

FROM CONCEPT TO COMPLETION

AUTOMATIC PLATE FREEZING

From Bottleneck to Competitive Advantage





THE INDUSTRY CHALLENGE

- **RISING PRODUCTION VOLUMES**

Increased demand requires higher freezing capacity

- **ENERGY COST PRESSURE**

Escalating energy prices impact profitability

- **QUALITY LOSSES**

Suboptimal freezing leads to texture and taste degradation

- **DOWNTIME & MAINTENANCE**

Outdated freezing equipment causes disruptions and high maintenance costs

- **SPACE CONSTRAINTS**

Limited production floor space limits expansion of freezing capacity



PLATEMATIC

AUTOMATIC PLATE FREEZING

a revolutionary solution designed to turn freezing from a production bottleneck into a strategic advantage for food processors. This advanced system offers exceptional speed, efficiency, and product quality, enabling businesses to optimize their operations and maintain a competitive edge.

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WHY FREEZING SPEED MATTERS

Rapid freezing is crucial for maintaining product quality in the food processing industry. When food is frozen slowly, large ice crystals form within the cells, causing damage and leading to texture degradation, drip loss, and higher reject rates after thawing. In contrast, fast freezing techniques like plate freezing result in the formation of smaller, uniform ice crystals that preserve the cellular structure and quality of the product.





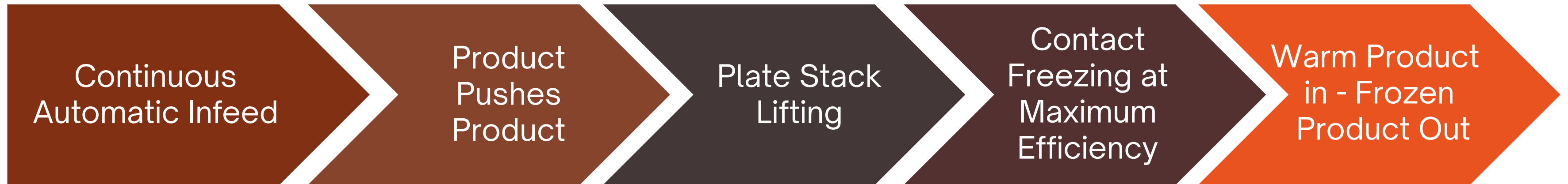
NOT A BATCH FREEZER

A TRUE CONTINUOUS FREEZING SYSTEM

The Platematic is the only plate freezer designed for extremely high capacities on a minimal footprint of just 4 × 4 meters. It is the most energy-efficient freezing system available, requires no operating labor, and delivers the fastest freezing times in its class.

