



Freshline[®] TRS freezer

**The continuous cryogenic solution
for crust freezing and chilling**

In the last few years, lifestyle trends towards convenience products have led to a dramatic rise in demand for sliced packaged meat and other delicatessen style products eg. bacon, cooked ham, salamis etc. At the same time, advances in cutting technologies have increased the speed at which products can be sliced. Traditionally, to enable ease of slicing, large portions or logs of meat products are crust chilled using batch mechanical or cryogenic systems. In most cases these solutions involve a high proportion of manual labour to move products between chillers and slicing lines. This not only adds labour costs into the process, but products are also subject to temperature discrepancies while being moved from one area to another. This is why we developed the Freshline® TRS freezer.

Benefits of nitrogen systems

- Reduction in weight loss caused by dehydration
- Reduction in enzyme and oxidative deterioration
- Reduction in the size of ice crystals
- Microbial stability
- Improvements in appearance
- High freezing speed
- Flexibility in production
- Low financial investment
- Reduction in space taken up by the equipment

Crust chill, slice and pack continuously

The Freshline® TRS freezer is a continuous system for crust freezing meat and other products that require slicing. It is unique in that it uses the power, quality and speed advantages of nitrogen but unlike the traditional batch freezers or other cryogenic tunnels, it is designed to work in conjunction with high speed cutting machines and has special fan systems. The freezer ensures all sides of the product are

evenly chilled. Effectively you can crust chill, slice and pack in one continuous line.

Meet peak demands, fast

Many processors these days are working to “just in time” production so need the flexibility to increase their output at short notice. The Freshline® TRS freezer can provide a fast and effective add-on to existing slicing lines which can be utilised as and when required.

The process takes between three and nine minutes depending on product composition (eg. fat content and added water). By just freezing the crust (between 0 and -5°C), the product surface becomes harder. This means the cutting blades get a better grip onto the meat during the slicing process and a clean and homogeneous cut is achieved.

Save space

Normal inlet temperature of the product is between 0 and 3°C and the slicing machines work continuously up to 2000 kg/h. The tunnel uses a double LIN

injection system and a double exhaust system. In many factories space is a problem, but the Freshline® TRS freezer is just three metres long and 1220 millimetres wide which makes it possible to install in front of most slicing lines.

Advantages

- Crust chill/freeze in minutes not hours
- Reduce manual labour costs
- Increase refrigeration capacity
- Homogenise slicing for better yields
- Reduce waste from moisture loss and product damage
- Process inline with high speed cutting systems

Specifications

| Services and other details | | | |
|--------------------------------|--|--------------------------|-------|
| Electricity | 400V, 3ph, N, E, 23A | | |
| Compressed air | 2Nm ³ /h @ 5-7barg | | |
| Design nitrogen requirement | 500kg/h @ 3barg | Width | 1.22m |
| Freezing area dimensions | Length 3m | Height (to top of panel) | 2.29m |
| Overall dimensions | Length 4.05m | Width (doors open) | 3.28m |
| Maximum product height | 200mm | | |
| Weight of machine | 1800 kg | | |
| Default control panel position | Infeed end, right | | |
| Normal operating temperature | -20°C to -60°C | | |
| Normal operating hours | 8 hours (1 shift) per day (room oxygen monitor recommended) 20 hours (2 shifts) per day (room oxygen monitor mandatory) | | |

For more information

UK

Air Products PLC
2 Millennium Gate
Westmere Drive
Crewe CW1 6AP
United Kingdom
T +44 0800 389 0202
F +44 01932 258502
apukinfo@airproducts.com

Ireland

Air Products Ireland Ltd
Unit 950 Western Industrial Estate
Killeen Road
Dublin 12
Ireland
T +353 1800 99 50 29
ieinfo@airproducts.com



tell me more
airproducts.co.uk
airproducts.ie