

AEROFREEZE[®] SPIRAL FREEZERS AND CHILLERS

Spiral freezers for high product quality,
and efficient freezing of food applications



DSI DANTECH



extensive **experience** in **freezing** and **chilling** for food processing

We help food manufacturers optimize their production processes with reliable freezing and cooling solutions - designed to preserve taste, texture, and nutritional value.

Freezing and cooling solutions customized your production

We have developed a highly configurable, versatile freezer and chiller portfolio that can provide the ideal solutions for your most complex industrial freezing and cooling needs.

With decades of experience and deep process knowhow, we customize solutions that meet the highest demands for food safety, hygiene, and cost & energy efficiency.

See the results for yourself

At our application center, you can test your own products on our latest freezing and cooling technologies - supported by our team of specialists.

Together, we'll validate performance, optimize setup, and ensure the solution fits seamlessly into your production line.



superior **hygiene** by design, high **uptime** and product **yield**

Aerofreeze spinal freezers are designed to match the needs of your product characteristics, production planning, facility space and line layout

Customized solution

- Modular configuration
- Belt, floor, and enclosure type options to match application requirements
- Extended run-time from single shift to 14 days operation with proven frost management systems: Static Pressure Control System (SPCS) and Sequential Defrost (SD) options
- Low profile top drive option addresses space and headroom constraints

Safe product handling

- Open profiles and fully welded structure
- Design answers the most stringent hygiene requirements with fully welded floor and fully welded enclosure option
- Effective solutions from belt cleaning to full recirculating cleaning system that acts like a giant dishwasher
- Option for fan and drive motors outside the enclosure for improved access and hygiene

High yield with horizontal airflow

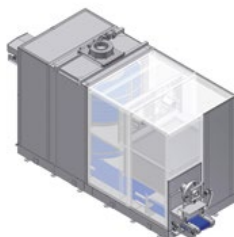
- Even airflow and temperature distribution across all tiers for optimum heat transfer and minimum product dehydration
- High performance, independent from product loading variation

Low total cost of ownership

- Optimized evaporating temperature for minimum energy consumption.
- Simple drive system, non-proprietary parts, reliable structure for low maintenance costs
- Option for external fan motors for ease of maintenance

Capacity range

COMPACT



MODULAR



1,500 lb/h

Fully built, shipped,
Plug-in ready

2,000 lb/h

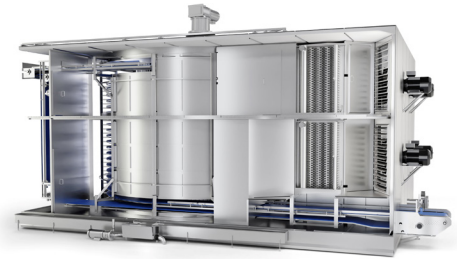
Site built

+18,000 lb/h

Configurable solutions to match different requirements

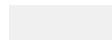
The standard spiral belt mechanisms are defined by belt width, turn radius, number of tiers and tier pitch.

- Overall belt widths are available from 30" to 52" to match those of typical processing lines
- Modules can be configured with different turn radius dependent upon space constraints and site footprint
- Aerofreeze solutions can be supplied with 15 to 38 tiers, and single drum or twin drum configurations, to meet just about any capacity
- Tier pitch can be configured from 110 mm to 270 mm, to accommodate different product heights



Aerofreeze spiral standard matrix

Belt width (inches)	30	36	42	48	52
Usable belt width with stainless steel belt (in)	27	33	39	45	49
Usable belt width with plastic belt (in)	28	34	40	46	50
Tiers range	15 to 38				
Tier pitch range (mm)	110 to 270				
	Drum diameter (in)				
	103	1,72			
	116	1,93	1,61		
	135	2,25	1,88	1,61	
Available turn radius	150		2,08	1,79	
	167			1,99	1,74
	187		2,23	1,95	1,80
	212		2,52	2,21	2,04
	240		2,86	2,50	2,31

 Models available with DDS option.

frozen meat, poultry, and fish

Aerofreeze chillers and freezers use industry-leading horizontal airflow technology to surround every surface of the product.

Supporting recipes and high-quality products





Today's consumers expect quick, high-protein meal options - whether in the supermarket freezer or at their favorite fast-food chain. Behind the scenes, food manufacturers rely on efficient processes and reliable equipment to deliver premium-quality meat, poultry, and seafood.

