

Freezing - Cooling - Chilling - Drying - Proofing - Steaming

The most innovative solutions for all further processed products.

We're with you, right down the line.™



# Patented technologies that provide processors with top-notch equipment from the leaders in freezing

For over 50 years, JBT has mastered the freezing, cooling, chilling, drying, proofing and steaming categories and continues to innovate with our full line of products. Our Frigoscandia and Northfield lines have shaped today's frozen food markets by inventing breakthrough technologies, such as the self-stacking spiral freezer, the top-selling freezer in the world. In this brochure, you will find the complete line of products offered by JBT in these categories. These product lines help processors produce quality, consistency and longevity for their dairy, bakery, protein and grain based products. We stand by the reliability and payback of our products and invite food processors to test new food products and simulate runs on many of the machines shown at our Tech Center in Sandusky, OH. Portioning, cooking, coating and frying solutions are also available for testing at the Tech Center.

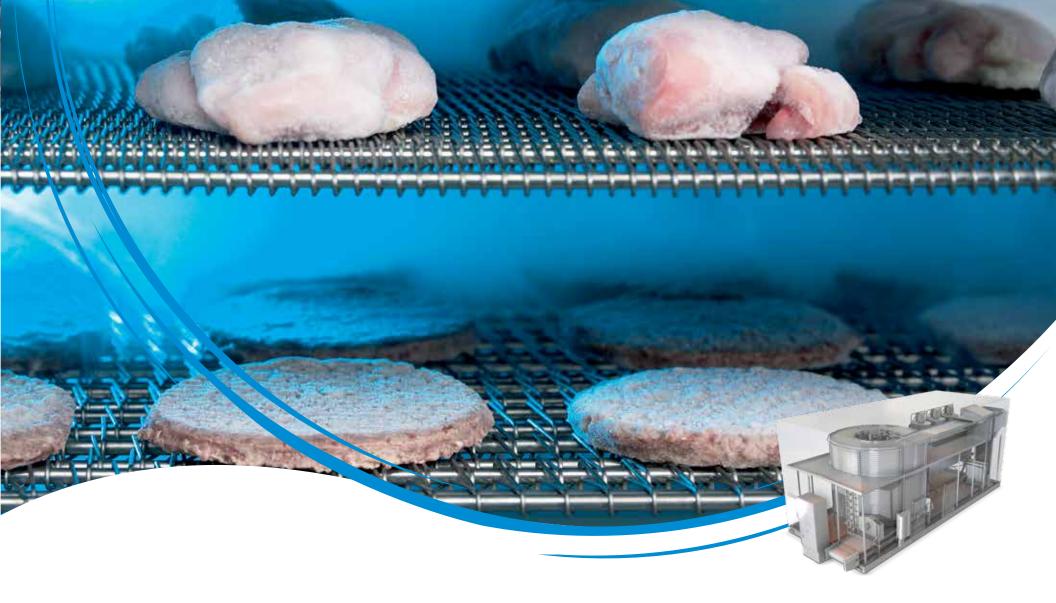
To reserve time at the Tech Center, call 419 627 4319 or talk to your JBT Account Representative.



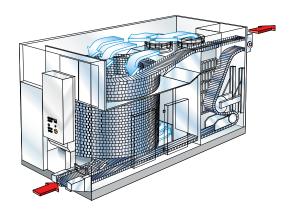
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#### **Self-Stacking Spiral Systems**



#### Frigoscandia GYRoCOMPACT® Classic 400

An entry-level, pre-built, fully assembled spiral freezing system utilizing a self-stacking belt with unparalleled product zone hygiene in a vertical down airflow configuration.

#### Designed For:

Freezing and chilling food products, both packaged and IQF, including dairy, grain based and protein items.

