

A quick freeze

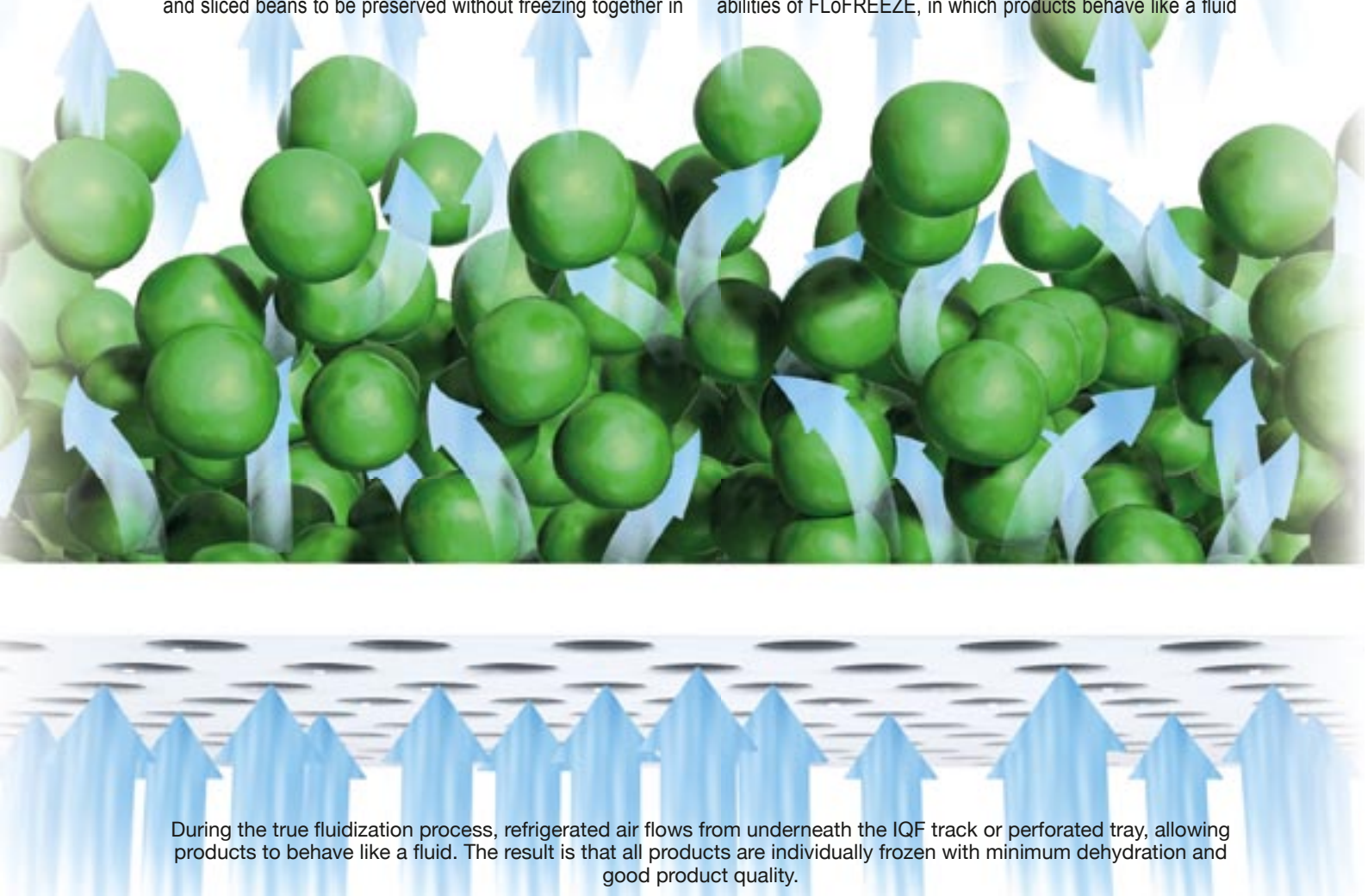
To remain competitive, the frozen food industry must embrace technologies that preserve the best-possible flavour, texture and quality of its product offerings

Consumer interest in frozen foods is steadily increasing around the world. The main driver for the popularity of frozen foods has been convenience. Now, a higher quality and wider variety of foods have consumers taking a second look at the freezer section.

Today's freezing technology allows for fragile berries, vegetables and seafood to be individually quick frozen; difficult-to-separate products such as diced mango, diced apricots, pasta and sliced beans to be preserved without freezing together in

large clumps; and smaller items such as rice and *couscous* to be cooked and quickly frozen to maintain flavour.

This emphasis on freshness poses a unique challenge to food processors for continued improvement. JBT FoodTech developed the new FLoFREEZE® A to aid small- to medium-scale processors in meeting the growing demand for premium food products while maintaining cost-efficient plant operations. Fluidization is the key to the individually quick freezing (IQF) abilities of FLoFREEZE, in which products behave like a fluid



During the true fluidization process, refrigerated air flows from underneath the IQF track or perforated tray, allowing products to behave like a fluid. The result is that all products are individually frozen with minimum dehydration and good product quality.



because they are suspended by refrigerated air that flows from underneath the perforated belt or tray.

