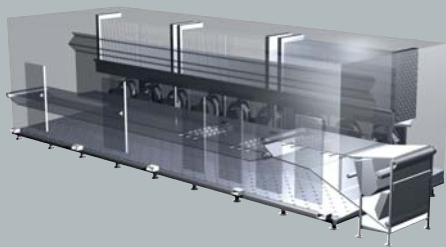


In Touch



Aerofreeze IQF tunnel freezers and chillers

In touch with GEA Freezing—
high efficiency freezing and chilling

GEA Refrigeration Technologies through the GEA Freezing product range represents innovative solutions in industrial freezing and chilling closely oriented to the stringent requirements of its customers: Cost-efficient, long-life, energy-efficient and customized.

° In touch with your processes: optimum freezing and chilling solutions

Extensive experience in freezing and chilling food processing

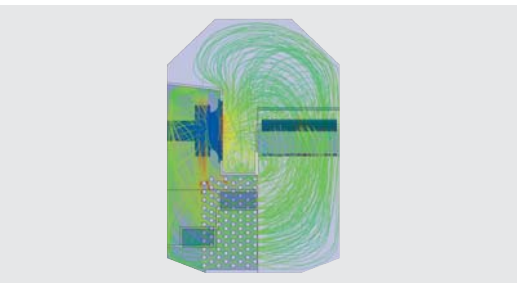
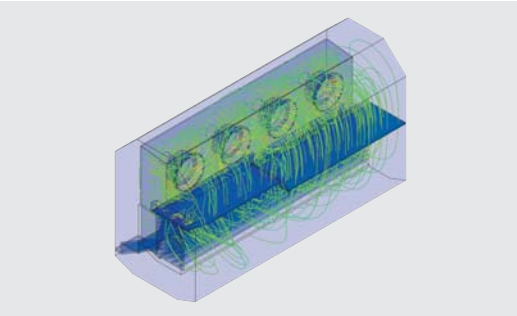
Berries, French fries, mangos, broccoli, shrimps, meat crumbles, cheese, herbs, etc. etc. Raw or cooked products: With the rapid change in the market demands and innovations in food processing, there have been many product developments requiring unique handling. GEA experts in frozen food applications ensure that the best solution is identified for your product. Aerofreeze tunnels can run as a freezer, chiller, pre-cooler, pre-freezer or after-freezer, with the highest IQF (Individually Quick Frozen) quality.

Aerofreeze IQF tunnel freezers and chillers are designed for hygiene, high-efficiency and reliability.

We guarantee quality and safe products throughout your entire freezing or chilling process. How? Based on our proven know-how with regard to food freezing and chilling, together with the ability to test your products in our technology center, we select and test the optimum freezing or chilling configuration for your specific application.

Innovative, optimized, scientifically proven

Our R&D department uses the latest airflow and heat transfer technologies. With the ability to conduct simulations and confirm the results in our test freezers, we can quickly generate new and industry-leading solutions that energy efficiently maximizes product quality and yield.



In GEA Tech Center, 3D model simulations are built to optimize airflow and heat transfer for all IQF tunnel series.

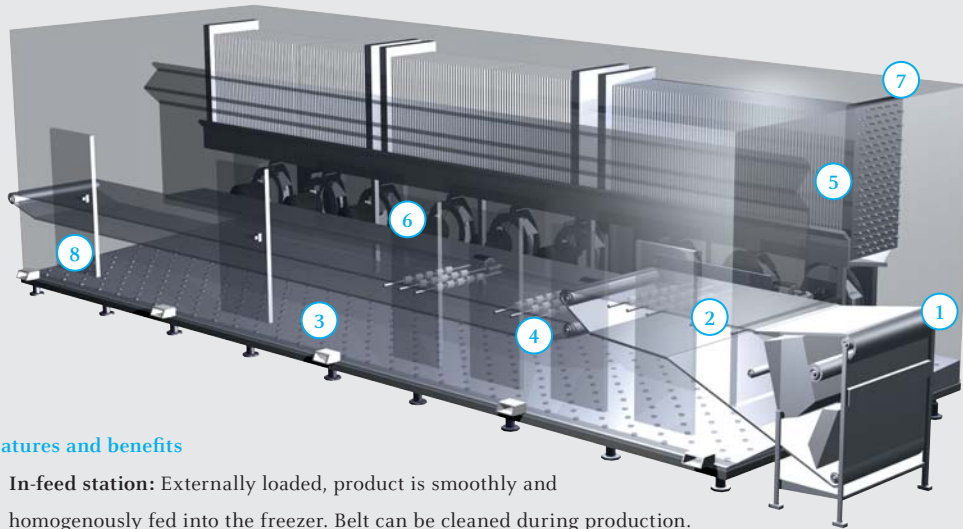
GEA Freezing manufacturing facility.

