

# Freshline®



## RH immersion freezer

# For fast, high-quality IQF freezing



The Freshline RH immersion freezer allows you to produce consistently high-quality IQF (individually quick frozen) products, such as seafood (shrimp, shellfish), soft fruits (strawberries, raspberries) or vegetables, which can be difficult to freeze without clumping using traditional freezing methods. Instantaneous immersion freezing of the food's outer surface using liquid nitrogen helps maintain the product's form, taste and texture and prevents moisture and quality losses.

## Benefits of the Freshline RH immersion freezer

**Increased throughput:** The immersion section of Air Products' largest RH immersion freezer has been expanded and can process 10,000 to 15,000 pounds of product per hour. The liquid nitrogen bath is nearly two times larger than most immersion freezers currently available on the market, providing increased product throughput.

**Unparalleled immersion control:** The Freshline RH immersion freezer offers the ability to change internal support racks to adjust the amount of time product is immersed in the liquid nitrogen bath.

**Improved flexibility:** The Freshline RH immersion freezer features the flexibility to change the amount of belt passing through the bath, enabling a variety of products to be processed efficiently with greater control over product retention times. When the Freshline RH immersion freezer is used as a complete freezing system with Air Products' Freshline tunnel or with a mechanical or

cryogenic freezing system, and you need to freeze products on the same line that do not require crust-freezing, the RH immersion freezer can be used without immersing the product in the nitrogen bath.

**Easy to clean and maintain:** The Freshline RH immersion freezer features gullwing doors that open easily for fast and thorough cleaning. In addition, its simple design, construction, and few moving parts make the freezer easy to maintain and use.

**Low capital investment:** Because it uses liquid nitrogen as the refrigerant, the Freshline RH immersion freezer requires a significantly lower capital investment than that for mechanical systems. You can get the productivity benefits without the high costs.

## How does it work?

Crust-freezing by immersing product in a bath of liquid nitrogen at  $-320$  degrees F prior to full freezing minimizes dehydration, thereby increasing yields by as much as eight percent. The taste and appearance of your products may also be enhanced. This process is ideal for products that are difficult to individually quick-freeze, such as seafood, vegetables, and marinated or cooked products, since they have a tendency to clump or stick to the belt during the freezing process.

## General Specifications

	Model RHJ-2811	Model RHJ-5011	Model RHJ-5016
Overall length	10'9"	10'9"	15'9"
Overall width	4'4"	6'3"	6'3"
Overall height	5'4"	5'4"	5'4"
Belt width	28"	50"	50"
Length of immersion	Up to 5' 1.5"	Up to 5' 1.5"	Up to 5' 1.5"
Production volumes	Up to 4000 lbs/hr	Up to 7500 lbs/hr	Up to 15,000 lbs/hr

When the Freshline RH immersion freezer is used with a Freshline tunnel freezer, the conveyor belt delivers the crust-frozen product into the equilibration tunnel, where cold nitrogen gas is used to continue the freezing process. If the immersion unit is placed in front of a mechanical freezer or cryogenic spiral, the crust-frozen product exits the immersion system and enters the mechanical freezer or cryogenic spiral to complete the freezing process.

Freshline RH immersion freezers are fabricated from stainless steel and are insulated for service at cryogenic temperatures. A microprocessor control and monitoring system maintains the liquid nitrogen bath at a constant level and regulates liquid nitrogen consumption and other process parameters to ensure product quality and system efficiency.

## Ask Air Products . . . and expect more

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,  
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