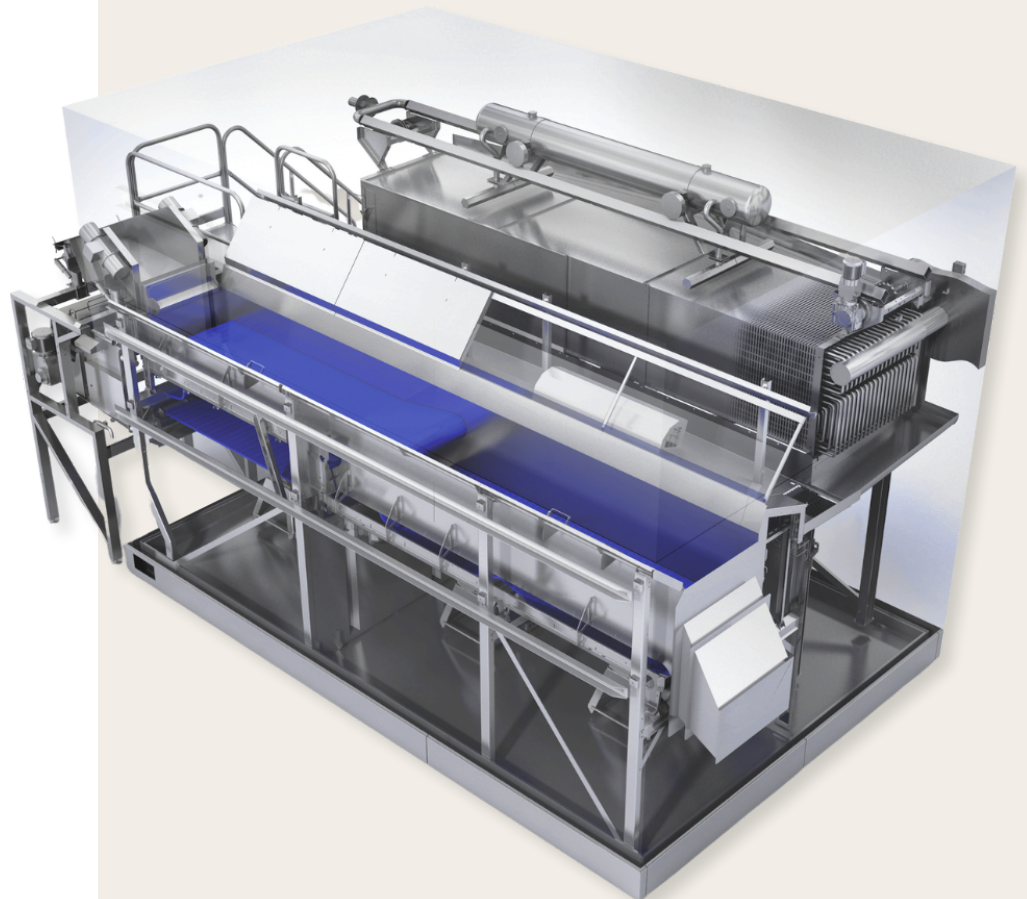




When product quality and yield matters

# Frigoscandia FLoFREEZE<sup>®</sup> IQF Freezer

The only true IQF freezer





# 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.

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 Marel, we promise you IQF freezing capabilities that serve and stimulate your growth and profit in this rewarding market.

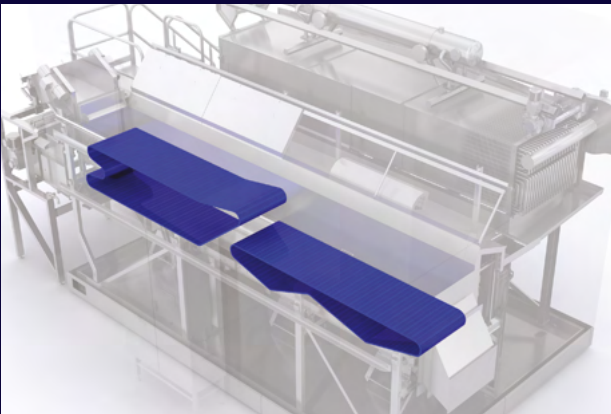
EXAMPLE ON PRODUCT CAPACITY (KG/H, +15/-18°C  
(IN-/OUT FEED TEMP) AT -38°C EVAPORATION TEMPERATURE.