Evaporators, enclosures, floors, frameworks and control panels are manufactured and assembled in our 10,000m² plant.

° In touch with your needs: gentle product handling and high hygiene

Aerofreeze IQF tunnel freezers and chillers

Capable of handling capacities from 0.5 to 25 tons per hour, the Aerofreeze IQF tunnel freezers are designed by expert engineers to exact specifications based on your product characteristics, capacities, facility space and line layout.



Features and benefits

- 1 In-feed station:** Externally loaded, product is smoothly and homogeneously fed into the freezer. Belt can be cleaned during production.
- 2 Belt and vibrator:** Variable-speed belt vibrators gently agitate product — assuring integrity for both delicate and resilient products.
- 3 Floor design:** All-welded, insulated and sloped. Does not require heating.
- 4 Structure:** All-welded stainless steel. Non-hollow uprights elevated from the floor reduce bacteria-trapping areas.
- 5 Product guard:** Height reduces the risk of light-product blow off.
- 6 Catwalk and walkways:** Width offers safe access and easy cleaning.
- 7 Evaporators:** Use stainless steel tubes and heavy-duty aluminum fins to be durable and optimally transfer heat. Built in-house to suit any specific application.
- 8 Accessibility:** Fully stainless steel doors and round corners allow high access and hygiene.

Flexibility

Aerofreeze IQF tunnel freezers can handle:

- ° A wide range of applications, such as fruits, vegetables, sliced and diced meats, and seafood
- ° Sensitive product gently, minimizing the risk of damaging your product
- ° 1 shift to 2 weeks of operation without stopping to defrost, based on your desired configuration. We select for your need – whether Sequential Defrost (SD) or Snow Removal System (SRS)

Cost-efficient production

Our tunnel freezers profitably:

- ° Increase yield by gently handling product, fluidizing just enough to produce superior IQF product
- ° Save energy by using higher evaporating temperature and lower pressure drop
- ° Clean quickly and effectively
- ° Ease maintenance, use non-proprietary spare parts.

Great durability

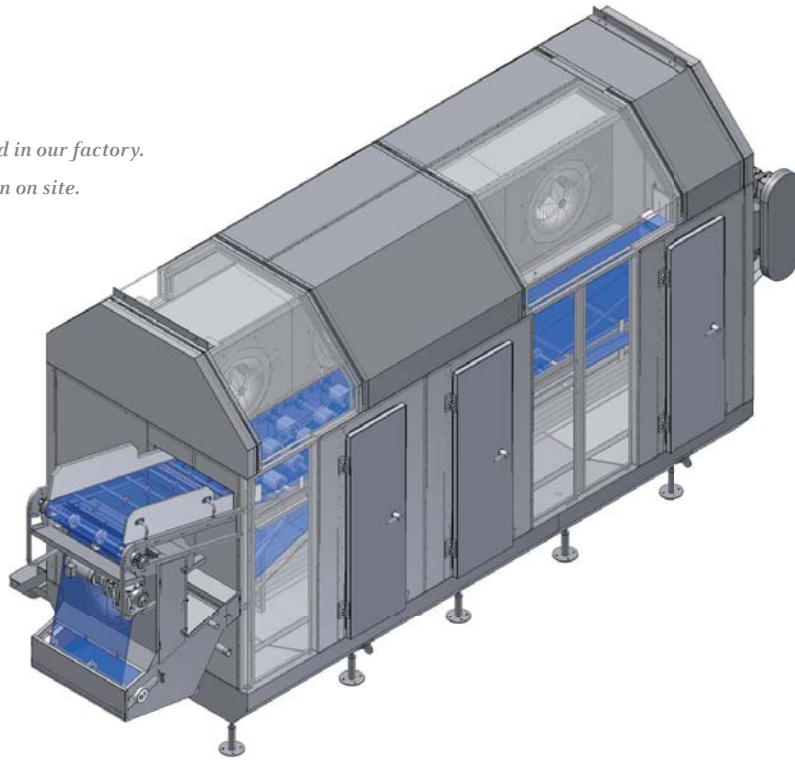
Our tunnel freezers are strengthened by:

