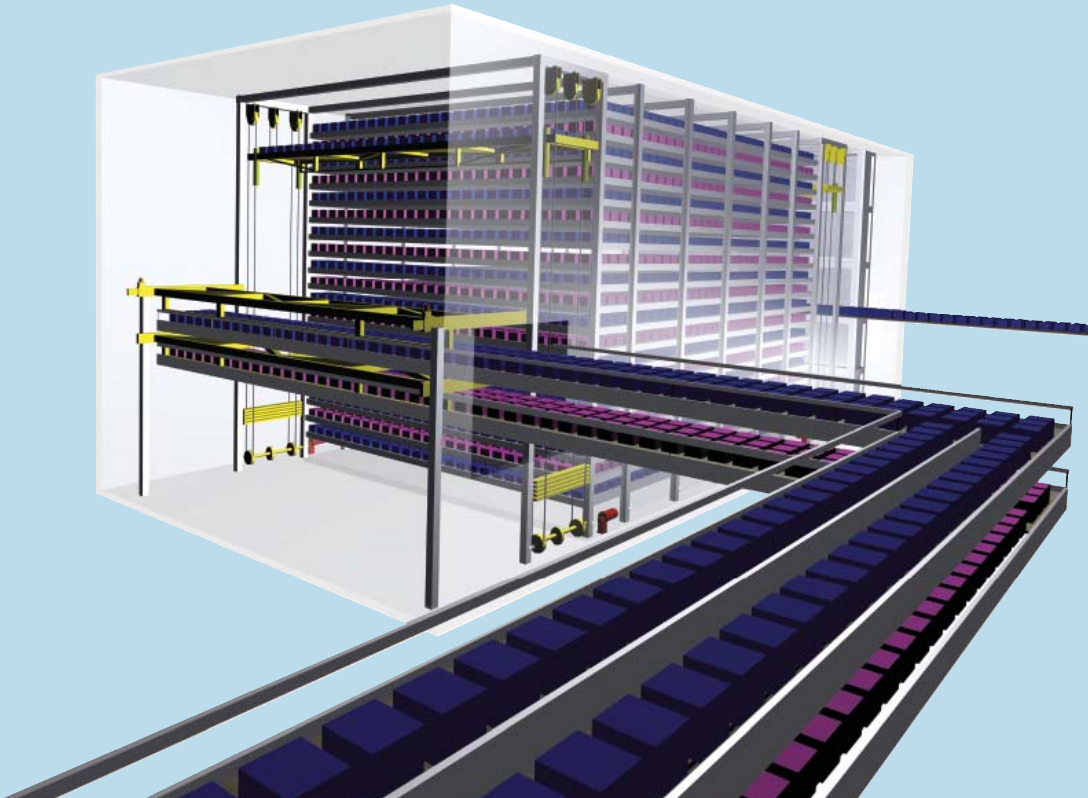


# In Touch



## GEA Intec VRT carton freezers & chillers

In touch with GEA Freezing—multiple retention time automated system

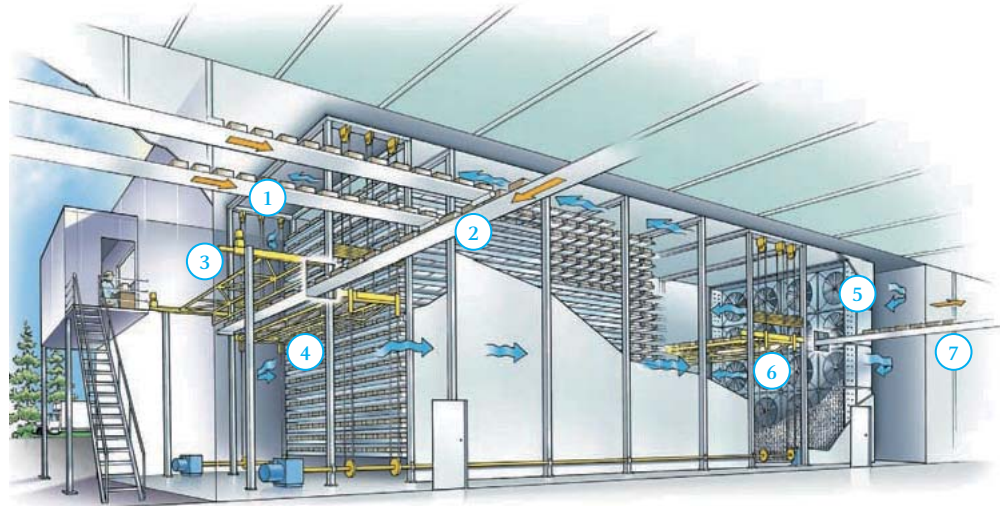
Food packed in cartons, plastic totes or plastic shrink wrapped; GEA Intec VRT (Variable Retention Time) can handle simultaneously all your products coming in various sizes and types with different chilling and freezing profiles. GEA Intec VRT system offers optimal flexibility through a wide range of food applications and full integration into your in-line process.