#### **Key Features:**

- Self-stacking stainless steel mesh belt
- Counter Clockwise (CCR) belt rotation
- Pre-assembled enclosure and belt drive for simplified installation and start up
- Caulked enclosure panels
- Fully seam-welded stainless steel floor
- Tube and fin heat exchanger
- Adjustable belt speed
- Vertical airflow with counter current heat transfer

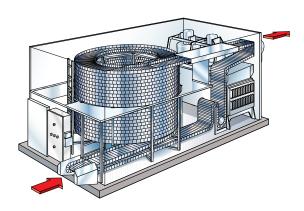
#### Options:

- Available with multiple belt options:
  - Two vertical side link heights
  - Two belt lengths (no. of tiers)
  - Mesh belt sizes
- Straight through or U-shaped layout
- Enameled or stainless steel finish caulked enclosure panels
- Air Defrost (ADF) system
- High-hygiene evaporator coil in two heat exchanger sizes
- A patented low volume refrigerant feed (LVS) system is also available

#### Capacity/Size Range:

The Classic 400 has a 14.8 in. wide usable belt, capable of freezing or chilling up to 1750 lbs. per hour dependent on product and application.





#### Frigoscandia GYRoCOMPACT® Classic 600

An entry level, modular design, spiral freezing system utilizing a self-stacking belt with unparalleled product zone hygiene in a vertical down airflow configuration.

#### **Designed For:**

Freezing and chilling food products, both packaged and IQF, including dairy, grain based and protein items.

#### **Key Features:**

- Self-stacking stainless steel mesh belt
- Counter Clockwise (CCR) belt rotation
- Modular stainless steel floor and belt drive
- Caulked enclosure panels
- Tube and fin heat exchanger
- Adjustable belt speed
- Vertical airflow with counter current heat transfer

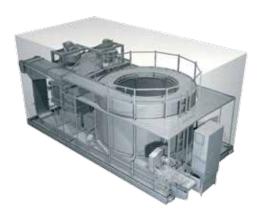
#### Options:

- Available with multiple belt options:
  - Four different belt lengths (no. of tiers)
  - Mesh belt sizes
- Straight through or U-shaped layout
- Enameled or stainless steel finish caulked enclosure panels
- Clean in Place (CIP) system
- Air Defrost (ADF) system
- High-hygiene evaporator coil and two heat exchanger sizes
- A patented low volume refrigerant (LVS) feed system is also available

#### Capacity/Size Range:

The Classic 600 has a 24.2 in. usable belt, capable of freezing or chilling up to 4400 lbs. per hour dependent on product and application.

#### **Self-Stacking Spiral Systems**



#### Frigoscandia GYRoCOMPACT® M6

A flexible and fully featured modular design, self-stacking belt spiral freezing and chilling system utilizing the new patented FRIGoBELT® Nova belt for unparalleled performance and product zone hygiene in a vertical down airflow configuration.

#### Designed For:

Freezing, chilling and steaming food products, both packaged and IQF, including dairy, grain based and protein items.

#### **Key Features:**

- Self-stacking stainless steel mesh belt
- Clockwise (CR) or Counter Clockwise (CCR) belt rotation
- Modular stainless steel floor and belt drive
- Caulked enclosure panels
- Tube and fin heat exchanger
- Vertical airflow with counter current heat transfer

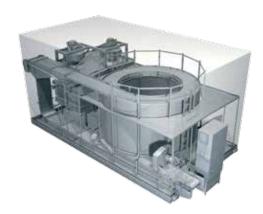
#### Options:

- Available with multiple belt options:
  - Vertical side link heights (tier height)
  - Belt lengths (no. of tiers)
  - Mesh belt sizes
- Straight through, U-shaped and angled belt layouts are available
- Enameled or stainless steel finish caulked enclosure panels
- Fully seam-welded stainless steel enclosure
- Clean in Place (CIP) system
- Air Defrost (ADF) system
- Steam in freezer
- Stainless steel motors
- High-hygiene evaporator coil and multiple heat exchanger sizes
- A patented low volume refrigerant (LVS) feed system

#### Capacity/Size Range:

The GYRoCOMPACT M6 has a 24.2 in. usable belt, 16-40+ tiers and belt speeds up to 100+ fpm. It is capable of freezing or chilling up to 4800 lbs. per hour dependent on product and application.





#### Frigoscandia GYRoCOMPACT® M7

A flexible and fully featured modular design, self-stacking belt spiral freezing and chilling system utilizing the new patented FRIGoBELT® Nova belt for unparalleled performance and product zone hygiene in a vertical down airflow configuration.

#### Designed For:

Freezing, chilling and steaming food products, both packaged and IQF, including dairy, grain based and protein items.

