BLC CHILLER/FREEZER

BOUNDARY LAYER CONTROL IMPINGEMENT TUNNEL

The Ross BLC Impingement Tunnel quickly and economically chills or freezes all types of fresh food products, while delivering a whole new level of food safety and productivity.

Ross introduces the next generation of their industry - leading Boundary Layer Control (BLC) Impingement Tunnel. The modular and easily expandable Ross BLC is the perfect solution for rapidly chilling or freezing all types of fresh food products. The new BLC provides processors with the highest levels of sanitation and productivity, with throughput gains of up to 50%. Ross BLC Tunnels chill or crust freeze meat primals, freeze flat products (with minimum weight loss), and produce free flowing IQF products such as patties, nuggets, meat balls, dumplings, eggrolls, tortellini, fruits, vegetables, shrimp and more.

New high-efficiency coils increase throughput by as much as 50%.

The Ross BLC features new, high-efficiency fin coil evaporators that reduce coil icing and the downtime associated with defrost cycles. Small end-box dehumidification coils can also be added to prevent moist (infiltration) air from entering the main BLC cooling modules, optimizing system performance. The result is rapid, economical and highly efficient cooling that can increase production throughput by as much as 50% when compared with the capability of our earlier evaporator.

Improved sanitation for a higher level of food safety.

This new BLC construction prevents water ingress and provides unsurpassed hygiene, cleanability and food safety.

BEEF PORK POULTRY SEAFOOD

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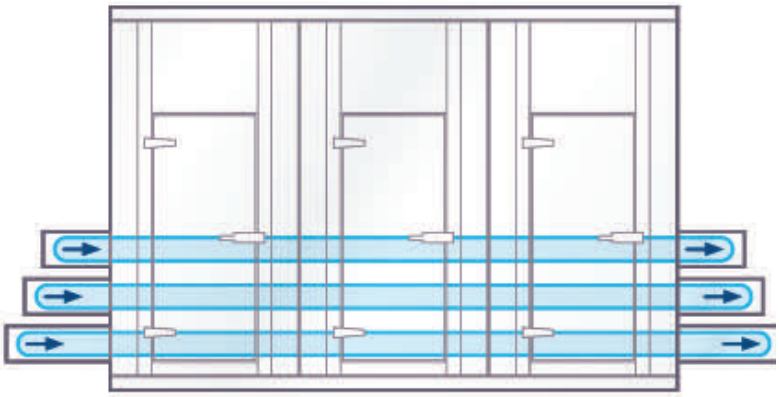
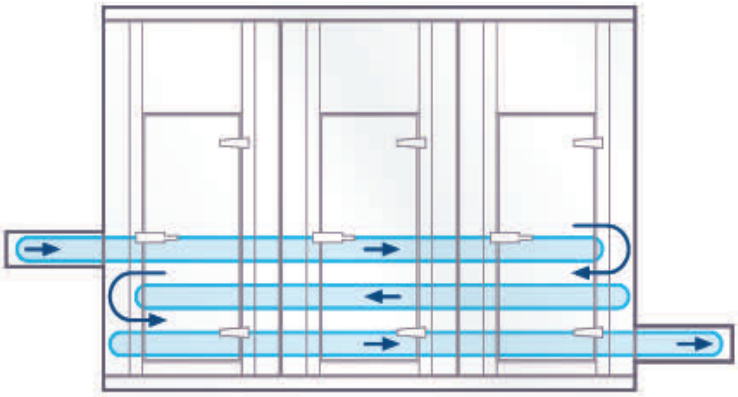


Independent Conveyor Scheme



Cascade Conveyor Scheme

Cost-effective chilling and freezing

The Ross BLC Tunnel utilizes impingement heat transfer to very quickly and gently chill and freeze products while dramatically increasing production rates. Thousands of carefully controlled jets of refrigerated air blast away the insulating boundary layer of heat surrounding the product to freeze it quickly and uniformly. Faster freezing times substantially reduce product cell damage and dehydration to ensure the highest quality product. This system increases heat transfer rates by 2-3 times over standard tunnel freezers, and as a result requires much less floor space. The Ross BLC matches the performance of cryogenic freezing systems, but at a fraction of the operating cost. The BLC produces cold air using a conventional mechanical refrigeration system – a far more economical choice than cryogenic, CO_2 or nitrogen. And when factoring in additional transportation costs for the delivery of these gases, the costs savings of the BLC are even greater.

SPECIFICATIONS

Nominal Production Rate	**Freezing:** Over 1,000 lbs./hr./module **Crust Chilling:** Up to 2,400 lbs./hr./module **Cooling:** Up to 5,500 lbs./hr./module
Tier Clearance	2”, 3”, 4”, 5”, 6”, 7”
Conveyor Width	38” (36” Usable)
Conveyor Type	Stainless Steel or Plastic
Tunnel Configuration	Independent and/or Cascade
Refrigerant Type	Ammonia or Freon
Evaporator Capacity (At –40°F evacuation	33 TR/module (Ammonia) 18 TR/module (Freon)
Power Requirements	17 kw/module (nominal)
3 Phase Voltage Requirements	208V, 230V, 400V, 460V, 575V

Modular design for total flexibility

The Ross BLC is highly versatile. Unlike fixed-size cryogenic and spiral systems, the BLC’s modular construction makes it easily expandable. As throughput demands increase, modules can be quickly and easily added to meet new production requirements.
The BLC features a three-level conveyor system to allow optimum production flexibility. The three conveyors can be controlled independently in a straight line, set in a cascade configuration for IQF products, or as a combination of both flow schemes.

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