FLoFREEZE A is part of the JBT FoodTech Frigoscandia product line. Frigoscandia Equipment originally developed FLoFREEZE IQF freezers when it invented the fluidization process for IQF in the 1960s.

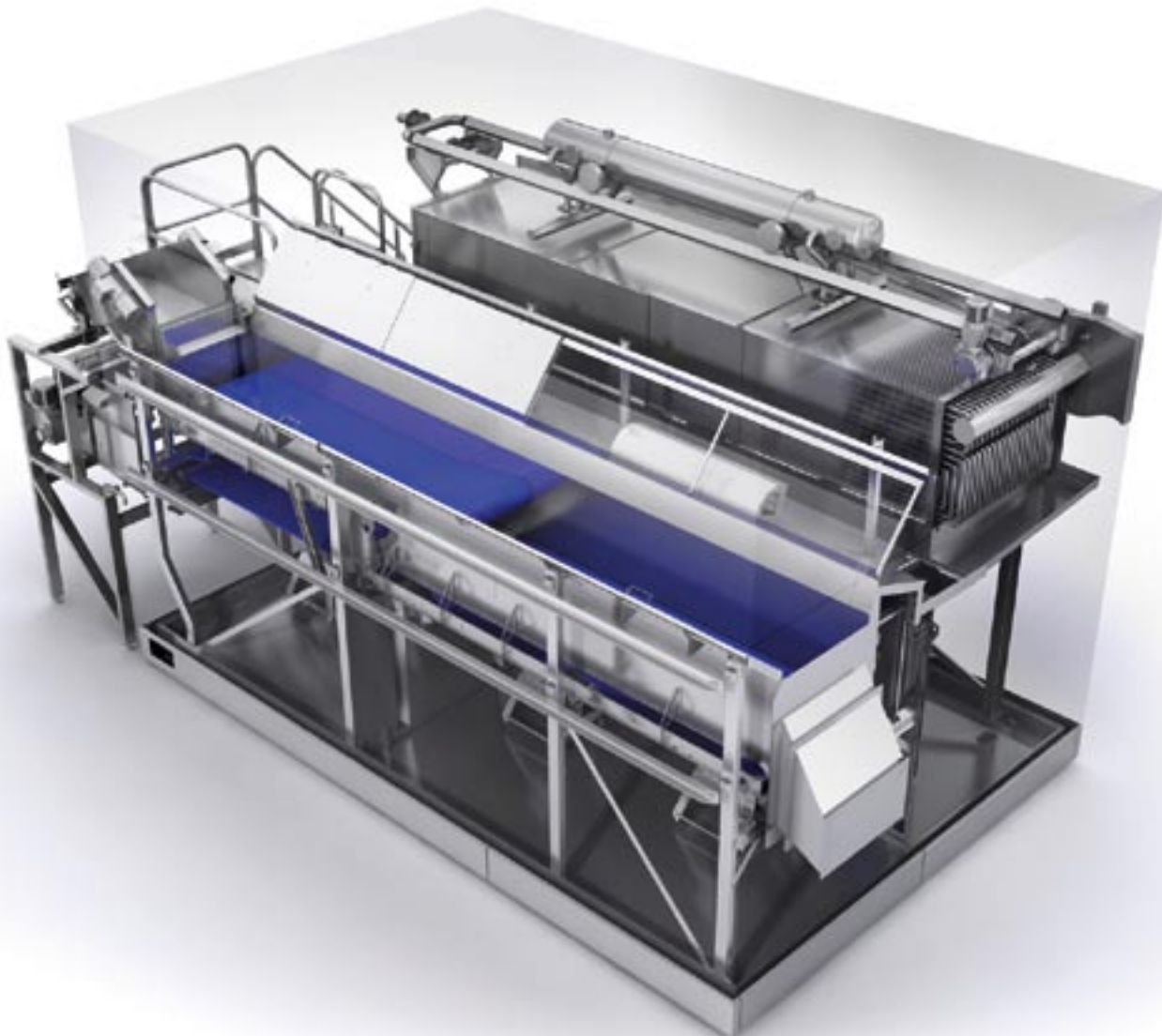
Customised versatility

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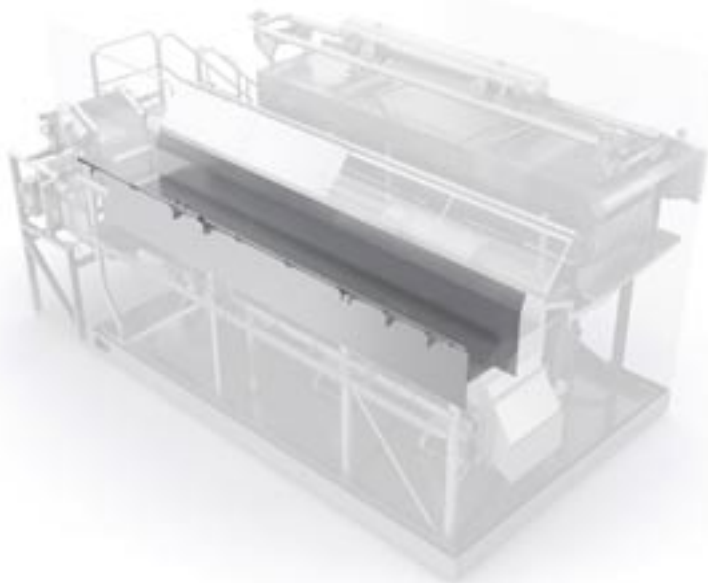
as the choice between an IQF track and perforated tray.

Prior to the availability of FLoFREEZE A, processors chose between two freezer models that each had broad range capacities. FLoFREEZE M offers processors high-volume production, with a capacity ranging from 5 to 15 tons per hour of green peas. FLoFREEZE S was originally developed for relatively small production operations, with a capacity ranging from 1.5 to 5 tons per hour.

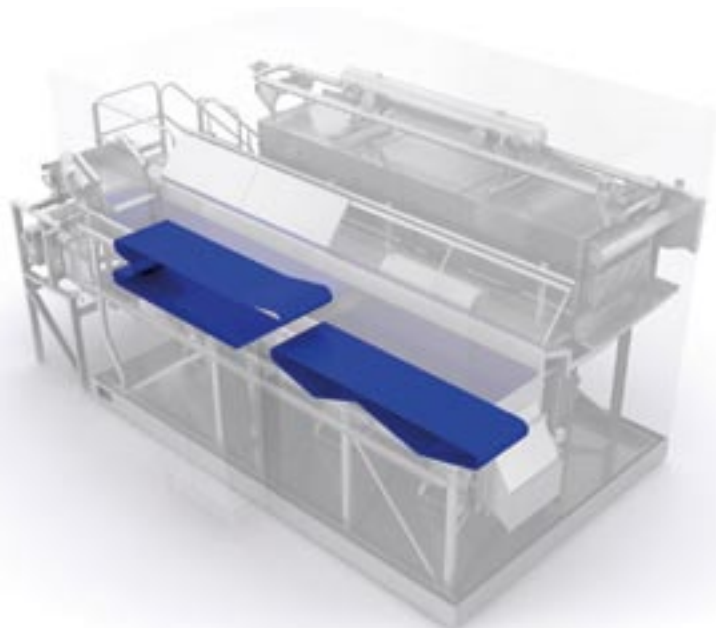
FLoFREEZE A is available in capacities of 1, 2, 3 and 4 tons per hour, making the freezer easier to integrate into



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The perforated stainless steel tray option on the FLoFREEZE A provides high-quality freezing on basic vegetables and high level of hygiene for diced meat and cheese applications.



The IQF track provides the broadest product range and highest-quality freezing for delicate, hard-to-handle and difficult-to-separate products.

existing lines and more cost-effective for processors with tight production demands. Also, for the first time, processors have the option of an IQF track conveyor or a perforated stainless steel tray on the freezer.

An IQF track provides the highest-quality IQF on delicate, hard-to-handle and sticky products. The perforated stainless steel tray design is suited for products homogeneous in shape, such as peas, diced carrots and other basic vegetables. The tray is easily accessible from both the product side and the underside for cleaning, which also makes it suitable for diced meat and cheese applications, which require a higher level of sanitation.