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	Artichoke bottoms, Cabbage (cut 13mm), Pea Pod, Whole Potatoe (25mm), Mango/ Peach (diced), Ham/ Chicken (diced). Pasta (Farfalle, Gnocchi, Fusilli etc)	Corn (on the cob 150mm), Pasta (Spaghetti, Tagliatelle cut 50mm)
A10e	1,100	950	775	610	450
A20e	2,250	1,900	1,550	1,225	900
A30e	3,350	2,850	2,350	1,850	1,350
A40e	4,450	3,800	3,125	2,450	1,800
A50e	5,600	4,750	3,900	3,050	2,250
M20	5,600	4,750	3,900	3,050	2,250
M25	6,500	5,525	4,550	3,600	2,600
M30	8,400	7,150	5,850	4,600	3,350
M40	10,700	9,100	7,500	5,900	4,275
M50	13,500	11,500	9,450	7,400	5,400
M60	16,300	13,850	11,400	8,950	6,500
M3SD	7,000	5,950	4,900	3,850	2,800
M4SD	9,300	7,900	6,500	5,100	3,700
M5SD	11,600	9,850	8,150	6,400	4,650
M6SD	14,000	11,900	9,800	7,700	5,600
M7SD	16,800	14,250	11,700	9,200	6,700



# 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-freezes first, minimising clumping and tangled or torn product.



Together with its IQF track, the FLoFREEZE® freezer's modulation ensures gentle handling, increasing the value of your fresh berry products.

With fresher-than-fresh IQF freezing, you can command a premium price for your shrimp harvest.



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

Thanks to the IQF Track, modulation, air bypass and pulsator, sticky cooked rice can be readily frozen in the FLoFREEZE® freezer.



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

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

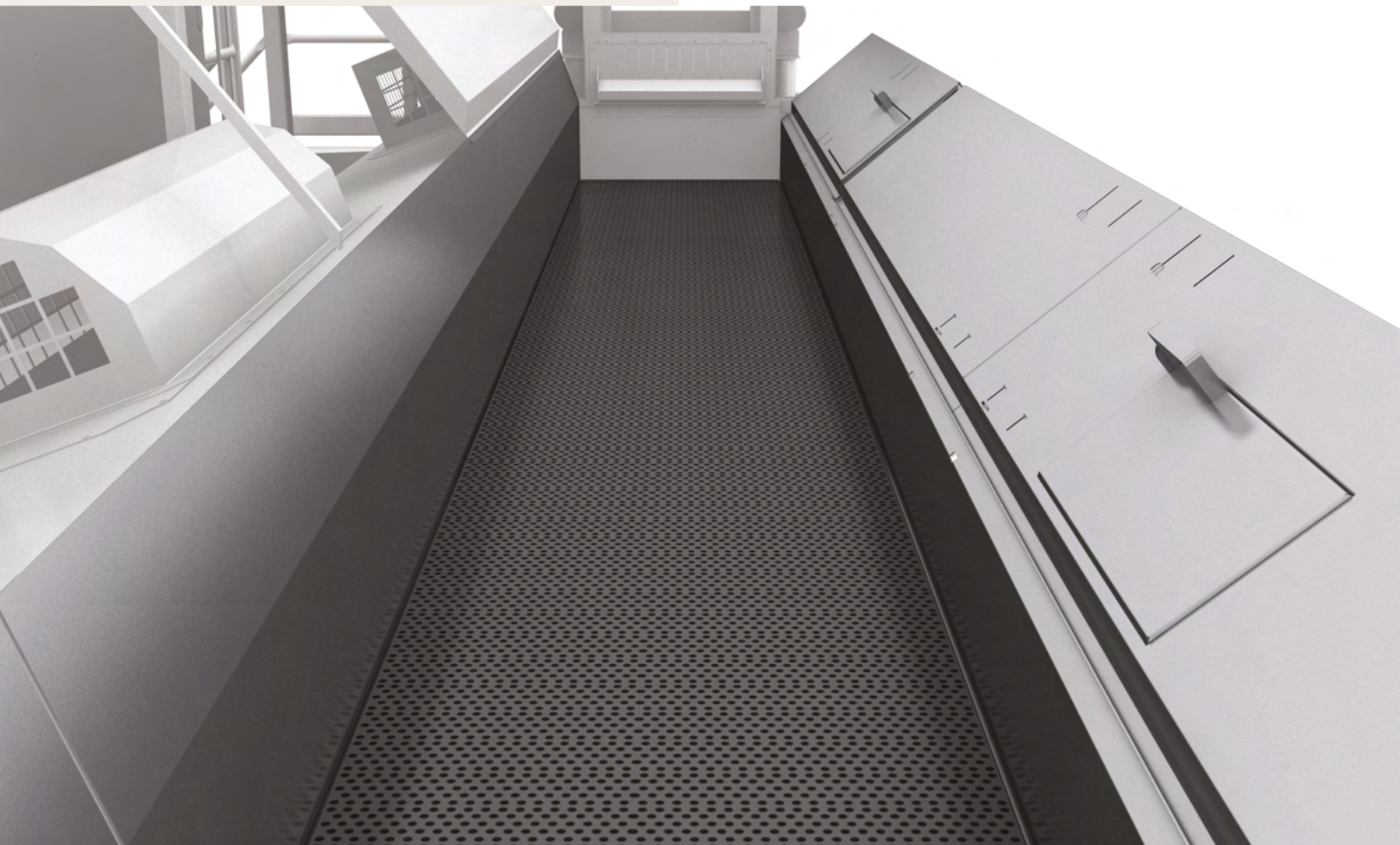
The stainless steel FLoFREEZE® IQF Tray is perfect for products that demand extra hygiene precautions in your processing, as well as for classic high-volume products.