- ° Fully welded stainless steel
- ° Ease of operation
- ° Customer support

° In touch with your operations: Installation to implementation

SMA-series from 0.5 to 3 tons/hour

*Fully assembled in our factory.
Ready to plug in on site.*



The SMA-series is specifically built for:



Easy, short installation

- ° On legs, can be installed without a concrete pad
- ° With separated enclosure roof, it can be shipped in a container
- ° Fully prefabricated, loaded on the truck


Hygiene

- ° Fully welded enclosure both inside and outside
- ° Flooring is seamlessly welded and integrated with enclosure

Easy cleaning


- ° Catwalk is accessible by a staircase
- ° All components are easily accessible
- ° Cleaning nozzles are preinstalled

Aerofreeze IQF tunnel freezer SMA-series selection table (Imperial)
 Capacity (lb/h) of green peas at -35°F suction temperature at evaporator and 70°F product in-feed temperature

Series		Total heat load for peas (includes base load)			Dimensions		
		Capacity [lb/h]	[TR]	Base Load [TR]	Enclosure Length (L)	Loading Length (LL)	Unloading Length (UL)
SMA-3		2,420	46	11	15'-0"	4'-6"	1'-4"
SMA-4		3,300	60	13	19'-0"	4'-6"	1'-4"
SMA-5		4,180	75	15	23'-0"	4'-6"	1'-4"
SMA-6		5,060	89	17	27'-0"	6'-3"	1'-4"
SMA-7		5,940	104	19	31'-0"	6'-3"	1'-4"
SMA-8		6,600	115	21	35'-0"	6'-3"	1'-4"

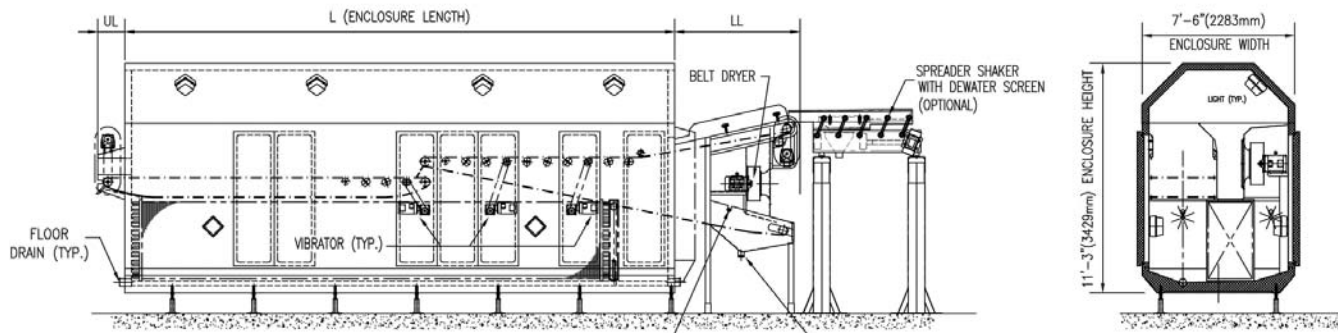
Note: SMA-6 and higher models separate the loading section from the freezer for shipping reasons.