At DSI Dantech, we help manufacturers bring new ideas to life through advanced thermal solutions that support forming, frying, cooking, grilling, and freezing - so they can stay ahead of market trends and deliver food that meets both taste and quality expectations.

Locking in freshness, flavor, and value

Once products have been formed, coated, or cooked, they need the right thermal treatment to preserve quality. Our spiral freezers and chillers are designed to fit your production layout, loading pattern, and capacity - while maintaining product weight, appearance, and taste.

By using a high-velocity horizontal airflow and precise temperature control, our technology ensures fast and even freezing across every product surface. Compact and hygienic by design, our solutions help reduce energy use, cut freezing times, and lower the cost per kilo - without compromising on food safety or quality.

Products		Typical product dimensions [in] L x W x H	Typical product weight [oz]	Aerofreeze 30" Capacity* [lb/h]	Aerofreeze 42" Capacity* [lb/h]
Poultry 	Nuggets, battered and breaded, par-fried, frozen	1.5" x 1" x 0.5"	1	1,700-6,600	6,600-18,000
	Tenders, battered and breaded, par-fried, frozen	4" x 1" x 0.5"	1	1,900-6,800	6,100-18,000
	Filets, battered and breaded, par-fried, frozen	5.5" x 3.5" x 0.75"	4	1,600-6,600	5,300-18,000
	Nuggets, battered and breaded, fully cooked, frozen	1.5" x 1" x 0.5"	1	1,500-5,500	4,800-18,000
	Tenders, battered and breaded, fully cooked, frozen	4" x 1" x 0.5"	1	1,600-6,600	5,300-18,000
	Filets, battered and breaded, fully cooked, frozen	5.5" x 3.5" x 0.75"	4	1,400-5,300	4,600-18,000
Meat 	Beef patties, raw, frozen	4"(D) x 3/8"(H)	4	1,500-6,500	4,800-14,000
	Beef patties, fully cooked, frozen	14"(D) x 3/8"(H)	4	1,300-4,600	4,200-12,300
	Meat ball, raw, frozen	Sphere 1"	0.28	1,500-6,500	4,800-14,000
	Meat ball, fully cooked, frozen	Sphere 1"	0.28	1,300-4,600	4,200-12,500
Fish 	Filets, raw, frozen	8" x 3.5" x 0.5"	4	1,400-5,100	4,400-13,400
	Fingers, battered and breaded, par-fried, frozen	4" x 1.25" x 0.6"	1	2,500-9,000	7,900-14,000
	Filets, battered and breaded, par-fried, frozen	5.25" x 4" x 0.7"	6.6	2,500-9,200	8,100-14,000



DSI DANTECH





DSI DANTECH

frozen bakery products

Aerofreeze chillers and freezing technologies gently handle your bakery products to preserve shape, texture, and color.









Advanced technologies. Expert support.

In the bakery industry, precision is everything. From cooling to freezing, you need solutions that handle products gently and preserve shape, texture, and color - whether you're producing waffles, pancakes, bread, cakes, or pizza.

At DSI Dantech, we combine advanced thermal technology with deep application expertise. Our specialists work closely with you to define the best energy-efficient and sustainable solution for your products and processes.

Why choose DSI Dantech?

- Precisely controlled temperatures to prevent freezer burn
- Gentle handling that protects delicate surfaces
- Long production cycles – up to 14 days with out defrost
- Reliable frost management for maximum uptime
- Configurable systems for high capacity and product heights up to 8”
- Horizontal airflow for efficient and uniform freezing with lower energy consumption