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.

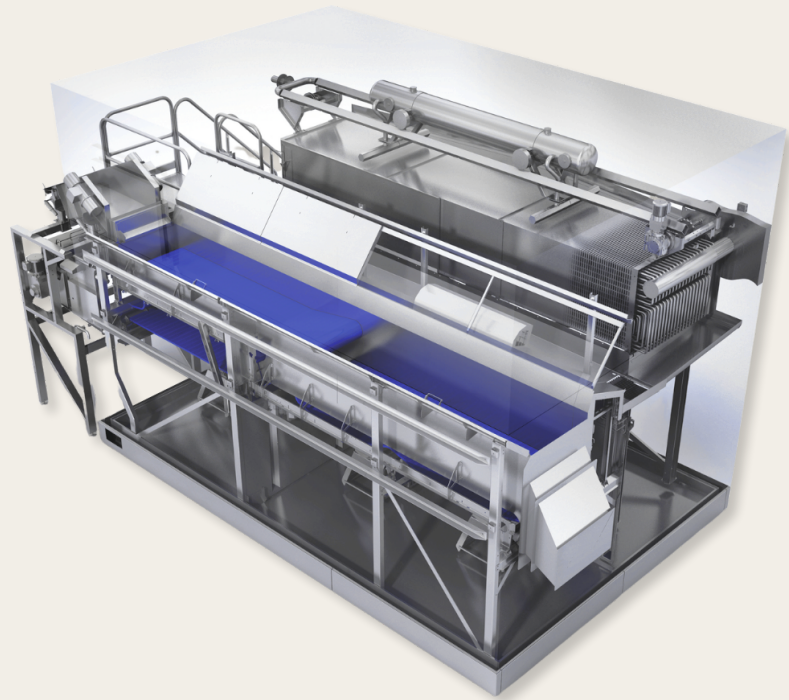
With nearly six decades of IQF experience, we have identified the factors that give the best results for each food product. We continuously improve our technology to successfully achieve those results.

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 profit-able processing, and achieve rapid return on your IQF investment.

# FLoFREEZE® IQF Freezers



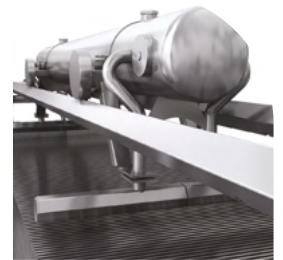
## The right infeed equipment gives you the best start

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.



