



EFFICIENCY: BALANCING TIME, COSTS AND ENERGY

As the demand for frozen food products increases, so do advances in technology and equipment needed to process it. An example of such a category is the spiral freezers: today's requirements for this particular machinery can be described as smarter, faster, long-lasting and able to withstand and carry more load.

Dan Orehov reports



Energy efficiency, hygiene and total cost of ownership are also issues that are becoming more important, which is why producers of spiral freezers and conveyor belts are turning to their R&D departments for innovation and new ideas, a requirement which enables them to take the lead in today's competitive market.

In fact, energy efficiency has become so important that it does not only refer to the actual power needed to run a freezer, but also to the energy to defrost and clean the machinery. Added to this, mechanical reliability is also an important factor, which is why producers such as JBT focus on extremely low belt forces that provide long belt life and reliability in the spirals.

"We focus not just on our spiral freezers to make them more cost-efficient, we also work on the supporting areas around the freezers. One example is the LVS refrigeration system, where we have developed a technical solution to make the system feeding the freezer more efficient. The LVS system minimizes the losses between the compressor and the freezer, thus reducing the power consumption in the refrigeration system. The LVS system also lowers the refrigerant load which, in many cases, is an important factor," says Torbjörn Persson, director, Portfolio & Applications, JBT.

CURRENT TECH TRENDS

Producers of spiral freezers and conveyors contacted for this article say that one of the growing trends noticed on this particular market is that original equipment manufacturers (OEMs) and



Photo: Cambridge Engineered Solutions



Photo: JBT

EU food processors are increasing the speeds, widths and overall size of their equipment, a similar move to the US market. This is explained by the need for increased throughput and efficiency.

"Manufacturing footprint optimization (MFO) has also become more important. Customers want to meet the goals of increased throughput, but sometimes they cannot add a new spiral system. So systems are now being designed without a cage and instead, sprockets are used to drive the belt on its edge," says Mike Truitt, Director, International Sales, Cambridge Engineered Solutions.

"These systems allow a spiral to be placed in areas where traditional spirals can't go. For example, they can be built around building columns. They also reduce system footprint because the coils, fans, and conditioning systems can now go in the center of the

system. We have partnered with select OEMs in Europe to help design and launch these systems as MFO becomes more and more important. We will be debuting a cage-less system that features our new CamEdge belt at the Anuga FoodTec show in March," he adds.

Cambridge Engineered Solutions offer resources and services for all applications within a plant, across many frozen food categories, as well as non-food market sectors. Also, the company provides custom manufacturing, for those customers who need a specific product or shape that traditional belts cannot produce.

"Our belts are of the highest quality; not only the design of the belt, but also the engineering that goes into our manufacturing process. For example, we offer PacTitan, a premium flat wire belt, that can be found in food production plants across the world. This belt, just by our proprietary manufacturing process, can increase the life of the belt by 30%. The engineering behind the design of a belt is extremely important, but the engineering behind our manufacturing equipment is just as important," says Mike Truitt.

BEYOND THE SELLING PROCESS

Most of the times, selling the equipment is just the beginning of a relationship between producers and clients, which, if properly addressed can lead to the building of a strong business partnership. This is something that manufacturers of spiral freezers also emphasize, especially since most of their partners require more than simply installing the equipment.

"Our clients require complete in-line solutions to streamline their operations efficiently. We also believe that long-term relationships are important with partners throughout the entire life of a machine, which is why we're also heavily focused on the servicing and maintenance", says Torbjörn Persson, director, Portfolio & Applications, JBT. "The main advantages with our spiral freezing technology is our experience and dedication. We've been in the freezing business since the late 1950s and that journey has been one of constant development to help our customers drive their businesses forward," he concludes. ■



Around the world,
more food is
proofed, baked,
cooked, cooled
and frozen
on our
conveyor belts.

Ask for
Ashworth.



www.ashworth.com