing of the boxes is part of an automated process that takes place before the boxes are palletised by the robot. It used to be heavy manual work that involved lifting around 20 tonnes per day.

"The robot cell packs and palletises boxes of two to six kilograms from three production lines – two grills and a roasting line," says Andras Jonsson of Evomatic. "The cell scans and counts the number of boxes and creates a log. This provides a better check on the production figures."

Guldfågeln's staff are trained so that they can control the robot, he explains. They can program in new products, and an on-site electrician can adjust pack designs. "We can also control the robot remotely from Evomatic to look at the flow and to carry out troubleshooting," Jonsson says.

Production is manually inspected

At the handling and grading tables – the stage before the automation takes place – boxes are packed manually. “We’ll continue doing this,” says Abrahamsson. “This is an important final check on the product, although we carry out sampling in addition to this. The hard part has been to get control of the irregular flow.”

Although the products are still inspected by the staff, the monotonous heavy lifting has disappeared with the addition of the robot. Now more robot cells can be used on the other production lines.

“We’re satisfied with the end result,” says Abrahamsson. “The robot has really worked well. We are now looking at whether it would work on the fresh chicken line and on the frozen raw chicken line.”

Environmental policy

Guldfågeln has a comprehensive environmental policy and operates as a carbon-neutral business. For example, in Mörbylånga each year 2,000 to 2,500 tonnes of feathers must be disposed of, but instead of being incinerated using fossil fuels they are ground down and transported to Cementa’s nearby factory at Degerhamn in southern Öland for combustion. It is a double gain for the environment. At Guldfågeln, “quality”, “environmental welfare” and “the environment” are bywords. Abrahamsson explains that to meet competition from imports, rationalisation and cost-cutting are a continuous process. “For our production to be efficient, we must continue to automate,” he says. “In the production itself there is a lot of manual work, but when it comes to packing we are pretty much like other companies. It is often that part that is easiest to automate.”

Guldfågeln has 350 to 400 products and thus many production lines. Some 35 percent of the production is delivered as fresh chicken to retail shops. The remainder is processed by freezing, roasting or grilling.

Facts

Guldfågeln is owned by the Jan Håkansson family and belongs to the Blenta Group based in Skåne. Ingelsta Kalkon and Lantfågel are also part of the group. The company was formed in 1975. The plant in Mörbylånga employs 350 people; 120 people work at the plant in Falkenberg.

Evomatic is a Value Provider for ABB. The company specialises in customers in the automotive, manufacturing and processing industries. Evomatic supplied a complete solution to Guldfågeln that ranged from developing the concept to training the staff. The robot with grippers is the central part of the solution concept. It is surrounded by conveyors and carton erectors. Everything is controlled by a programmable logic controller. The operator interface is adapted for communicating easily in a manner suited to the staff.

ABB supplied an IRB460 M2004, which Evomatic incorporated into its solution concept. The IRB460 industrial robot is a relatively new product with capabilities for high speed and increased reach.