Products	Typical product dimensions [in] LxWxH	Typical product weight [oz]	Aerofreeze solution	Product treatment	Capacity range* [lb/h]
Waffle 	4.5"(D) x 0.75"(H)	1.34	Double drum DDS spiral freezer	Freezing from +190°F to -10°F	2,000-6,500
Subway roll 	11.0" x 1.25" x 1.25"	6.5	Single drum DDS spiral freezer	Freezing from +70°F to 0°F	2,200-14,000
French toast 	4.25" x 4.25" x 0.75"	2.5	Single drum DDS spiral freezer	Freezing from +140°F to 0°F	2,000-6,000
Baked bread 	10" x 3.5" x 2.7"	16	spiral ambient cooler. Single drum or twin drum Single drum spiral freezer with sequential defrost for 6 days in operation	Cooling from +195°F to +110°F Freezing from +110°F to -10°F	2,200-6,600
Croissants 	6" x 1.6" x 1.4"	2.6	Double drum spiral	Adjustable temperature from: +75°F to +105°F Adjustable air humidity: 70 to 90%	2,200-14,000
Cookie dough 	2.5"(D) x 1.5"(H)	1.7	Single drum DDS spiral freezer	Freezing from +70°F to 0°F	2,000-20,000
Pancakes 	5"(D) x 0.46"(H)	1.83	Single drum lo-tension spiral freezer	Freezing from +140°F to 0°F	2,000-6,000
Pizza with topping 	12"(D) x 2"(H)	33	Double drum DDS spiral freezer	Freezing from +40°F to 0°F	3,000-30,000

*Capacity figures are indications for basic estimation purpose.

frozen ready meals

Spiral freezing and chilling solutions for any type of ready meal, from in-flight dinners and prepacked sandwiches, to soup and pasta.

Perfect solutions for prepared meals

Today's ready meals are a far cry from the tray-based dinners of the 1950s. Consumers now expect healthy, high-quality options made with fresh ingredients and fewer additives.




We support food manufacturers with advanced thermal solutions for every stage of production - from forming and cooking to chilling or freezing. Whether you're producing soups, pasta, sandwiches, or in-flight meals, we customize systems to match your processes.

No matter the packaging - bags, trays, boxes, or pouches - our technologies help preserve the natural look, taste, and texture of your meals while ensuring efficiency, hygiene, and sustainability.

Precise chilling. Proven efficiency.

Our freezing and chilling technology ensures precise temperature control to prevent surface freezing and protect product quality. Horizontal airflow delivers even cooling - especially for large tray - by surrounding every surface with consistent, accurate airflow.

All systems are engineered for high energy efficiency, helping you reduce operational costs while supporting your sustainability goals.

Products	Typical product dimensions L x W x H [in]	Typical product weight [oz]	Aerofreeze solution	Product treatment	Capacity range* [lb/h]
Meal tray 	7.5" x 5.75" x 1.5"	10	Double drum DDS spiral freezer	Chicken and Sauce at +45°F, Rice at +90°F to 0°F	2,000-10,000
Corn dog 	2" Dia. x 4" includes 2/3/8" stick	2.67	Single drum DDS spiral freezer	Freezing from +150°F to 0°F	2,000-12,000
Soup in pots 	4" Dia. x 5.5"	21	Single drum DDS spiral freezer	Freezing from +150°F to 0°F	2,000-12,000

*Capacity figures are indications for basic estimation purpose.



frozen dairy & ice cream

The Aerofreeze ensures milk, cream, and cheese-based foods are processed at the right temperature to preserve flavor and extend shelf-life.

Precise temperature control for quality dairy

From small producers to large-scale manufacturers, we support the dairy industry with advanced solutions for chilling and freezing milk-based products. With decades of experience, we help ensure safe, hygienic, and consistent processing - every step of the way.



Whether you're producing ice cream, cheese, or yogurt, our chillers and freezers deliver precise temperature control to preserve texture, appearance, and shelf-life. Rapid and uniform freezing forms smaller ice crystals in ice cream for perfect consistency, while carefully controlled chilling protects the structure of delicate products like cheese.

Extend shelf-life. Minimize waste.

Our freezing and chilling solutions are designed to preserve product quality, extend shelf-life, and reduce food waste - all while keeping energy use and operational costs low.

Built for hygiene, our spiral systems feature fully welded floors, enclosures, and conveyors, plus a full-zone recirculating CIP system.

For extra demands, fully welded enclosures can handle 160°F heat treatment for pasteurization.

Products	Typical product dimensions L x W x H [in]	Typical product weight [oz]	Aerofreeze solution	Product treatment	Capacity range* [lb/h]
 <p>Ice cream</p>	14" x 10" x 4"	145	Double drum DDS spiral freezer	Freezing from +25°F to 0°F	3,000-15,000
 <p>Milk curds</p>	15" x 18" x 4"	335	Single drum spiral chiller	Chilling from +95°F to +40°F	3,000-10,000
 <p>Pizza cheese</p>	13" x 12" x 4"	353	Double drum spiral chiller	Chilling from +95°F to +50°F	3,000-10,000

*Capacity figures are indications for basic estimation purpose.