Aerofreeze IQF tunnel freezer SMA-series selection table (SI)
 Capacity (kg/h) of green peas at -37°C suction temperature at evaporator and 21°C product in-feed temperature

Series		Total heat load for peas (includes base load)			Dimensions [mm]		
		Capacity [kg/h]	[kW]	Base Load [kW]	Enclosure Length (L)	Loading Length (LL)	Unloading Length (UL)
SMA-3		1,100	162	39	4,572	1,372	406
SMA-4		1,500	211	46	5,791	1,372	406
SMA-5		1,900	264	53	7,011	1,374	406
SMA-6		2,300	313	60	8,230	1,905	406
SMA-7		2,700	366	67	9,949	1,905	406
SMA-8		3,000	404	74	10,668	1,905	406

Note: SMA-6 and higher models separate the loading section from the freezer for shipping reasons.

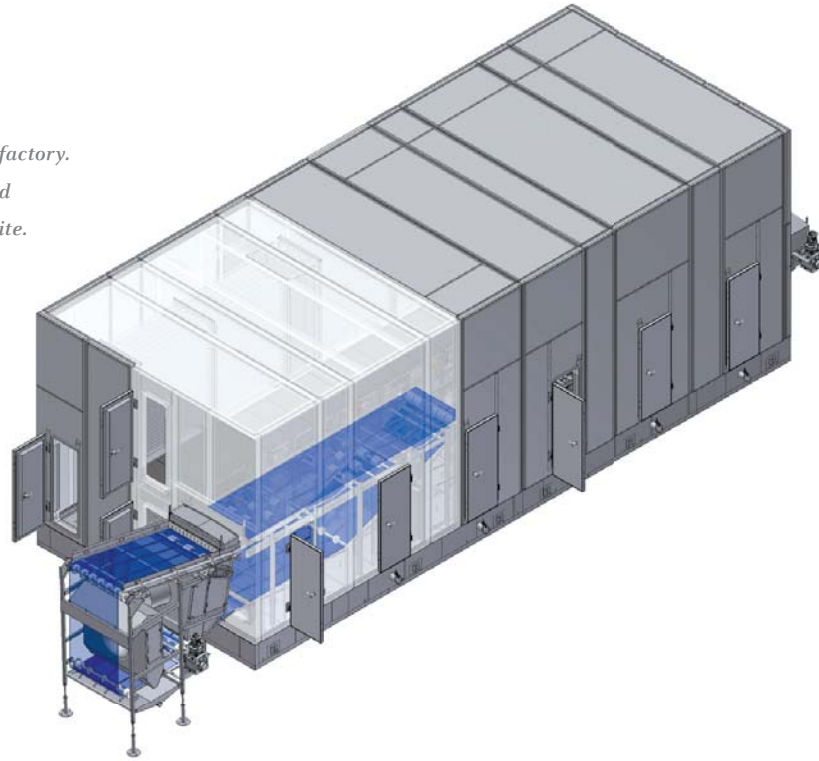
Aerofreeze IQF tunnel freezer layout



° In touch with your operations: Installation to implementation

A-series from 3 tons/hour and up

*Pre-assembled in our factory.
Only floor sections and
enclosure welded on site.*



The A-series is specifically built for:



Easy, short installation

- ° Preassembled in your factory guarantee a better quality control
- ° Downtime on site is minimal

Hygiene and reliability

- ° Stainless steel tubes, aluminum fins evaporators are manufactured in-house
- ° Triple-action belt dryer

Easy cleaning and inspection

- ° Large openings permit easy and safe access

Aerofreeze IQF tunnel freezer A-series selection table (Imperial)
Capacity (lb/h) of green peas at -25°F suction temperature at evaporator and at 70°F product in-feed temperature