FLoFREEZE A offers features such as optimised agitation, patented pulsation and modulated airflow that reduce the percentage of crushed and wasted product. The common denominator for all of these features is that the product is handled solely by air. There are no mechanical devices that can damage the food.

Cost-reducing technology

Processors can save thousands of dollars per year when using FLoFREEZE A, mainly because of reduced product damage and ice clusters, decreased downtime and improved product throughput.

By optimising airflow and heat transfer, the amount of clustered product can be reduced to 1% or less with minimal dehydration; while the fluidization technique freezes more products per square metre than conventional freezers. The result is that 1 pound of IQF blueberries is worth more than 1 pound of the same blueberries frozen together in clusters.

The hygienic design of FLoFREEZE freezers reduces the amount of downtime and related lost productivity associated with cleaning because of smooth, sloped and self-draining surfaces which make it easier to wash off particles. Freezers with an IQF track conveyor have the option to install an extended track rinsing that can be used with the freezer in cold operation and will extend run-time between extensive cleanings, further reducing downtime.

Processors today need to be flexible and versatile to keep up with changing trends in frozen foods, which include adding variety to their product lines while maintaining efficient operating costs. To remain competitive, the frozen food industry must embrace technologies that preserve the best-possible flavour, texture and quality of its product offerings. **FBA**

This article is written by:

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