

Freshline® solutions for bakery processors



Scale your bakery with confidence— preserve quality and maximize efficiency

Applications for bakery processors

1. Liquid Nitrogen Tank

Safe, reliable liquid supply and cryogenic tank installation.

2. Mixing/Blending

Industrial gases are used during the blending process to chill mix temperatures prior to forming. This can be achieved with cryogenic bottom injection or dry ice inclusion.

- **Bottom Injection:** Cryogenic liquids such as CO₂ or nitrogen are injected to provide rapid and precise temperature reduction. Designed to remove heat quickly and enhance product quality.

- **Dry Ice:** In smaller mixers, solid CO₂, or dry ice, can be added to dough mixtures to also reduce temperature prior to forming.

3. In-line Chilling/Freezing

Extremely cold cryogenic gases are used to rapidly chill products directly within the production line.

- **Tunnel freezer:** With operating temperatures below -150F, these machines allow for continuous high throughput freezing/chilling on a broad range of food products. Air Products has a wide range of tunnel freezer models available: IQ, MP, MP+, among others.

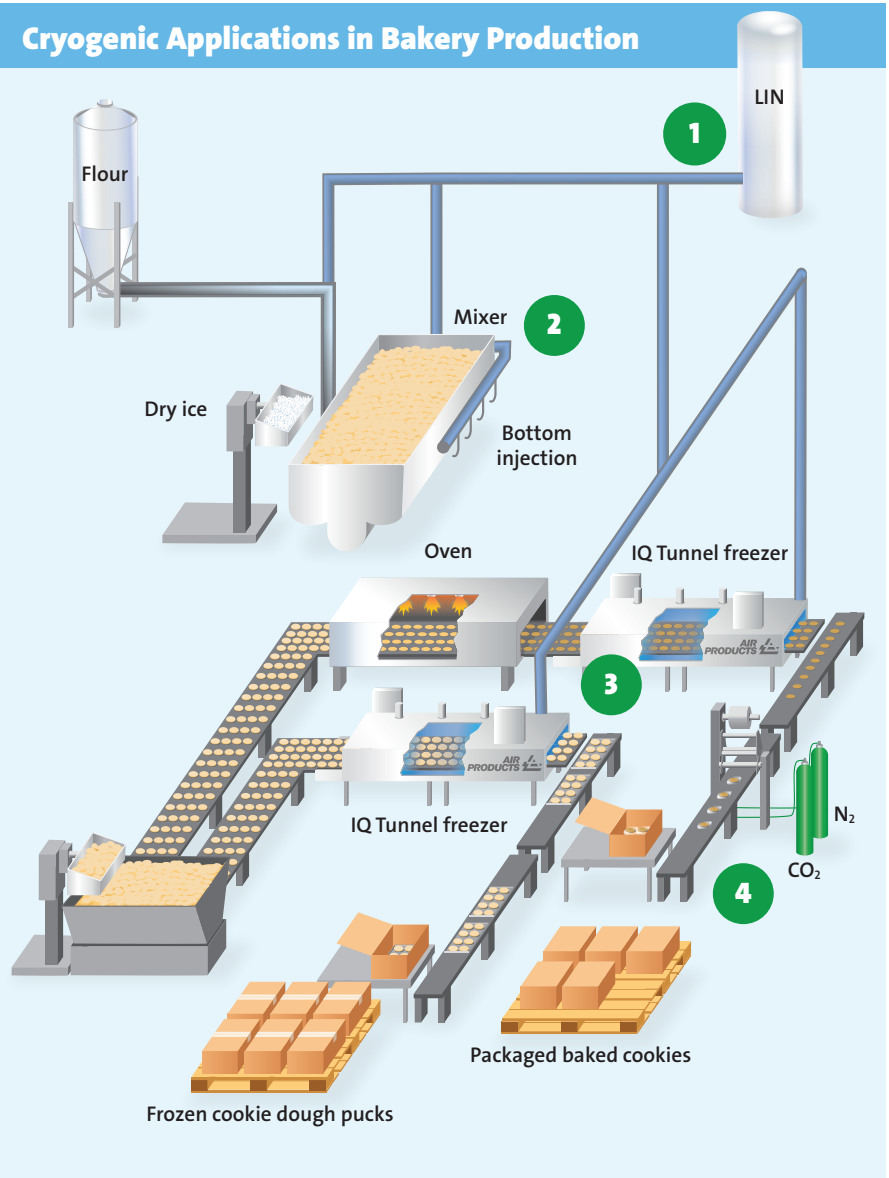
4. Packaging

Industrial gases can be used in packaging for baked goods to extend shelf life, preserve freshness, and maintain quality.

- **Modified Atmospheric Packaging:** Replaces the air inside a package with a controlled mixture of gases. Keeps baked goods fresher for longer, prevents staling, and maintains texture.

Don't waste countless hours and money freezing or chilling your baked goods with traditional freezers. With cryogenics, you could cut your production time in half while improving product quality and yield. Faster freezing times also result in less ice crystal formation leading to a better-quality product overall. With minimal upfront capital investment required, there has never been a better time to explore switching.

Cryogenic Applications in Bakery Production



Freezing with cryogenics can help you:

- Preserve a high-quality product taste, texture, and moisture
- Reduced processing time or increased line throughput
- Maximize efficiency and reduce waste
- Save you downtime and labor costs due to low equipment maintenance
- Lower upfront costs with flexible rental options
- Optimize processes and track key parameters for maximum efficiency

By partnering with Air Products for your industrial gas and equipment needs you will gain access to:

- Technical experts specialized in bakery applications
- Access to our food lab for initial product testing to determine which freezing/chilling method is most effective for you
- Full support through installation of equipment, maintenance, etc.
- Access to our SMART technology system for self-monitoring analysis and remote troubleshooting support
- 24/7 customer service and support

For more information, please contact us at:

Corporate Headquarters

Air Products and Chemicals, Inc.
1940 Air Products Blvd.
Allentown, PA 18106-5500
T 610-481-4911
(Outside the U.S. and Canada
+1-610-481-6799)
info@airproducts.com
or visit airproducts.com



Gas enabled
solutions for
a broad range
of products



Test your products first

Looking to evaluate how nitrogen, carbon dioxide or other food grade gases can benefit your food manufacturing process? Air Products' food industry experts can help you reach peak product quality and processing efficiency by putting your food product to the test. Food processors have the option of bringing their product to our fully equipped Food Lab based in Allentown, PA, or we can come to your site with our comprehensive Mobile Food Lab. We'll help you determine which food grade gases are most beneficial to you and your operations.



GENERATING A CLEANER FUTURE