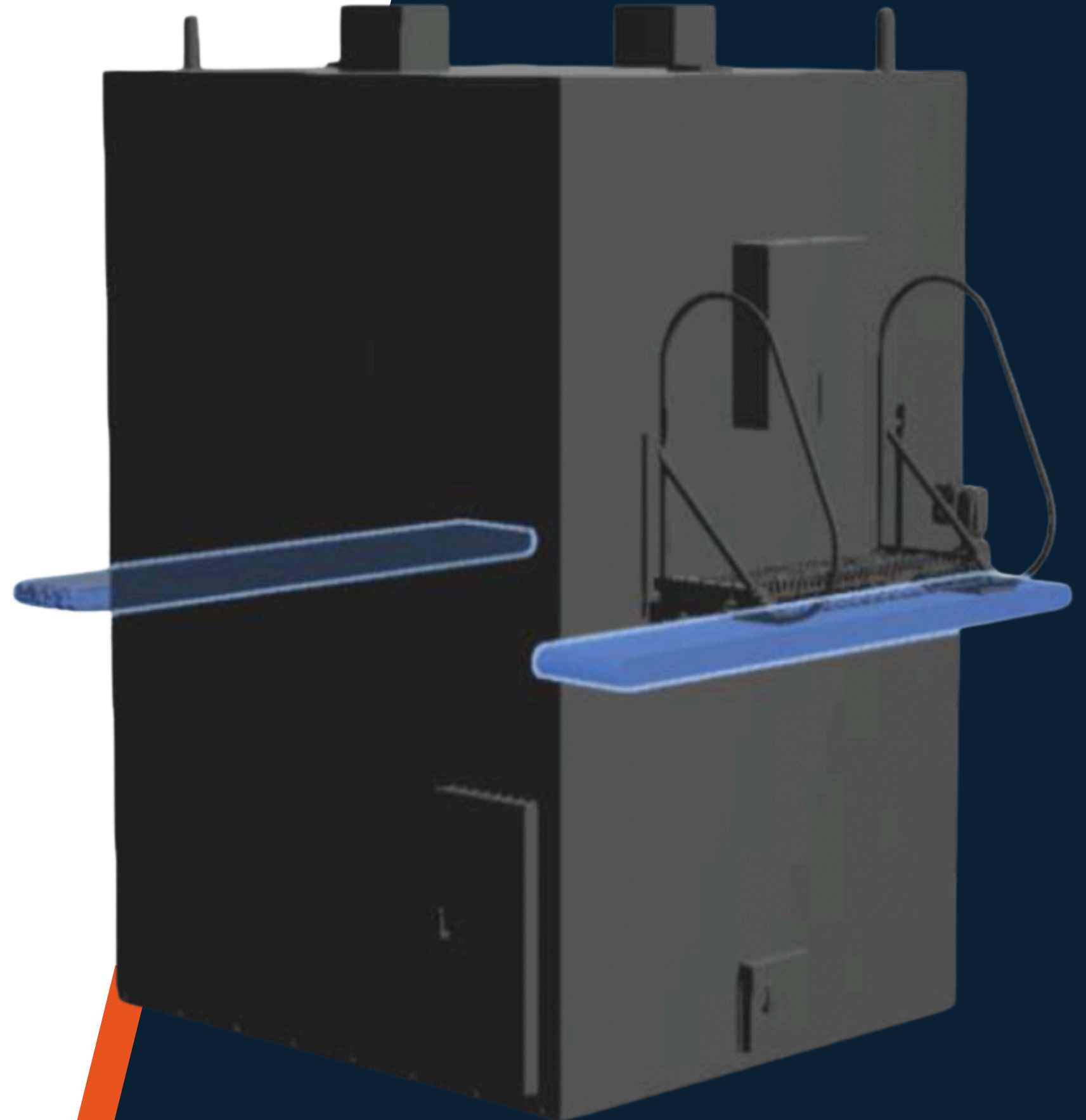


HOW THE AUTOMATIC PLATE FREEZER WORKS



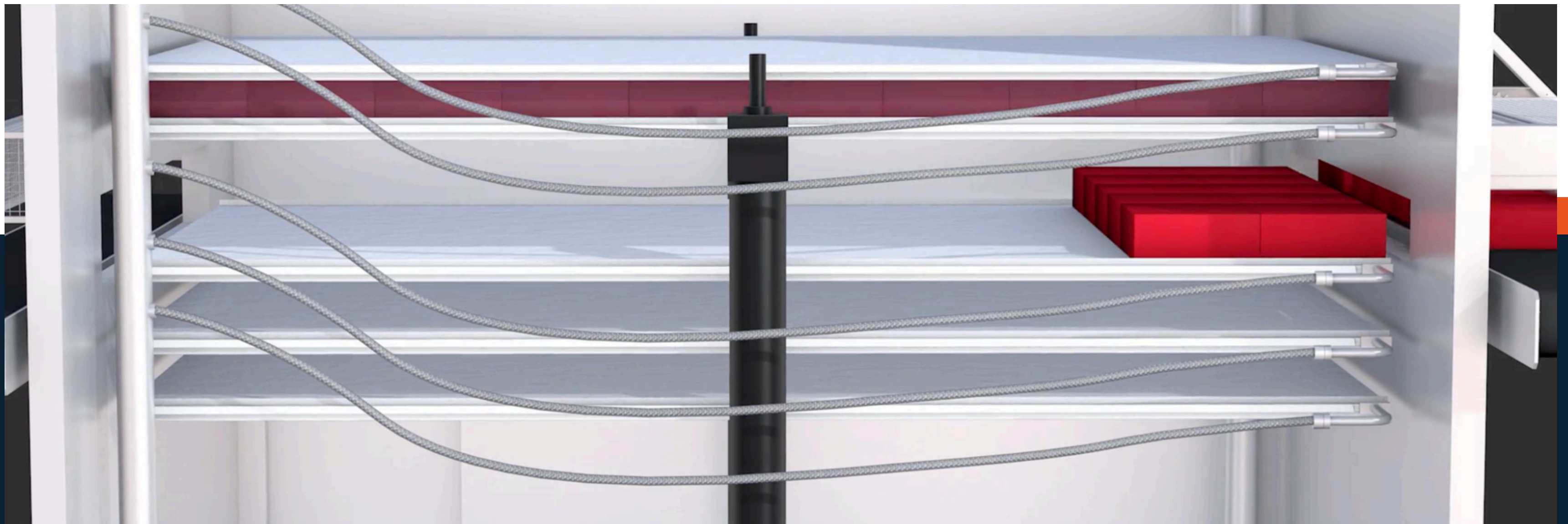
CONTINUOUS INFEEED & OUTFEED

- Fixed infeed and discharge conveyors for continuous flow
- Products enter and leave the freezer at the same time
- Mechanical stop forms complete product rows at the infeed
- Sensors automatically trigger each loading cycle
- Photocell ensures smooth, controlled discharge



PRODUCT PUSHES PRODUCT

The push bar mechanism efficiently transfers one complete row of product onto the freezing plate with each push, seamlessly moving the previous row forward without any gaps or manual handling. This enables the usage of very large plates, ensuring a continuous and highly efficient freezing process.



CONTACT FREEZING AT MAXIMUM EFFICIENCY

The Platematic is engineered for maximum heat transfer and minimum freezing time. Through direct, non-pressurized contact between the plates and the product, heat is removed extremely fast. This allows the freezing time to match the loading time, enabling a truly continuous, high- efficiency production cycle.



WARM PRODUCT IN - FROZEN PRODUCT OUT

Once all plates are loaded, the system automatically returns to the first station, where fresh product is loaded while frozen product is discharged at the same time.

This continuous exchange, combined with direct plate contact, enables rapid and uniform freezing while preserving product structure and quality.



BUILT FOR CONTINUOUS INDUSTRIAL OPERATION

The Automatic Plate Freezer is built for continuous 24/7 industrial operation. It requires only one defrost per week, taking approx. 1 hour for defrosting and 1–2 hours for cleaning, after which production can immediately resume. The insulated enclosure minimizes energy loss, and the system automatically adapts to the production line speed — no manual intervention required.

