

# BLAST CHILL CELL

SOLUTIONS



Rapid Stabilization for Optimal  
Product Uniformity and yields



**MARLEN**

A DURAVANT COMPANY

# UNIFORM CHILLING

Consistent Chilling. Reduced Chill Times. Higher Yields.

**W**hat's wrong with the way you're chilling now? Most existing chilling equipment wasn't designed to perform to today's exacting processing standards. Often, what exists is a compromise with inefficiencies and unpredictability that can affect product and food safety. From controlling condensation and airflow to verification of processes, Marlen blast chill cells are designed and built to overcome these challenges, resulting in faster chill times, higher yields, greater uniformity and ease of operation and maintenance.

## ADVANTAGES OF MARLEN BLAST CHILLERS

### CONTROL OF CONDENSATION.

Chilling isn't about driving in cold. It's about surrounding the product with conditions that allow it to give up its heat at a maximum rate and in a uniform manner. By producing a chilling recipe for each product, similar to a cooking recipe, our blast chill cell adjusts itself to remove condensed moisture during an initial phase per the chilling recipe using the Marlen Delta Chill process. This coupled with Marlen's variable fan speed control and step down chilling process not only reduces shrink variations, but also helps to control condensation. The result: optimum product uniformity with no "hot spots" or errant crusting.

### NO GUESSWORK.

Time, temperature, and airflow are all precisely controlled via the Marlen Smart Step system. A specific sequence of operations ("recipe") that best suits the product is loaded by the operator into the Marlen control system. The system then follows the parameters of that recipe, adjusting temperature and fan speed for optimal results.

### VERIFICATION OF PROCESSES IN WRITING.


Every Marlen product is designed and built with a Safety-First emphasis and paramount sanitary design. Our blast chill cell's Powis 6000 control system logs process and product temperature data for complete HACCP verification and meets the USDA Appendix B and Canadian Food Inspection Agency chilling guidelines on most products.





# INNOVATIVE DESIGN FEATURES


 Access Door for Inspection and Sanitation

 Clean-In-Place System

 Variable Speed Fans

 Optimized Evaporator Coil

 Insulated Drain Pan Under Coil

 Fully insulated fan cabinet



Airflow modeling with computational fluid dynamics software ensures the best possible airflow in the industry

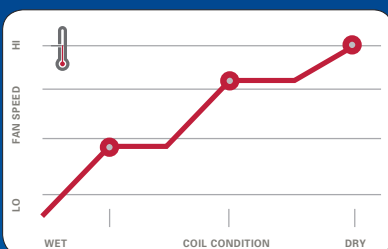


Fan accessible from maintenance platform



45° wall-to-floor deflectors enhance airflow

 Superior Door Design



## Control the fans, and you control the chill.

The goal in blast chilling is to maintain a consistent, predetermined temperature difference between the product and the evaporator coil. A large difference between the two means more moisture is removed from the product, thus reducing yield.

To ensure uniform chilling and to prevent errant crusting, Marlen's Delta Chill process uses variable speed fans running at low speed during "wet coil" conditions. Then, as desired moisture removal is nearly complete, fan speed increases and the system shifts to a lower temperature "dry coil" condition.



## CUSTOM DESIGNED

FOR EVERY OPERATION

Every Marlen blast chill cell is custom designed to meet our customer's own specific objectives. Internally and externally, every facet of every Marlen blast chill cell outperforms the competition. Energy saving coil design and process deliver the fastest chill times and best yields in the industry reducing the cost of ownership. Isn't it time you had the best? Let us design a blast chill cell for your company.

## ABOUT MARLEN

Marlen has been trusted by leading food brands for over 60 years. Our world-class Solution Centers strategically located across the globe, allow processors to lean on our highly experienced food processing technologists to develop and test unique solutions for your products. Marlen is a Duravant Company and is backed by SupportPro, a complete lifecycle management program for parts and service.

Marlen's thermal processing line includes batch ovens, smokehouses, chillers & industrial dehydrators, sous vide solutions, serpentine cook & chill systems and spiral ovens, chillers & freezers. Our processing equipment provides extremely repeatable results with uniform temperature, color, and product shrink profiles. Integrated control systems provide complete data reporting.

**It's the Company behind the machine that makes the difference.**



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