# *CryoBlend*<sup>™</sup> Injection System for Protein Mixing



Innovation, continuous improvement, and a focus on yield, costs, and quality have been the foundation of Linde's technology development efforts.

## Chilling Enhances Processing

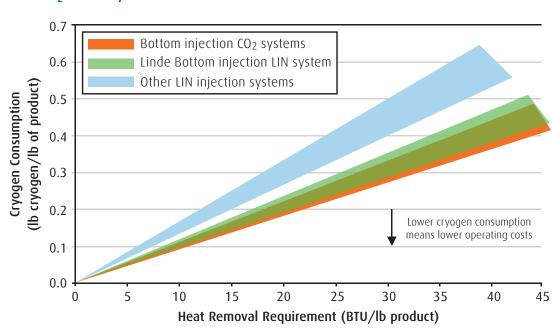
Linde

Heat generated during mixing and grinding accelerates bacterial growth and leads to off-flavors, decreased shelf life and spoilage. Heat also affects the fat portion of the meat product causing a "smeared" appearance. Precise temperature control is essential to obtain consistent appearance, dimensions and unit weights.

# **Delivering Better Performance** Linde's injection system includes a bottom injection liquid carbon dioxide or nitrogen option to deliver precise temperature control. Historically, CO<sub>2</sub> has been used due to its high efficiency. The N<sub>2</sub> *CryoBlend* injection system provides efficiencies similar to our CO<sub>2</sub> systems. The specialized N<sub>2</sub> bottom injection nozzles are designed to deliver cryogen deep into the product causing intimate contact between the product and nitrogen. The resulting longer residence time of the N<sub>2</sub> ensures that a large fraction of the refrigeration in the nitrogen vapors is transferred to the product and improves efficiency by up to 33%. Our liquid conditioning system ensures high quality liquid cryogen is injected at all times, leading to shorter batch times and increased production capacity. With our proprietary design, our injection system will also help you achieve the highest sanitation standards.

#### Temperature Control is Linde's Expertise

Whether choosing a N<sub>2</sub> or CO<sub>2</sub> *CryoBlend* injection system, you will find that each is a versatile, high performance cryogenic design that offers precise temperature control in your mixing and blending applications. The leading advantage of the *CryoBlend* injection system is the ability to inject just the right amount of cryogen at the right time in the right location to achieve optimal cooling. Our team of experts will work with you to provide the injection system that is right for you.



## N<sub>2</sub> Efficiency

#### **Features** → Efficient, cost effective removal of heat

- $\rightarrow$  Optimized cryogen flow rates
- → Highest sanitary standards
- **Benefits**  $\rightarrow$  Delivers low operating cost
  - $\rightarrow$  Improves product consistency and quality
  - $\rightarrow$  Provides uniform temperature

- $\rightarrow$  Customized for your operation
- $\rightarrow$  Adaptable to existing mixers
- $\rightarrow$  Easy to operate, clean and maintain
- $\rightarrow$  Reduces fat smearing
- → Reduces processing time
- $\rightarrow$  Reduces rework

Contact Linde<br/>TodayAdditional information about the *CryoBlend* cryogen injector system for meat mixer cooling as<br/>well as all of the *ColdFront*™ cryogenic freezing and chilling systems by calling 1-844-44LINDE or<br/>visiting www.lindefood.com

Linde 10 Riverview Drive Danbury, CT 06810 Phone 1.844.44LINDE (1.844.445.4633), Fax 1.800.772.9985; 716.879.2040 www.linde.com

TThe Linde logo, the Linde word, ColdFront and CryoBlend are trademarks or registered trademarks of Linde plc or its affiliates. The information contained herein is offered for use by technically qualified personnel at their discretion and risk without warranty of any kind. Copyright © 2020, Linde plc. 1/2020 P-40-4556