

# Freshline®

## IQF+ Tunnel Freezer

### Where efficiency and high quality IQF are a given



Air Products' latest addition to its range of IQF (Individually Quick Frozen) freezers offers the ultimate in IQF full freezing or crust freezing.

Designed to deliver impressive levels of quality while handling large quantities of product, the Freshline® IQF+ has also been equipped to keep production costs down.

#### Benefits

- High quality IQF results
- Medium to high volume operation (as of 1.5 tonnes per hour)
- Ultra fast full freezing or crust freezing
- Efficient liquid nitrogen consumption
- Small footprint
- Modular
- Easy to operate, maintain and clean
- Quick installation and start-up

The research and development team at Air Products has been at the forefront of food freezing for over 50 years, pioneering cryogenic technology and continuing to push the boundaries of efficiency, versatility and hygiene. With the development of the Freshline® IQF+ freezer, the team has responded to the growing need for high throughputs of IQF products without compromising on cost or quality. From the optimal flighted belt system to ultra-efficient liquid nitrogen dispersal and new levels of customization, the team has considered everything a high volume IQF producer could want in a freezer. While focusing on maintaining product attributes and optimising throughput, the team has been mindful of the practical need for equipment to have a state of the art hygienic design and to be compact. The result is our best cryogenic IQF freezer yet, designed to deliver an impressive level of quality with just about any product, while fitting into almost any production line.

#### Quality output

Multiple flighted belts prevent products from sticking to each other by delivering successive soft tumbling motions. The result is a consistent, reliable, high quality individual quick freeze with products instantly retaining their taste, texture and moisture level, with no loss of product weight.

## Optimum efficiency

The nitrogen injection system and the specially designed fans built into the Freshline® IQF+ disperse optimally the vaporized liquid nitrogen throughout the tunnel. This optimizes the freezing process, and minimizes running costs.



## Innovative design for simpler operation, maintenance and cleaning

- **Simple operation:** The Freshline® IQF+ tunnel freezer is operated by use of a touch screen, which is available in multiple languages. Pre-programmed process recipes can be saved.
- **Simple maintenance:** An operator interface allows diagnostics and fault finding.
- **Simple cleaning:** The Freshline® IQF+ tunnel freezer opens vertically, providing ease of access for simpler cleaning. A belt cleaning system is fitted

as standard and an optional assisted tunnel cleaning system is available.

The freezer has been designed with hygiene and ease of use in mind. A side-mounted exhaust below the belt avoids potential product contamination and the exhaust is equipped with a duct cleaning system.

The Freshline® IQF+ tunnel freezer is a modular freezing system consisting of a short IQF section within a longer cryogenic freezer. In some cases, it may be possible to retrofit the IQF system to an existing Freshline® MP tunnel freezer or placed in front of a mechanical freezer.

The table gives details of the standard Freshline IQF+ tunnel freezer of lengths 9 metres to 18 metres. Electrical<sup>1</sup> and pneumatic<sup>2</sup> requirements can be found in the notes section. Please contact us if you wish to discuss other size requirements<sup>3</sup>.

Model	Tunnel length (m)	Total freezer length (m)	Belt width (mm)	Total freezer width (m) <sup>4</sup>	Overall height (mm) <sup>5</sup>	Total weight (kg, approx.)	Electrical power requirements <sup>1</sup>
1220.9	9	11.7	1220	2.205	2515	7500	23kW
1220.12	12	14.7	1220	2.205	2515	9000	29kW
1220.15	15	17.7	1220	2.205	2515	11000	36kW
1220.18	18	20.7	1220	2.205	2515	13000	41kW

1. Electrical requirement: 400V, 3 phase and E, 50Hz

2. Pneumatic requirement: 1Nm<sup>3</sup>/h @ 5-7 barg

3. Other tunnel lengths are available on request

4. Total width excludes control panel and exhaust

5. Height quoted is when the tunnel is in an open position. All heights are subject to variation due to height adjustment on legs.

Air Products strives for continuous improvement and as such some details may be subject to change. Therefore any details quoted need to be confirmed for individual machines. Freezing capacity is dependent on product and operating conditions.

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