

Cold Room Conveyors

Experience Matters in Frozen Food Handling



NERCON
ENG. & MFG., INC.



Bulk Handling



Package Handling



Case Handling

BULK FOOD HANDLING

Experience matters in frozen food handling. A high degree of knowledge is crucial to the success of new conveyor lines and equipment because of the special requirements in a 32° F to - 40° F manufacturing environment.



Nercon offers over 35 years of experience in our knowledge base beginning with bulk sanitary equipment like the hopper system shown here.

This system was engineered for handling frozen food in a -20° F manufacturing environment. The system provides the manufacturing process of breaking up clusters of frozen bulk product, then mixing the ingredients to prepare for saleable packaging.

Adaptable to accept six different ingredients with various take-away routes, the system also utilizes reversing augers beneath the hoppers which allows discharge from two independent points. The added feature of multiple discharge options and mixing flexibility allows the capacity for additional product volume.



Reversing auger in pull-out full access position.



Cluster buster device designed to gently break up frozen clusters of frozen raw vegetables.



Hoppers, conveyors and devices are bead blasted, stainless steel, sanitary constructed.

Frozen bulk ingredients are loaded into dumpers and then are carefully broken up with specially designed cluster-busters. Then the product is metered onto the take away elevators feeding six hoppers. Product is scaled, measured and controlled to provide bulk mixes from single serving size to 2 lb. packages.

Quick sanitation and inspection is provided with rolling, pull-out mechanisms to access the cluster buster apparatus and augers, as well as access panels to other critical production areas. The stainless steel, bead-blasted, tube frame construction provides efficient cleaning processes between ingredient changes.

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Nercon has provided engineered equipment and conveyors not only in the frozen bulk ingredient market, but also has expertise with meat products and shredded and block cheese. In addition to the special hopper system highlighted above, Nercon has supplied sanitary design belt conveyors such as inclines, trough belts, noser belts and scoop elevators to handle bulk products.

CONTAINER HANDLING



Nercon is a preferred supplier to top frozen dairy manufacturers, having engineered sanitary packaging lines that convey round and rectangular cartons, pails, cases and bundles as well as special ice cream packages like “squrounds” and “squails”.



Equipment engineered and manufactured for cold environments include pressureless single filers, accumulators, alpine systems, servo diverters, lift stations, case and gripper elevators.

In addition to Nercon’s engineered-for-cold conveyors and equipment, the Nemco Design Group division offers packaging line layouts, line efficiency studies, project management, mechanical and electrical engineering, installation and site management.

Nercon’s line layout and engineering concepts focus on worker ergonomics, reducing cold room man hours, maximizing throughput, energy efficiencies and minimizing waste.

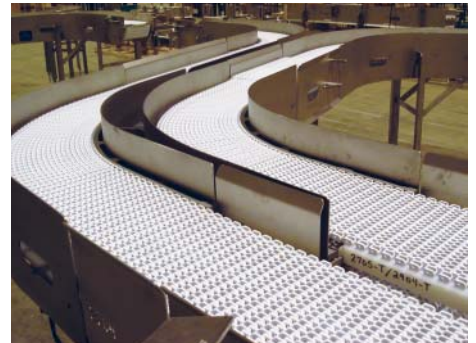
Many other types of industries have been served by Nercon equipment utilized in refrigerated rooms, including frozen appetizers, pastries, dinners, side dishes and meat entrees. Nercon has handled packaging types from wrapped and un-wrapped trays, bags, cartons and sleeved products.



Frozen dinner sanitary design conveyor with easy guide rail positioning.



Closed top design frozen dairy process room conveyor.



Sanitary design conveyors handling frozen pies.



Mat-style system with multiple spurs handling frozen bagged appetizers.



Square box accumulator handling frozen dinners.



Servo merge with powered side belt handling meat trays.

CASES, BUNDLES, PALLETS



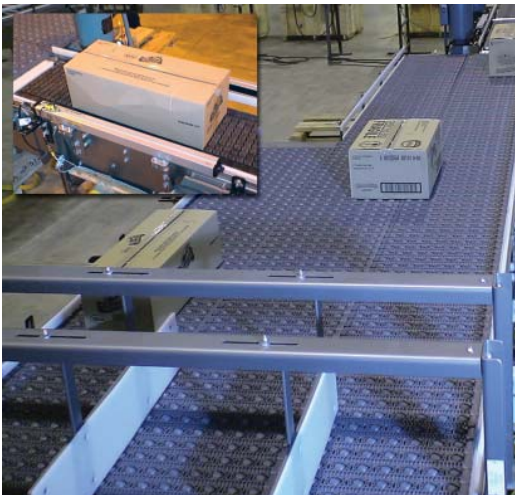
Conveying food in temperatures at or below freezing presents unique challenges to food manufacturers. Nercon works with the project team to design systems that reduce downtime, improve fulfillment speeds and make overall work environments more suitable to floor personnel.



Nercon's extensive fabrication capabilities combined with large assembly facilities provided over 1000 feet of cold-room engineered, heavy-duty case conveyors for the meat processing plant shown in this photo.

Plastic belt conveyor expertise includes horizontal and vertical diverts, curve inclines, merging and cleated inclines. Case handling equipment includes case elevators, vertical conveyors, and serpentine case accumulators.

Nercon's competence is engineering and manufacturing conveyor systems and equipment that are the best fit solutions for the application.



The angled roller belt diverting system above used activated rollers to divert cases without the use of gates or pushers. Designed for operation in 0° F environment, the system featured a smart scanner that was controlled to direct the cases to 1 of 3 palletizer diverting paths.



This system was designed to single file shrink wrapped bundles of ice cream in 0° F operating temperature. It features a drop-out take away conveyor for misoriented bundles.



Specially engineered for a 35° F environment, this stainless steel, dual strand, pallet handling system was fully automated and designed to replace manual operations.



Visit Nercon's web site at www.nercon.com and register for the Nercon Knowledge Center. The Frozen Food web page on the Knowledge Center offers several minutes of video footage on bulk food handling, packaged food handling, and a movie combining case, bundle and pallet systems. Other resources in the Knowledge Center Frozen Food page include white papers on various frozen food conveyor engineering topics.