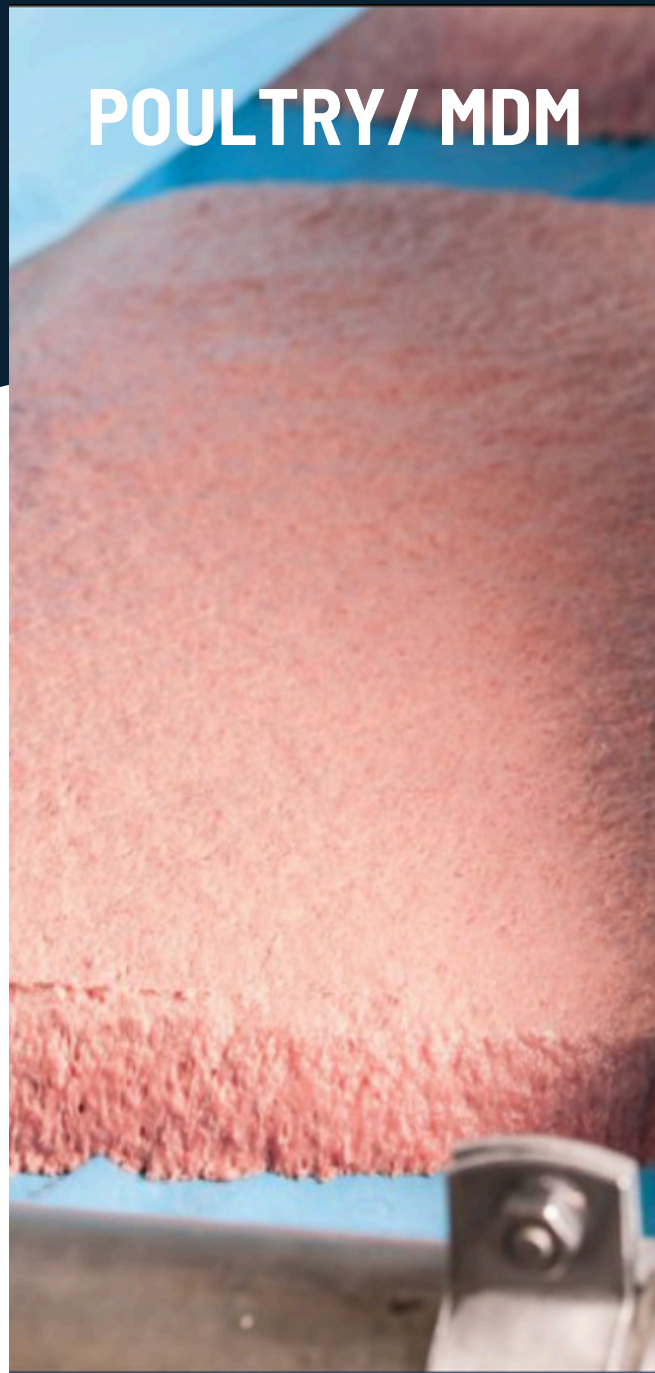


IDEAL PRODUCTS

MEAT



POULTRY/ MDM



FISH



READY MEALS



ICE CREAM



REQUIRED PACKAGING



Carton Box



Plastic T ray

Products must be packed in cartons or plastic trays to allow controlled row-by-row loading. Only rigid, stable packaging ensures reliable pushing, precise positioning, and full plate contact during freezing.

TECHNICAL ADVANTAGES

- **SHORT FREEZING TIME**

Rapid heat transfer enables faster freezing compared to traditional methods

- **INDUSTRIAL COMPONENTS**

Rugged, high-quality parts designed for 24/7 operation in demanding environments

- **UNIFORM TEMPERATURE**

Precise plate control ensures even freezing across the entire product surface

- **PLC AUTOMATION**

Fully automated controls for unattended, reliable performance

- **HYDDRAULIC SYNCHRONIZED LIFTING**

Synchronized plate movement for smooth, automated product handling

- **REMOTE SERVICE READY**

Connectivity for remote diagnostics and software updates



BUSINESS BENEFITS

Higher Throughput

Increased production capacity and faster freezing times enable higher throughput for greater operational efficiency.

Lower Energy Costs

The Automatic Plate Freezer's advanced design and industrial components result in significantly lower energy consumption per ton of product frozen.

Reduced Labor

The fully automated system requires minimal manual intervention, lowering labor costs and freeing up personnel for other tasks.

Less Waste

Improved freezing quality and reduced product damage leads to lower reject rates and higher yields, minimizing waste and increasing profitability.

Lower Maintenance

Robust industrial components and PLC automation result in fewer breakdowns and lower maintenance requirements, reducing downtime and associated costs.

TYPICAL PROJECT FLOW

- **PROCESS ANALYSIS**

Thorough evaluation of the customer's freezing requirements, production volumes, and process flow to determine the optimal Samifi Automatic Plate Freezer configuration.

- **LAYOUT & 3D DESIGN**

Customized 3D layout and integration planning to ensure seamless installation and integration with the customer's existing production line.

- **MANUFACTURING**

Engineered and manufactured to the customer's specifications ensuring quality and precision.

- **ON-SITE INSTALLATION**

Skilled Samifi technicians handle the complete on-site installation, commissioning, and integration of the Automatic Plate Freezer into the customer's production facility.

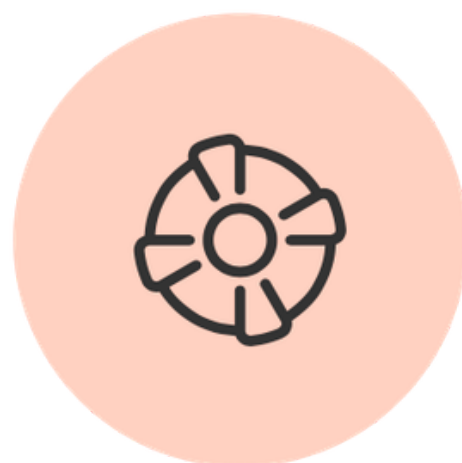
- **COMMISSIONING**

Comprehensive on-site testing and calibration to ensure optimal performance and seamless integration with the customer's production processes.

- **OPERATOR TRAINING**

Hands-on training for the customer's personnel to ensure they can operate the Automatic Plate Freezer efficiently and safely.

SERVICE & PARTNERSHIP



Spare Parts

Readily available spare parts for quick repairs and maintenance



Remote Support

Secure remote diagnostics and troubleshooting to minimize downtime



Service Contracts

Customized service and maintenance plans to ensure optimal performance



Upgrades & Optimization

Continuous improvement through process enhancements

CTi's comprehensive service and support ensures your automatic plate freezer continues to deliver maximum performance and value over its lifetime.



READY TO OPTIMIZE YOUR FREEZING PROCESS?

Unlock new levels of efficiency, quality, and profitability. Let us analyze your production and create a custom efficiency report. Request your layout & ROI estimate.

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