DSI DANTECH



modular configuration

Benefits include fast installation on site, space-saving flexibility, efficient cleaning, and reduced maintenance.

Customized to your production

DSI Dantech spiral freezers are built on a proven modular concept and can be configured to match your plant layout, capacity, and surrounding processes.

Available in standard belt widths to suit typical food applications, our freezers are tailored with the ideal turn radius, number of tiers, and belt pitch to meet your process requirements. Every design prioritizes hygiene, easy cleaning, and long-term performance.

Hygienic by design. Easy to maintain.

Our spiral freezers feature fully welded modular floors - no need for floor heating and no hidden dirt traps. Optional stainless steel enclosures are also fully welded, eliminating silicone joints and supporting the highest hygiene standards.

This design not only simplifies cleaning and reduces maintenance, but also allows for heat treatment up to 160°F when required.

Belt options



Lo-tension stainless steel



Lo-tension plastic



Direct Drive System plastic

Cleaning system options



FIP (foam-in-place)



Full recirculating cleaning system

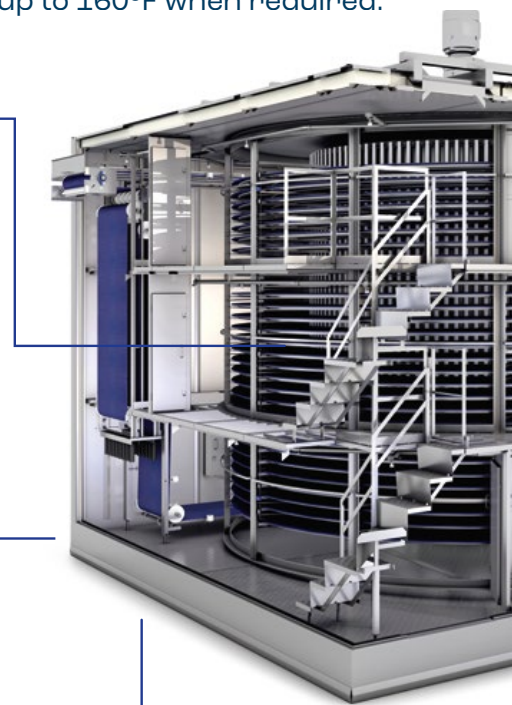
Spiral drive options



Top drive



Bottom chain drive





DSI DANTECH

Smart design for better hygiene and easy access

Our spiral freezers offer a proven external drive setup and the option for external fan motors - minimizing internal components and maximizing hygiene. This makes cleaning and maintenance easier, especially in freezers operating at -25°F.

To fit your facility, systems can be configured to meet specific height requirements and are available with either a top spiral drive or bottom chain drive.