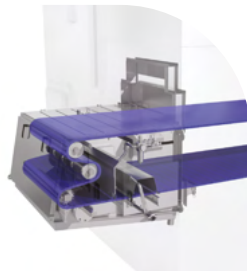
## Continuous operation, with ADF

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



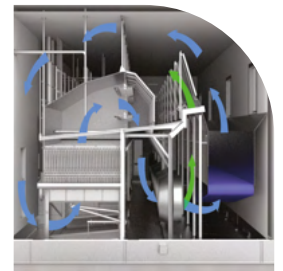
## Extended Track Rinser

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.



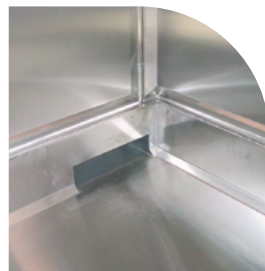
## Extended continuous operation

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 PLC-automated system can be adapted to any production needs.



## Hygiene by Design™

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 self-draining, to ensure efficient, complete removal of food debris during cleaning.



## Low volume refrigeration means high profit

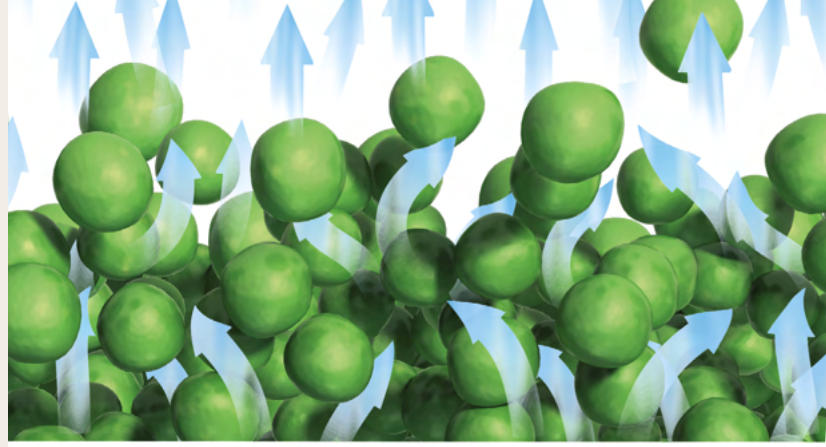
The optional Frigoscandia® LVS Refrigeration system is a winning investment. It delivers very low temperatures (down to  $-50\text{ }^{\circ}\text{C}$ ) as well as increased evaporator efficiency. It requires a much smaller refrigerant charge than traditional systems, and the refrigeration pack can be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



## True fluidization

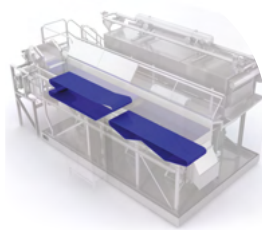
The secret of successful IQF processing is the carefully controlled freezing sequence. It protects product quality and maximizes yield while ensuring true IQF results and long production runs.

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



## IQF Track

The IQF Track offers stable, dual zone fluidization, with two independent tracks and two separate pressure chambers. Crust-freezing 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.



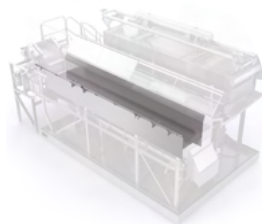
## Agitation

To ensure proper IQF at the critical crust-freezing stage, back-and-forth agitation 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.



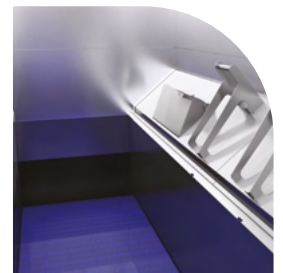
## IQF Tray

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.



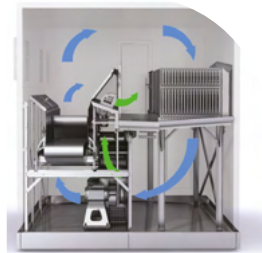
## Air bypass

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.



## 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.



## 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'.