Series	Belt area; ft ² / section	Number of Sections (Cascade Model)								
		3	4	5	6	7	8	9	10	11
4-	24	4,500	6,000	7,600	9,100	10,600				
5-	30		7,600	9,500	11,400	13,300	15,200			
6-	36			11,400	13,700	16,000	18,200	20,500		
7-	42				16,000	18,600	21,300	24,000	26,000	
8-	48					21,300	24,300	27,300	30,400	33,500

Aerofreeze IQF tunnel freezer A-series selection table (SI)
Capacity (kg/h) of green peas at -32°C suction temperature at evaporator and at 21°C product in-feed temperature

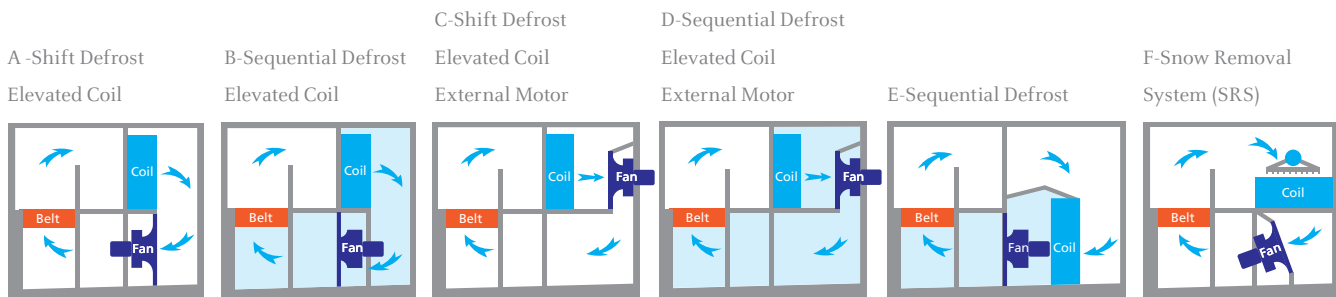
Series	Belt area; m ² / section	Number of Sections (Cascade Model)								
		3	4	5	6	7	8	9	10	11
4-	2.2	2,000	2,700	3,400	4,100	4,800				
5-	2.8		3,400	4,300	5,100	6,000	6,900			
6-	3.3			5,100	6,200	7,200	8,300	9,300		
7-	3.9				7,200	8,400	9,600	10,900	12,100	
8-	4.5					9,600	11,000	12,400	13,800	15,200

Configuration options (schematic side views of configurations A–F)
Dimensions (Imperial)

Series	4-	5-	6-	7-	8-
Section Length Type A–F	6'	6'	6'	6'	6'
Enclosure Thickness Type A–F	5"	5"	5"	5"	5"
Enclosure Width Type A, B, F	15'-0"	16'-0"	17'-0"	18'-0"	19'-0"
Enclosure Width Type C–E	17'-0"	18'-0"	19'-0"	20'-0"	21'-0"
Enclosure Height Type A–F	13'-9"	14'-9"	15'-9"	16'-9"	17'-9"

Configuration options (schematic side views of configurations A–F)
Dimensions (SI)

Series	4-	5-	6-	7-	8-
Section Length Type A–F	1,830	1,830	1,830	1,830	1,830
Enclosure Thickness Type A–F	127	127	127	127	127
Enclosure Width Type A, B, F	4,572	4,877	5,182	5,486	5,791
Enclosure Width Type C–E	5,182	5,486	5,791	6,096	6,401
Enclosure Height Type A–F	4,191	4,496	4,801	5,105	5,410



° In touch with high flexibility for any food application

S-series



The S-series flexibly handles any application, specifically configured:

For a wide range of products

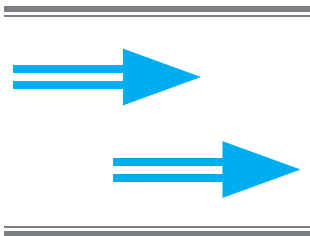
- ° Hollow and soft when ripe, broken when frozen
- ° Cracked when over-frozen
- ° Damaged if abused when frozen

The S-series integrates the desired solution into any processing line:

