



I C E
g r o u p

Who doesn't like ice cream? Every year, millions of people buy millions of tons of this delicious dessert, presented and packaged in a million different ways – on a stick, in a cone, as a sandwich, in a cake, etc.



Similarly, manufacturers try year for year to surprise their customers with more and more creative new products. To make this possible, state-of-the-art machinery must be available so that these new products can be produced quickly and without developmental problems. In Poland, the company ICE Group specializes in the development and production of exactly this type of machinery.

Since 1996, ICE Group has been a well-known manufacturer of machinery for industrial ice cream production. Their product spectrum includes all types of machines for the industrial production of ice cream – from pasteurization and mix preparation, to freezing, forming, filling, and, finally, packaging. Since the company first started production, hundreds of systems have been produced bearing the „ICE“ trademark and delivered to over 50 countries. 90% of ICE Group's sales are generated in exports.

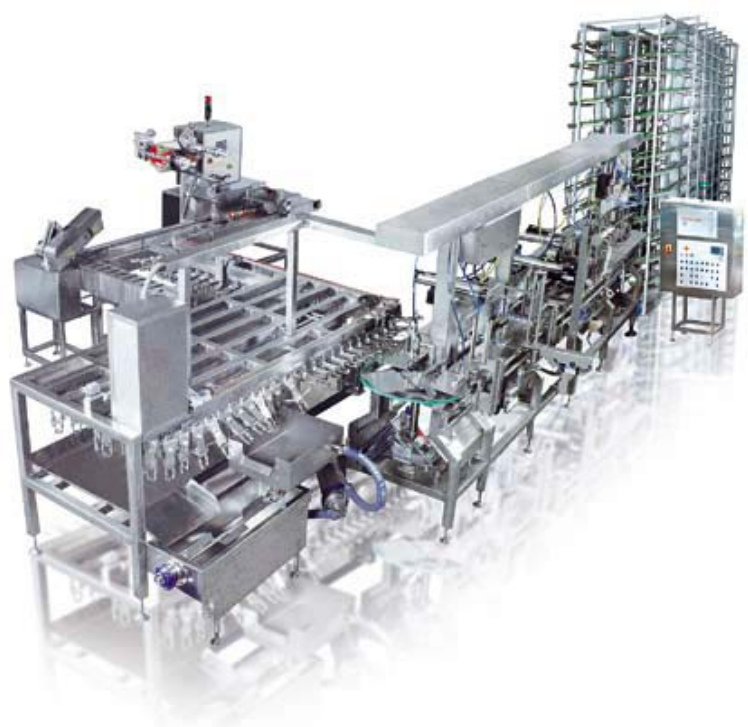
Cooperation with B&R's Polish subsidiary began in 2001. The teamwork resulted in a closed dosage station using an ACOPOS servo drive, integrated control system, and PP41 visualization.

Customer-specific Solution Approaches

Market characteristics, products with bizarre shapes, and surprise packaging all require machines that are developed based on the customer's input and tailored exactly to their needs. In light of these demands, a decision had to be made regarding a change in system approach – from the classic mechanical solution to a modern electronic solution based on servo drivers. The first step was to automate the technological IGLO line using synchronized ACOPOS server drivers and the Power Panel PP41. System support of the standard software in the form of Automation Studio and integrated libraries greatly simplifies this task. Solutions based on a real-time ETHERNET Powerlink network were developed that provide a wide range of possibilities to freely configure synchronized drives, in addition to high speed and zero jitter. This makes it possible to be flexible when reacting to customer requests, especially with the option of being able to perform the new program online. During this transformation, the standard connections between elements in the assembly line, such as mechanical axes or frames with chains, were replaced with modern solutions based on the electronic synchronization provided by servo drives.

"The modernization of our line has clearly simplified installation and our company's processes," said Mariusz Goik, owner of ICE Group. "We are especially pleased with the positive feedback we have received from the users of our machines, who appreciate the simple operation, the significant reduction in operating costs, and the simple maintenance and servicing."

Faster and more efficient technology makes it possible to increase production levels, while at the same time creating a need for better and faster packaging systems. The logical answer was to completely modernize the RAPID packaging machine into a "flow pack system" in cooperation



with B&R Poland. All control elements are – as with the IGLO line – connected via an ETHERNET Powerlink network.

"The installation time for this type of machinery has been drastically shortened," reported Mariusz Goik.


The packaging process was increased to 9,000 units per hour. A further important consideration is that the RAPID flow pack machines frequently have to be used to package products that vary in weight, shape, size, and packaging material. Adapting the machines to these variations used to be a time consuming process, yet today it has been reduced to simply selecting the new product line on the display unit. It is particularly interesting that the mechanical construction of the packaging machines guarantees compatibility with not only other product lines from ICE Group, but also with product lines from other manufacturers.

Trends for new Machine Generations

Mariusz Goik concluded, "From the very beginning, the cooperation with B&R Poland has been marked by openness for unconventional solutions.

Together with B&R we were successful in finding the optimal solution for our customers.

In many cases we worked together to convince the customer of the advantages of the modern solution. Today, customers can no longer imagine working with machines from the old generation."

Further collaborations are planned for the future that will implement servo drivers and control systems from B&R and make it possible to develop machines that create revolutionary products in the market of industrially produced ice cream. 

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