

#### **FLoFREEZE® - IQF Freezers**

The only true IQF freezers



# FLoFREEZE<sup>®</sup> freezers, when product quality and yield matters



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# Fresher than fresh. True fluidisation boosts your profit.

We invented IQF freezing with true fluidisation in 1962, creating a new way for consumers to enjoy fresh fruit and vegetables – many months after the harvest.

Today, increasing consumer spending power is balanced by growing consumer health awareness. The demand for appetising frozen food products grows like never before. And true IQF freezing is still the most cost-effective way to create premium fresher-than-fresh food products that offer maximum convenience – and sell for a premium price.

The FLoFREEZE® A and FLoFREEZE M IQF freezers are available in a range of sizes, so you can choose the right freezer to suit your products and throughput requirements (see page opposite for more detailed guidelines).

Thanks to our continuous technology advancements, you can now IQF freeze a much greater range of product, in much less space, at much lower cost. At JBT, we promise you IQF freezing capabilities that serve and stimulate your growth and profit in this rewarding market.



#### Example on Product Capacity (kg/h, +15/-18°C (in-/out feed temp) at -38°C evaporation temperature.

Guideline only, for more details contact JBT

FLoFREEZE Model	Sweet corn cut, Peas, Lingonberries, Shredded Mozzarella	Beans, Whole Brussels Sprouts (25-40mm), Potato & Carrot Diced/sliced, Blueberry (6% sugar), Currant	Whole Asparagus, Broccoli (cut 30mm), Cauliflower (florets 25-50mm), Leek (cut 25mm), Onion/Zucchini/ Turnip/Papaya/Pear (diced 10mm), Rice, Sweet Pepper		Corn (on cob 150 Pasta (S Tagliatell cut 50m
A10	925	780	650	510	
A10e	1,100	950	775	610	
A20	1,850	1,575	1,300	1,025	
A20e	2,250	1,900	1,550	1,225	
A30	2,800	2,380	1,950	1,535	
A30e	3,350	2,850	2,350	1,850	
A40	3,700	3,150	2,600	2,050	
A40e	4,450	3,800	3,125	2,450	
A50	4,650	3,950	3,250	2,550	
A50e	5,600	4,750	3,900	3,050	
M20	5,600	4,750	3,900	3,050	
M25	6,500	5,525	4,550	3,600	
M30	8,400	7,150	5,850	4,600	
M40	10,700	9,100	7,500	5,900	
M50	13,500	11,500	9,450	7,400	
M60	16,300	13,850	11,400	8,950	
M3SD	7,000	5,950	4,900	3,850	
M4SD	9,300	7,900	6,500	5,100	
M5SD	11,600	9,850	8,150	6,400	
M6SD	14,000	11,900	9,800	7,700	
M7SD	16,800	14,250	11,700	9,200	

JBT Frigoscandia FLoFREEZE®



# Application-specific IQF freezing is our specialty

Food processors are our driving force, and our greatest ambition is to make your processing operations more successful and profitable. The FLoFREEZE® freezer sets a new standard for IQF productivity, delivering food-focused quality to build your reputation and profit to drive your growth. Providing true fluidisation, it will serve even the most difficult products, while simultaneously meeting the industry's toughest requirements for hygiene, energy usage, operating economy and user-friendliness. To achieve profitable food-focused freezing of your most valuable products, the FLoFREEZE IQF freezer just can't be beaten.



# IQF Track – for delicate products

The FLoFREEZE IQF Track offers versatility, keeping sensitive or sticky products separated until they achieve a protective crust.



With the IQF Track, delicate parboiled fresh pasta crust-



Together with its IQF track, the FLOFREEZE freezer's



With fresher-thanfresh IQF freezing, you can command

freezes first, minimising clumping and tangled or torn product.



Tickle consumer taste buds by IQF freezing delicate high-value fresh spices. With the FLoFREEZE freezer, it's a profitable business.

modulation ensures gentle handling, increasing the value of your fresh berry products.

Thanks to the IQF

Track, modulation,

cooked rice can be

readily frozen in the

air bypass and

pulsator, sticky

FLoFREEZE

freezer.



a premium price for your shrimp harvest.



Thanks to our process know-how, diced tropical fruit retains its appearance and fresherthan-fresh flavour.



## IQF tray – for high-hygiene or high-volume production

The stainless steel FLoFREEZE IQF Tray is perfect for products that demand extra hygiene precautions in your processing, as well as for classic high-volume products.



Protein products: capture the juicy goodness of shredded, diced or cubed chicken and diced topping meats – and minimise hygiene risk.



True fluidisation keeps sticky cheese toppings separated, while ensuring high throughput and long production runs.



For premium IQF freezing of the year's entire basic vegetable harvest, the FLoFREEZE IQF freezer delivers results from start to finish.

# FLoFREEZE® IQF Freezers The most effective IQF freezer ever made

Since the 1960s, when we first invented the individual quick freezing process, we have continuously enhanced the functionality of our IQF freezers. Our aim? To make it possible for you to apply true fluidization to a wider range of product, with longer uptime and greater throughput.



Food-Focused Freezing

True fluidization gives you premium IQF results, and thus the best return on your investment. But is not a one-size-fits-all process.

With nearly six decades of IQF experience, we have identified the factors that give the best results for each food product. We continuously improve our technology to successfully achieve those results. At the same time, we construct our freezers to give you continuous performance, operating economy and low energy consumption when you need it most.

Thanks to the FLoFREEZE IQF freezer's flexible design, we can quickly and effectively configure each performance factor to precisely match the throughput requirements of your food product and process.

