



## **Freshline<sup>®</sup> QF tunnel freezer**

*A high performance and flexible freezing concept*

### **Flexible production capacities**

The Freshline<sup>®</sup> QF tunnel freezer has throughput capacities ranging from 100 kg per hour to 3000 kg per hour or more in a standard range of machines. It can handle virtually any type of food - fish, meat, poultry, vegetables, fruit, confectionery and bakery products.

The Freshline<sup>®</sup> QF tunnel freezer is a conveyor encased in an efficient insulated tunnel. Food is carried along the conveyor and under spray headers which are connected to a controlled liquid nitrogen supply.

### **Better food texture and taste**

Liquid nitrogen has a temperature of  $-196^{\circ}\text{C}$ . When vaporised in contact with the food it rapidly absorbs heat. The ultra low temperature and high heat transfer rate leads to rapid freezing. This minimises large ice crystal formation and helps preserve food texture. It also cuts drip loss and dehydration to almost nothing, leaving the product with a better colour, better texture and better taste. The expendable refrigerant gas is controlled and directed down the tunnel to efficiently precool the incoming food. The high velocity circulating fans create extremely rapid cooling of food in the gas sections of the freezer. This increases the amount of heat that the gas absorbs from the food and leads to highly efficient nitrogen use.

### **Easily expanded**

Whilst offering a low capital cost alternative to traditional methods of food freezing, one of the most important benefits of the Freshline<sup>®</sup> QF tunnel freezer is its compatibility with existing production systems. It comes in a range of widths to accommodate most upstream and downstream processing equipment. The Freshline<sup>®</sup> QF tunnel freezer can also be installed alone or in conjunction with a Freshline<sup>®</sup>-DIP immersion freezer to give premium IQF products. The freezer is built in modules, allowing a range of tunnel lengths depending on the process requirements.

Increasing production on the Freshline<sup>®</sup> QF tunnel freezer can be attained by simply increasing the nitrogen flow and speeding up the conveyor. The nominal capacity can be increased by as much as 30%.

The Freshline<sup>®</sup> QF fits naturally with flow-line production and with an automated control system it requires minimum attention. As the only major moving parts are the fans and the conveyor, maintenance is reduced to a minimum. The pneumatically operated dropping bottom provides easy access for cleaning. This total simplicity means minimum downtime, maximum flexibility and a perfect frozen product.

### Benefits

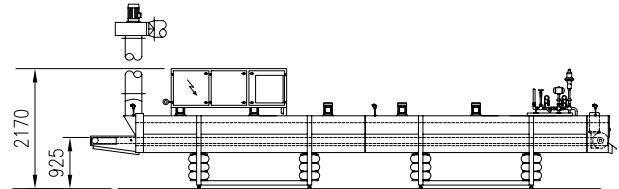
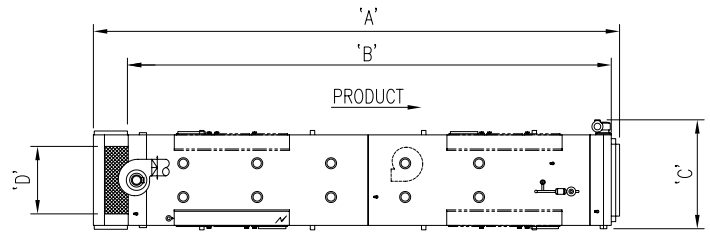
- Low capital cost
- Compatibility with existing production systems
- High quality frozen product
- Flexible modular design
- Handles a range of capacities and product types

### Further information:

Call us today on 0800 389 0202 to speak to one of our experts and discover our new Freshline technologies for coating, mixing and IQF fast-freezing, which allow you to broaden your range of products and improve their quality.

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Type	A Total length m	B Effective length m	C Total width m	D Effective width m	Required power (3ph)	Weight
QF 660.4	5.5	4	1.4	0.66	5 kW	1700kg
QF 915.4	5.5	4	1.65	0.915	5 kW	2020kg
QF 1220.4	5.5	4	1.9	1.22	6 kW	2350kg
QF 660.6	7.5	6	1.4	0.66	6 kW	2150kg
QF 915.6	7.5	6	1.65	0.915	6 kW	2470kg
QF 1220.6	7.5	6	1.9	1.22	7 kW	3000kg
QF 660.8	9.5	8	1.4	0.66	6 kW	2700kg
QF 915.8	9.5	8	1.65	0.915	6 kW	3100kg
QF 1220.8	9.5	8	1.9	1.22	7 kW	3700kg
QF 660.10	11.5	10	1.4	0.66	7 kW	3250kg
QF 915.10	11.5	10	1.65	0.915	7 kW	3900kg
QF 1220.10	11.5	10	1.9	1.22	8 kW	4600kg
QF 660.12	13.5	12	1.4	0.66	8 kW	3900kg
QF 915.12	13.5	12	1.65	0.915	8 kW	4450kg
QF 1220.12	13.5	12	1.9	1.22	9 kW	5350kg

This table shows a non-exhaustive list of the equipment. Additional lengths and widths are available to meet a broad range of requirements. The maximum height of the food product that can be placed in the standard tunnels is 90mm; however, the equipment may be modified in order to accept products above this height. Different types of conveyor belt, with a looser or tighter mesh, can be provided to meet the needs of different products. A conveyor belt with a full band or with stainless steel plates provides highly effective IQF fast-freezing.

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