

Pierino Frozen Foods Improves Throughput, Efficiency and Labor Savings with the Latest IQF Freezing Technology.

For over 50 years, premium pasta maker Pierino Frozen Foods, Inc. (Lincoln Park, MI) has served frozen spaghetti, linguini, ravioli, and a wide range of other filled pasta varieties to consumers, restaurants, and the food industry. As the family-owned company has grown, it has partnered with Messer's experienced food team and embraced the latest, cutting-edge nitrogen freezing technologies. Most recently, Pierino installed Messer's newest IQF freezer, achieving unprecedented levels of production, labor savings, and cryogen efficiency.

Background

In 1996, Pierino started its journey with a Messer Modular Tunnel Freezer, which worked well for decades. By 2015, the company's sales had increased over 25 percent and they outgrew the existing freezing tunnel. As a result, Pierino adopted the latest Messer freezing technology at the time and became the first prepared foods food processor to install the Messer Wave freezer for individually quick frozen (IQF) pasta. The Wave freezer improved throughput by up to 40 percent and kept the high-quality gourmet pastas separated as they moved down the freezing line.

The Challenge: Increasing Production, Efficiency, and Labor Availability

As business continued to grow, production costs increased and Pierino sharpened its focus on improving freezing efficiency, reducing expenses, and therefore increasing profitability. Pierino wanted to increase freezing production in the same footprint with more efficient cryogen and labor usage. The gourmet pasta producer knew Messer's trusted food team could help.

Fortunately, Messer was developing a next generation technology for IQF freezing. After doing some baseline testing onsite, Messer modeled the new production increase and cost to freeze with the new Messer Wave Impingement Freezer. The Pierino team also took advantage of Messer's Technical Center in Cleveland, Ohio



Pierino Gnocchi is pictured entering (top image) and exiting (bottom image) of the Messer Wave Impingement Freezer. The wave-like action helps keep the product separated while the impingement gas flows increase throughput, cryogen efficiency and operating leverage for the premium pasta maker.

to get a firsthand look at the new freezer. "Seeing the equipment firsthand helped give us the confidence we were making the right decision," said Gianni Guglielmetti, Pierino president, COO and son of founder Pierino Guglielmetti. He was impressed with the freezer's long-term reliability, maintainability and cleanability.



The Messer Wave Impingement freezer is the latest IQF freezing technology for improved throughput, efficiency and labor savings.

The Solution: Messer's Newest Cryogenic Technology

Like the previously installed Messer Wave Freezer, the patented Wave Impingement Freezer uses a wavelike motion in its conveyor belt to help keep the pasta separated. To enhance its capacity in the same footprint, the freezer also uses impingement gas flows that increase heat transfer while reducing nitrogen consumption and overall cost to freeze. In addition, the Wave Impingement Freezer requires minimal maintenance and the top lifts vertically for easy access for cleaning.

The Result: Operating Leverage and Flexibility

After installing the Wave Impingement Freezer in September 2021, Pierino has seen a 20 to 30 percent increase in throughput and improved their nitrogen efficiency by 10 percent. Most importantly, Pierino has increased its operating leverage.

"We can run at full capacity and at the same time shorten our workday," says Guglielmetti. "Employees originally assigned to the freezer line have been repurposed to preparation. Messer helped us set up recipes to change the wave action according to the product, so we can deliver perfectly cooked, high-quality pasta to our customers."

With the Wave Impingement Freezer Pierino can run custom orders with minimal stocking time and inventory. Plus, new, larger orders help maintain its profitable growth trajectory.

"Our partnership with Messer goes back to my early days in the business," says Guglielmetti, who grew up with the company and took over leadership in 2014. "If we run into a problem, we contact Messer and get prompt support."

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