For your security, each freezer is pre-assembled before delivery. This also speeds up installation and commissioning, so you can quickly begin profitable processing, and achieve rapid return on your IQF investment.





# **True fluidization**

The secret of successful IQF processing is the carefully controlled freezing sequence. It protects product quality and maximizes yield while ensuring true IQF results and long production runs.

JBT's patented true fluidization technology is the best way to achieve premium prices for your IQF food products.







The right infeed equipment gives you the best start Three infeed alternatives are available: a conveyor that gently handles ripe berries, a vibratory conveyor that ensures even distribution, or a vibratory conveyor that also supplements your own de-watering capabilities.

**Extended Track Rinser** The optional Extended Track Rinser quickly and efficiently cleans the first belt without raising freezer temperature. This enables you to extend your production run and still uphold the toughest hygiene requirements.

#### Hygiene by Design<sup>™</sup>

The FLoFREEZE freezer's open design is very easy to keep clean, in keeping with our Hygiene-by-Design™ philosophy. All key interior metal parts are stainless steel. All surfaces, including the floor, are smooth and selfdraining, to ensure efficient, complete removal of food debris during cleaning.



#### IQF Track



The IQF Track offers stable, dual zone fluidization, with two independent tracks and two separate pressure chambers. Crustfreezing for stable IQF, appearance and yield, and then fresher-than-fresh core freezing, it can be run in either agitation or conveyor mode, ensuring optimum IQF for both delicate and hard-to-handle products.



Delivering multi-zone freezing capability, the stainless steel IQF Tray is perfect for products that require extra hygiene precautions in your processing, as well as high-volume 'classic' products like peas and corn kernels.

#### Pulsation



By modulating only air pressure and frequency over the product bed, our unique pulsator gently separates delicate products at the crust freezing stage. Excellent for soft, juicy products, it gives you maximum freezing flexibility.

#### Agitation



To ensure proper IQF at the critical crustfreezing stage, back-and-forth agitation on the first track or on your tray separates long or sticky products like sliced bell peppers, pasta, onion rings and rice. Stepless speed adjustment on both conveyors also helps increase your throughput of staple IQF products like peas, beans and cauliflower.



#### Continuous operation, with ADF

By systematically and continuously removing snow build-up, the PLC-controlled automated ADF gives you a minimum of 22 hours nonstop freezing. Reliable and easy to clean, it helps minimise refrigerant load and ensures you maximum utilisation of your freezing capacity.



Extended continuous operation For production that demands operating several days in a row, with up to a week between defrosts, the FLoFREEZE M Sequential Defrost offers secure and reliable technology. The freezer is based on the same fully fluidising system as the other freezers in the FLoFREEZE freezer family, and the PLCautomated system can be adapted to any production needs.



#### Low volume refrigeration means high profit

The optional Frigoscandia<sup>®</sup> LVS Refrigeration system is a winning investment. It delivers very low temperatures (down to -50°C) as well as increased evaporator efficiency. It requires a much smaller refrigerant charge than traditional systems, and the refrigeration pack can be placed anywhere in your plant, with almost no pressure drop.



#### Air bypass



By fine-tuning airflow through the product bed, the air bypass ensures gentle, optimized fluidization regardless of product shape, size and weight. It also helps to maximize heat exchange over the evaporator, and minimize over-blow of light products.

#### Modulator



By modulating airflow on the first IQF Track, you can fine-tune initial crust freezing to the exact requirements of each product and eliminate product 'clumping'.

#### You know it's not goodbye, it's a good buy

In every aspect in the development of a solution from JBT you can rest assured that great considerations have been taken in regards of sustainability and ethics.

When you buy your machinery from JBT you know that it has been developed and manufactured in a responsible way. And you know that you get a piece of equipment that utilises the latest scientific advances in technology to minimise your environmental footprint.

But it doesn't end there. Our solutions and processes come with a commitment to constantly improve their impacts in the areas of CSR. Whether it is by developing more energy efficient drive lines, decreasing consumption of water and chemicals or offering training and support to create more sustainable workflows.

Our focus on minimising the environmental footprint of our business does not end with a closed deal on a piece of equipment. We are committed to long-term partnerships with our customers.



#### WE ARE YOUR SINGLE SOURCE FOR PROFITABLE PROCESSING SOLUTIONS

JBT is a leading provider of integrated food processing solutions. From single machines to complete processing lines, we enhance value and capture quality, nutrition and taste in food products. With a local presence on six continents, JBT can quickly provide our customers and partners in food processing industry with the know-how, service, and support needed to succeed in today's competitive marketplace.





Europe

John Bean Technologies AB Rusthållsgatan 21, Box 913 SE-251 09 Helsingborg SWEDEN Phone +46 42 490 4000 info-europe@ibtc.com

Latin America

John Bean Technologies Máquinas e Equipamentos Industriais Ltda. Av. Eng. Camilo Dinucci 4605 14808-900 Araraquara, São Paulo, BRAZIL Phone: +55 16 3301 2000 E-mail: latinamerica.info@jbtc.com John Bean Technologies Ltd. 159/26 Serm-Mit Tower, Room no. 1602-3 Sukhumvit 21 Road, Klongtoey Nua Sub-district Wattana District, Bangkok 10110, THAILAND Phone: +66 2257 4000 E-mail: infoasia-jbtfoodtech@jbtc.com

North America JBT Corporation 1622 First St. Sandusky, OH 44870 USA Phone: +1 419 626 0304 E-mail: process-solutions@jbtc.com

Asia



We're with you, right down the line.<sup>™</sup>

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