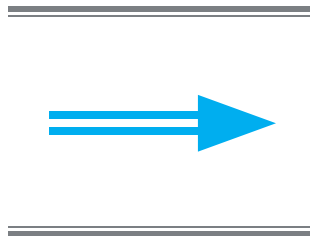
- ° Pre-cooling
- ° Retrograding
- ° Freezing
- ° Chilling
- ° Finish-freezing
- ° After-glaze hardening

With varying belt options

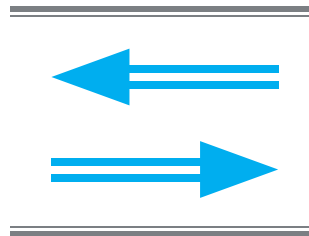
° Cascade



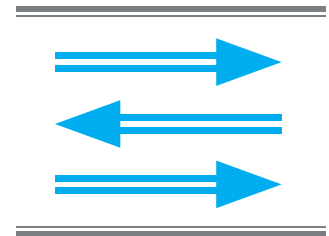
° One Pass



° Double Pass

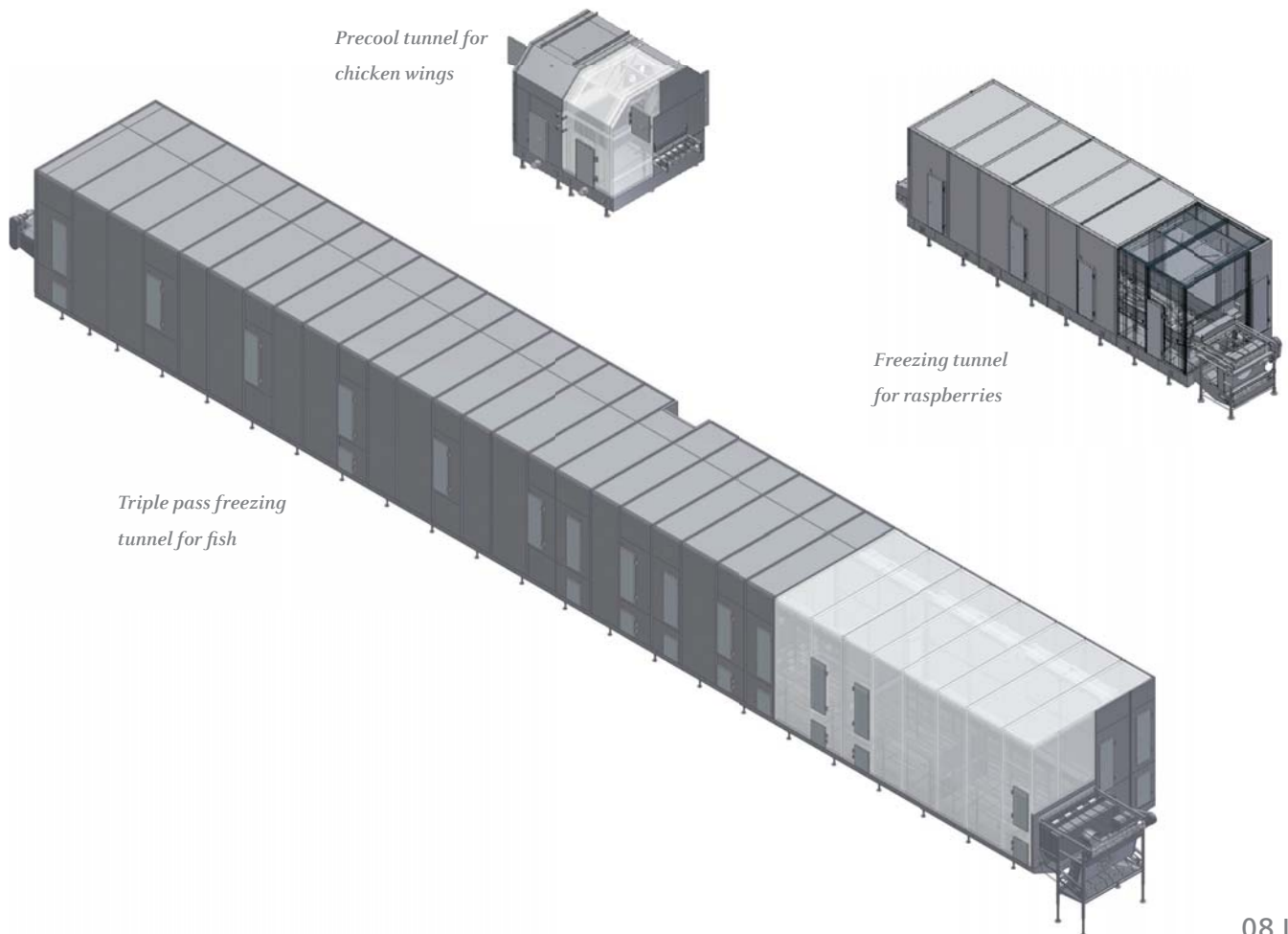
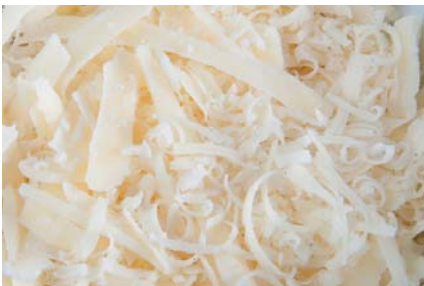