GEA Intec VRT provides automated system for product handling from the production room to the freezer/chiller and on to the palletizing area, while achieving:

- Chilling or freezing retention time adapted to each product
- Optimum product quality through accurate temperature control
- Full inventory control
- Minimum labor
- Cost effective chilling and freezing solution

° In touch with our technology

## GEA Intec VRT carton freezer



### The VRT Process

- 1 Batches accumulate by product specification or retention time on our fully integrated material handling conveyors.
- 2 Load transfers to the VRT infeed conveyor and package tracking is initiated, allowing total inventory control and data capture.
- 3 After product is spaced for optimal airflow, a custom designed sweep arm gently transfers product to an empty shelf.
- 4 The shelf is positioned on the cradle, elevated to the designated level and inserted into the freezer rack without the product being touched.
- 5 Packages pass through the VRT rack system while powerful fans provide the required velocity and end-flow air distribution to ensure efficient heat transfer.
- 6 When the product reaches the retention time required to achieve its pre-set exit temperature profile, the finished shelf discharges as a new shelf is loaded.
- 7 Product transfers onto the outfeed conveyor. The freezing/chilling cycle is complete and the product conveys to a fully integrated automatic or manual palletizing system.

GEA INTEC VRT System Typical Application Data	
Packages processed	Cartons, Totes, Nestors, Shrink wrapped packages
Products	Poultry, Pork, Beef, Ice Cream, Cheese, Yogurt, Redi-meals, Soups, Bakery
Feed rates:	Up to 55 units per minute
Capacities:	4,500 to 41,000 kg per hour
Hours of operation:	Up to 24 hours per day / up to 7 days per week
Shelf loading:	Loading Patterns are custom configured, specific to carton sizes and weights, all to optimize freezing / chilling profiles and production rates. (units across x units deep)
Storage capacity:	From 3,000 to 34,000 cartons at any one time within a VRT system = 1,000 to 10,200 square meters of storage capacity.

GEA INTEC VRT System Technical Data	
VRT infeed system:	Production mix and capacity specific – 1 to 6 per VRT
VRT discharge systems:	Production mix and capacity specific – 1 to 3 per VRT at the same end or opposite ends of the VRT system. This is customer specific for the optimum product flow for their application and facility.
Shelves:	Production specific – from 60 to 700 shelves within a VRT system
Standard shelf sizes:	Production specific – from 60 to 700 shelves within a VRT system
Shelf construction:	Galvanized steel frame, corrugated galvanized steel decking and polyethylene wear strips. Shelves are designed for a minimal deflection.
Platforms and ladders:	Platforms and ladders are supplied within the VRT enclosure to access the in-feed and out-feed conveyors, as well as the upper elevators assemblies and other high level components.
Construction:	Galvanized steel – bolt together assembly
Safety:	All moving parts within the VRT are painted yellow. Access into the VRT freezer enclosure is restricted such that the VRT must be isolated prior to personnel entry. Drives external to the VRT are guarded and a controlled shutdown of the VRT occurs whenever an access door is opened.

GEA INTEC VRT System Technical Data	
Electrical and control equipment:	Each VRT system has its own dedicated Allen Bradley Processor. Major operator controls will be accessed via SCADA screens. The operator interface monitor is a personal computer running an InTouch Wonderware SCADA package.
Camera system:	Cameras & monitoring system are included within each VRT control system.
Drives & servos:	SEW Eurodrive
Air flow:	Horizontal airflow - 6m/second over the top of all units. Airflow is baffled and controlled so that it insures even air flow and temperature to all products throughout the rack structure of the VRT system. Counter end air-flow
Evaporators:	Galvanized or stainless steel / aluminum Coil banks are stacked, 3 to 7 high
Fans:	Fans are blow through design, 3 to 4 per bank. Fan sizes are production specific, ranging from 9 to 28 fans, each from 3.75 kW up to 8.65 kW.
Refrigeration:	Pumped ammonia, freon or CO <sub>2</sub> cascade system
Suction temperature:	-1.1° C to -45.5° C, depending upon Freezer or Chiller requirements.
Defrost system:	Typically one defrost cycle per week, predominantly with hot gas, and some with electric or water defrost.

GEA INTEC VRT System Dimensions	
Enclosure footprint:	12.2 to 48.8 m L x 8.53 to 15.25 m W x 6 to 24.3 m H
Standard shelf sizes:	5.05 m W x 1.27 m L, 7.24 m W x 1.27 m L, 9 m W x 1.27 m L, 9 m W x 1.9 m L + custom
Installation:	Mechanical and electrical installation typically included in INTEC scope.

*Please get in touch with us:  
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