

Freshline® batch freezer

A warehouse of freezing that fits on your production floor



Benefits of Freshline batch freezer

- Easy to use and operate
- Uses small facility footprint
- Accepts industry standard racks and trays
- Capable of cooling and/or freezing
- Operating temperatures down to -180°F
- Can be customized to any size and for any operation

Air Products' Freshline batch freezer uses the unique properties of liquid nitrogen for fast, economic chilling and freezing of foods. The Freshline batch freezer has been specifically designed for food processors with batch, sporadic, or lower volume freezing and chilling requirements.

The Freshline batch freezer's low capital and entry costs make it appealing to new businesses as well as to existing businesses developing new products. From R&D cooling and freezing to specialty production items to production cooling and freezing at lower volumes, the Freshline batch freezer is your solution.



Food freezing and cooling is all about time and temperature. At colder temperatures, it takes less time to cool or freeze. At liquid nitrogen's -320°F temperature, freezing or cooling of your food takes mere minutes versus hours with traditional walk-in style freezers. And faster freezing or cooling means more production. Your ice maker at home makes a batch of ice about every 2 hours. If it were powered with liquid nitrogen, it could make a batch in under 10 minutes—letting you count batches per minute, not batches per day.

How does it work?

The Freshline batch freezer consists of an insulated food grade stainless steel cabinet with three custom-designed fans and a liquid nitrogen injection system. The liquid nitrogen at -320°F is injected into the batch freezer, where the fans instantly turn the liquid nitrogen to gaseous nitrogen. The super-cooled gas passes evenly over the food, quickly refrigerating the products. Typically, the Freshline batch unit takes 20 minutes to refrigerate 220 pounds of product. In-out and straight-through versions are available for both multi-recipe and standard models.

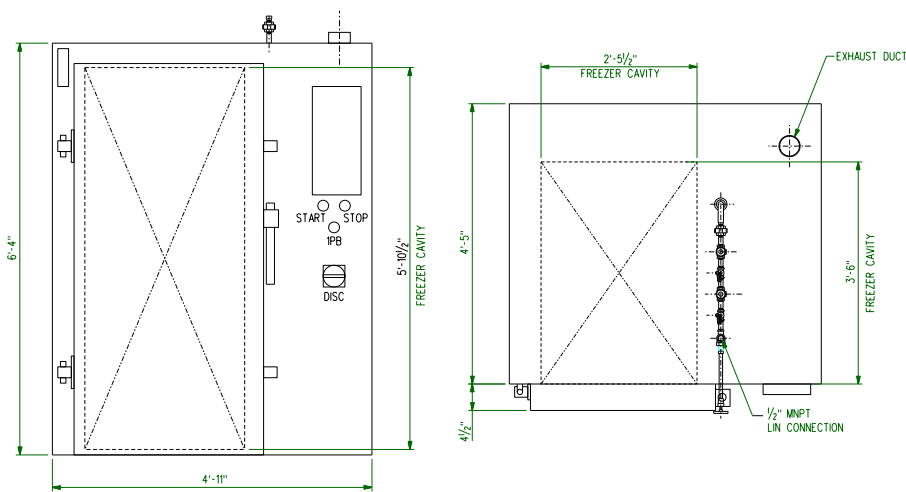
Table 1: General Specifications

Electrical Supply	3 Phase 460 V 60 Hz 12 Amp max
Liquid Nitrogen Supply	0.5 in. stainless steel or copper pipe
Exhaust Details	Stainless steel ductwork connected to the exterior of the building

Table 2:

Food	Weight	Size	Time to Freeze
Chicken Pot Pie	26 oz.	7" ϕ x 1 $\frac{5}{8}$ " H	12.5 Min.
Chocolate Mousse	2.8 oz.	3" ϕ x 1 $\frac{1}{2}$ " H	7 Min.
Taquitos	2.9 oz.	1" ϕ x 6 $\frac{3}{4}$ " L	3 Min.
Chicken Wings	1.5 oz.	2" L x 1 $\frac{1}{2}$ " W	5 Min.
Stuffed Flounder	10 oz.	6 $\frac{1}{2}$ " L x 3" W x 2" H	8 Min.

Figure 1: Freezer Dimensions



Ask Air Products . . . and expect more

In addition to the equipment, we supply the training and safety systems necessary for a quality installation and expert technical support before, during, and after installation. Whether your packaging, cooling, chilling or freezing applications include bakery goods, fruit and vegetables, poultry, meats, ready meals or anything in between, Air Products' Freshline solutions offer you the high-purity gases and equipment, the international supply capability, and—most important—the unmatched industry experience and technical support to help you succeed just about anywhere in the world. We can help you improve your productivity, lower your costs, maximize your returns, and, as a result, help make you more competitive in a very competitive market.

For more information,
please contact us at:

Corporate Headquarters
Air Products and Chemicals, Inc.
7201 Hamilton Boulevard
Allentown, PA 18195-1501
T 800-654-4567
F 800-272-4449
gigmrktg@airproducts.com



tell me more
airproducts.com/food