



CRYOLINE® PB Plate Belt Tunnel Freezer



General The new CRYOLINE® PB plate belt tunnel freezer from Linde is a liquid nitrogen-powered freezer optimized to crust freeze a variety of difficult to handle products such as raw marinated proteins, sauced foods, semi-liquid products, and others. The freezer quickly produces a frozen crust on the products resulting in low- to no sticking, an easy to handle product, and an increase in yield due to the prevention of dehydration. A specially designed solid stainless-steel segmented conveyor belt is chilled in the freezer to cryogenic temperatures. As products are placed on the conveyor belt, the outside surface is quickly crust frozen by contact with the cold surface and cold airflow. This crust freezing locks-in moisture, brine, marinade, or sauces so that there are minimal losses in downstream processing steps. Adjustable high-speed internal fans and controllable gas injection optimize the flow and use of nitrogen and ensure quick and efficient product crusting. The freezer's high capacity and efficient operation allow product yield improvement with a minimum of operating cost and plant floor space.

Application Areas **Bottom Crusting** – by quickly freezing the bottom of wet or sticky products to very low temperatures, products can enter a spiral or other freezer without adhering to the belt, thereby reducing product loss, equipment damage, and sanitation. Additionally, the flat surface and freezer operation quickly sets the bottom of the product with minimal marking for further freezing even on a traditional wire mesh belt that would typically leave noticeable marks.

Crust Freezing – with a minimal footprint, the CRYOLINE PB freezer can quickly set the moisture and rigidity of the product for a further pressing operation with consistent product thickness. Additionally, a quick cryogenic freeze of a sauced product prior to entering a spiral freezer can greatly reduce sanitation issues and improve changeover time by securing the sauce in place before entering the spiral.

Solid plate belt and advanced airflow Very cold solid plate stainless-steel surface quickly and cleanly crusts the bottom of raw marinated products. Optimum freezer airflow and liquid nitrogen injection provides top crusting.

Advanced electronic control systems CRYOLINE® PB plate belt tunnel has a full PLC control system that controls the operation and efficiency of the freezer. For multi-product use, up to 20 different recipes can be entered, allowing the operator to easily switch between products. Available with Linde's CRYOCONNECT™ RM remote monitoring, mobile alert, and online historical operational system.

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- Features

→ Unique solid stainless-steel conveyor belt

→ Short, efficient, high-capacity freezer optimized for product crusting

→ Cleanable stainless steel conveyor belt with no wire mesh

→ Modular design for on-site extension
- Benefits

→ Reduce yield losses from product, marinade, or sauce that sticks to the belt

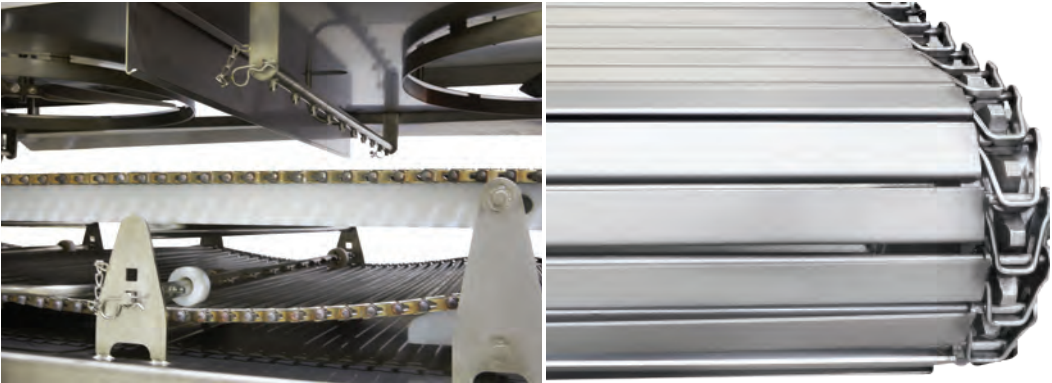
→ High efficiency and low nitrogen usage for a quick crusting

→ Reduce belt marking on the product
- Completely accessible interior for cleaning purposes

→ Controllable fans for maximum nitrogen efficiency

→ Belt cleaning sprayers available
- Improved sanitation by elimination of the wire mesh

→ Short, efficient, high-capacity freezer optimized for product crusting



Technical Data

	Overall Dimensions L x W x H (Ft)	Freezing Belt Internal Length (Ft)	Retention Time (Min)	Number of Modules
CRYOLINE PB 940	12.9 x 6.1 x 7.4	9	0.4 – 1.6	1
CRYOLINE PB 1440	17.9 x 6.1 x 7.4	14	0.5 – 2.0	2
CRYOLINE PB 1840	21.9 x 6.1 x 7.4	18	0.8 – 3.2	2

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