° Triple Pass



° Integration in your processing line

Process flow design



°In touch with hygiene

Your main concern. Our guarantee



GEA Aerofreeze freezers and chillers satisfy the food industry's most stringent hygiene requirements through their:

Hygienic by design

Built with fully welded stainless steel, including the floor and enclosure. The smooth surface is easy to clean.



Structural support

Built with all-welded stainless steel. Prevents dirt, water and soil from remaining on the surface.

Good drainability

Consistent sloped floor drains easily. The structure sits on elevated studs welded to the floor eliminates dirt traps.



Insulation without caulked joints

Option for fully welded insulated panels and floor on all our tunnels.

Recirculating CIP system

Foaming Clean-In-Place (CIP) covers some or all zones. The recirculating CIP system pumps and filters water, acting like a giant dishwasher – using less water and detergent than non-circulating systems.



GEA Refrigeration Technologies offers superior customer support services. These services add significant value to your company's operation. Staffed by well-trained and experienced technicians, your experience with our service and support will be a positive one.

° In touch with our customers



Worldwide service support

We offer you: top competence, from development to service

Of course we won't leave you alone when your systems have been installed. We support you during your plant operation, assure optimal maintenance, supply wear and spare parts, and are quickly there when your refrigeration systems unexpectedly have difficulty. In short: we are responsible for absolutely satisfactory operation – with companies around the world, and with highly competent staff.



Training programs by experts

Reliable maintenance and emergency repair service

We offer you preventive and restorative maintenance. Our engineers are selected, ongoing-trained experts that stand at your side around the world, and quickly and efficiently repair your equipment, minimizing production downtime. We customize your contract to meet your needs, from annual audits to full maintenance. You can depend also on our expert knowledge if you are looking for new possibilities of efficiency enhancement. Either for purchase or as part of contracting: our team will find for you the energy-optimized and sustainable solution.

Proven spare parts

GEA Refrigeration Technologies quotes, designs and provides genuine replacement parts to optimize the performance and extend the operational life of your freezer or chiller. Owing our manufacturing shop, we can quickly manufacture your replacement parts, customizing them to fit your unique installation – without delay.

Friendly expert training

GEA Refrigeration Technologies offers training programs designed to optimize the performance of your freezer or chiller. Our highly skilled engineers conduct these programs for existing or new employees at your facility or in our Technology Center.

*Please get in touch with us:
GEA Refrigeration Technologies and its companies are
located worldwide. Our complete addresses are available
on the Internet under www.gearefrigeration.com*



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