Robotics

Picking of prepared meats Case study: AEW Delford and Charkman



A new robotic system that packs prepared meats at Fernebrand Chark in Sweden is on the very cutting edge of automation..

When it comes to cold cuts, sausage, ham and other processed meats, leading player Charkman holds a unique position in the Swedish market. The Charkman Group, which produces cooked meat products, is made up of 12 small- to mediumsized private companies that for over 30 years have cooperated closely with each other on most aspects of the food processing business.

Picking innovation

The latest innovation introduced at the plant has dramatically increased output: a fully automatic slicing line that slices and packs high volumes of salami, ham, turkey, rolled pork and other cooked meats that require only a small team of operators. At the heart of the line is a new intelligent portion loading (IPL) robot and junior slicer from AEW Delford

Systems, added to the already existing polyslicer plus slicing line.

ABB's FlexPicker and PickMaster

The IPL robot is ABB's IRB 340, FlexPicker, which is ideal for applications where objects need to be moved quickly and precisely. The robot is guided by a vision system, which locates the incoming products on a continuously moving conveyor belt. The robot's outstanding feature is the speed at which it operates, handling up to 150 picks per minute. The IRB 340 wash-down stain less version is especially suited for use in hygienic production of open foods such as meat, dairy products and ready made meals.

To make it easy to install and operate the FlexPicker, ABB has developed a software product called PickMaster which includes a Cognex vision system. PickMaster is ABB's PC based software tool that supports high speed picking applications with several robots and high product flows. Whether the products come in at random, on guided conveyors or placed on indexed carriers, PickMaster ensures highest precision.

Picking of prepared meats

Efficiency

The new system at Charkman provides a very high level of flexibility in that it slices a wide variety of products and can be programmed to handle some 26 pack variations and sizes. However, this is just the start. The robot can be set up to handle as many as 100 product programs and, at a later date, further robot cells can be added to the existing master control and vision system to provide even greater flexibility and output. The robot picks up 12 slices at a time and for the 24 slice pack it rotates the second shingle of slices through 180 degrees to give visually pleasing overlapped packs. Loading rates vary according to the type of product, but speed is typically 50-70 packs per minute.

Customer satisfaction

The labor-saving benefits, easy hygiene and safety aspects of the new system are impressive in their own right, but the proven capability of the junior slicer combined with the astounding qualities of the IPL robot convinced Kjell Fernebrand that this system was indeed a wise investment. "Now, shingled slices can be quickly and perfectly handled with a level of precision and consistency that a human could never achieve," he says. For Fernebrand, Charkman's wellearned reputation has never looked stronger.

FACTS

Key benefits

Automation of the slicing and packing line at Charkman has some big advantages over doing the job manually:

- Increased output
- Improved hygiene
- Greater consistency and precision
- Labor cost reduction
- Safety
- Less floor space



Easy to use operator's interface

AEW DELFORD SYSTEMS FACTS

Facts about AEW Delford Systems

AEW Delford Systems offers the very best in automatic portion control slicing, sawing, shaping, checkweighing, grading, weigh price labelling, wrapping, sleeving and robot portion loading technology - either as stand alone machines or as fully integrated systems.

For more information: www.aewdelford.com

ABB Robotics

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