Fan motor option



External fan motors

Frost management options



Shift defrost



Sequential defrost



Static Pressure Control System (SPCS) as standard

Enclosures options

a) GEA panels



Fully welded inside and outside

b) Regular purchased panels



White inside / White outside

Floor options



Fully welded modular as standard



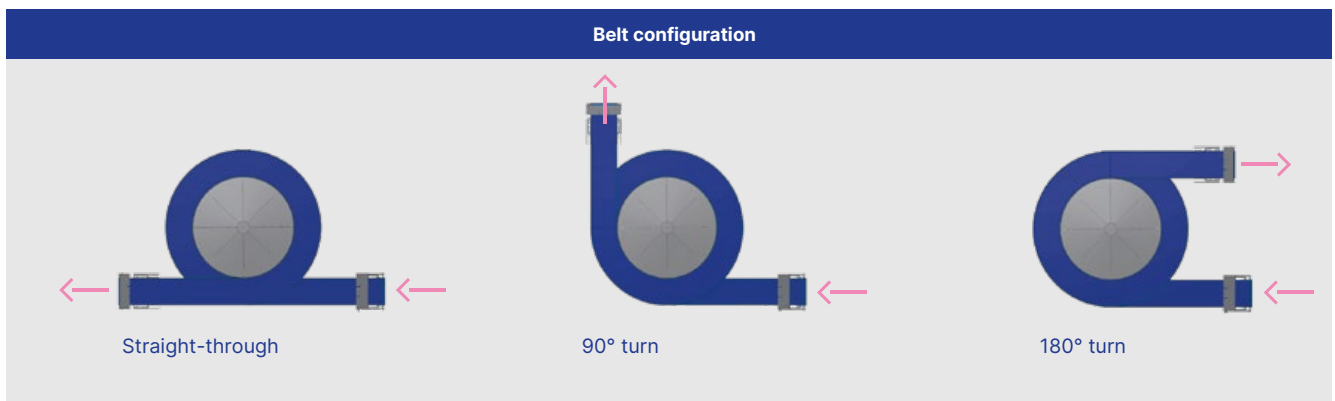
process **flow** design

Comprehensive spiral configuration options for perfect integration in your processing line.

Seamless integration with your line

Every DSI Dantech spiral freezer is configured to match your production flow, plant layout, and available space.

Infeed and outfeed orientation - as well as spiral direction - can be customized for a smooth line integration, fast installation, and minimal disruption to operations.





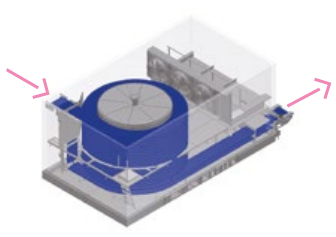
Lower total cost of ownership

DSI Dantech spiral freezers are built for long-term reliability, minimal maintenance, and energy efficiency. Our advanced evaporator design reduces power consumption, and configurable CIP systems help save water and resources.

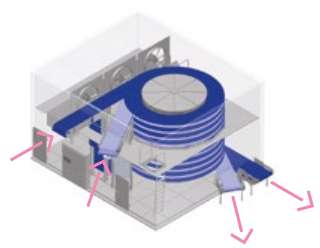
Using non-proprietary components ensures easy access to spare parts and low maintenance costs over time - making your investment cost-effective from day one and throughout the equipment's lifetime.

Drum configuration

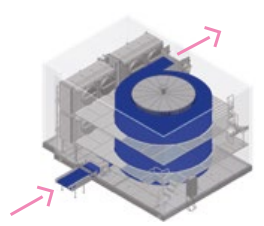
Single Drum
Down-go



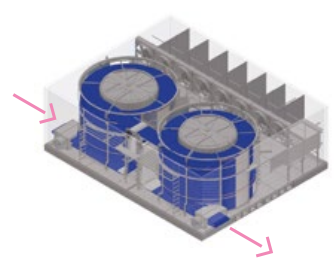
Single Drum
Twin-belt with two separate infeed lines



Single Drum
Up-go



Double Drum
Infeed and outfeed at the same level



customer **satisfaction** is our **main** objective



Where your products meet our expertise

Our application specialists are ready to test your products in one of our dedicated Technology Centers - in Denmark, France or the US. Here, you can trial a wide range of freezers and chillers under real processing conditions, with configurable air temperature and airflow settings.

We offer hands-on training, tailored product testing, and detailed data analysis to help you define the optimal process setup. Need on-site testing? We can ship equipment directly to your facility for full-scale trials in your own production environment.

DSI Dantech **service** – built around your **performance**

Where your products meet our expertise

We support you through the entire lifecycle of your equipment - from installation to optimization. Our service team is committed to maximizing uptime, product quality, and return on investment.

Start strong

We get your equipment up and running with smooth commissioning and operator training for instant productivity.

Keep it running

Our preventive maintenance and spare parts programs help ensure long-term safety, reliability, and cost-efficiency.

Extend performance

We share our knowhow to help you optimize operations, reduce downtime, and get even more from your equipment.

Partner for the future

We work closely with you to continuously improve your processes and safeguard your investment.

When you choose DSI Dantech service, you partner with a dedicated team of experts focused on your success.





DSI DANTECH

We combine world-class thermal technology with decades of expertise to deliver freezing solutions that enhance food quality, increase efficiency, and reduce environmental impact.

- One supplier, all freezing, cooling, and heating technologies
- Only supplier, that can freeze all foods
- Industry-leading innovation backed by real-world results
- Sustainability & energy savings that improve your bottom line

Ready to optimize your food processing? Let's talk about your freezing opportunities today.

DSI Dantech A/S
Speditørvej 1-3
9000 Aalborg
Denmark

dsidantech.com/contact
phone +45 98 86 42 99
info@dsidantech.com