#### **Key Features:**

- Self-stacking stainless steel mesh belt
- Clockwise (CR) or Counter Clockwise (CCR) belt rotation
- Modular stainless steel floor and belt drive
- Caulked enclosure panels for ease of installation and start up
- Tube and fin heat exchanger
- Vertical airflow with counter current heat transfer

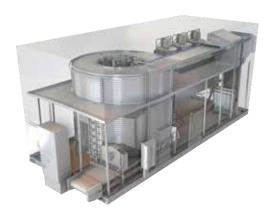
#### Options:

- Available with multiple belt options:
  - Vertical side link heights (tier height)
  - Belt lengths (no. of tiers)
  - Mesh belt sizes
- Straight through, U-shaped and angled belt layouts are available
- Enameled or stainless steel finish caulked enclosure panels
- Fully seam-welded stainless steel enclosure
- Clean in Place (CIP) system
- Seguential defrost
- Air Defrost (ADF) system
- Steam in freezer
- Stainless steel motors
- High-hygiene evaporator
- Multiple heat exchanger sizes and number of fans
- A patented low volume refrigerant feed (LVS) system

#### Capacity/Size Range:

The GYRoCOMPACT M7 has a 28.2 in. wide usable belt, 16-40+ tiers and belt speeds up to 100+ fpm. It is capable of freezing or chilling up to 7700 lbs. per hour dependent on product and application.

#### **Self-Stacking Spiral Systems**



## Frigoscandia GYRoCOMPACT® M10 Tight Curve

A flexible and fully featured modular design, self-stacking spiral belt freezing and chilling system utilizing FRIGoBELT® wide belt for unparalleled performance and product zone hygiene in a vertical down airflow configuration in a narrow footprint.

#### Designed For:

Freezing and chilling food products, both packaged and IQF, including dairy, grain based and protein items.

#### **Key Features:**

- Self-stacking stainless steel mesh belt
- Clockwise (CR) or Counter Clockwise (CCR) belt rotation
- Modular stainless steel floor and belt drive
- Caulked enclosure panels for ease of installation and start up
- Tube and fin heat exchanger
- Vertical airflow with counter current heat transfer

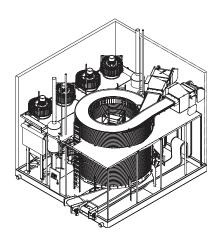
#### Options:

- Available with multiple belt options:
  - Vertical side link heights (tier height)
  - Belt lengths (no. of tiers)
  - Mesh belt sizes
- Straight through, U-shaped and angled belt layouts are available
- Enameled or stainless steel finish caulked enclosure panels
- Fully seam-welded stainless steel enclosure
- Clean in Place (CIP) system
- Sequential defrost
- Air Defrost (ADF) system
- Steam in freezer
- Stainless steel motors
- High-hygiene evaporator coil
- Multiple heat exchanger sizes and number of fans
- A patented low volume refrigerant feed (LVS) system

#### Capacity/Size Range:

The GYRoCOMPACT M10 TC has a 40 in. usable belt, 19-45+ tiers and belt speeds up to 75+ fpm. It is capable of freezing or chilling up to 8500 lbs. per hour dependent on product and application.





## Frigoscandia GYRoCOMPACT® M8 Twin Belt

A flexible and fully featured modular design, self-stacking twin (duplex) belt spiral freezing and chilling system utilizing the FRIGoBELT® spiral belt for unparalleled performance and product zone hygiene in a vertical down airflow configuration.

#### **Designed For:**

Freezing and chilling food products, both packaged and IQF, including dairy, grain based and protein items. A primary protein application incorporates two raw hamburger processing lines into one spiral freezer.

#### **Key Features:**

- Twin (duplex) self-stacking stainless steel mesh belt
- Counter Clockwise (CCR) belt rotation
- Stainless steel floor and belt drive
- Caulked enclosure panels for ease of installation and start up
- Tube and fin heat exchanger
- Vertical airflow with counter current heat transfer

#### Options:

- Available with multiple belt options:
  - Vertical side link heights (tier height)
  - Belt lengths (no. of tiers)
  - Mesh belt sizes
- Enameled or stainless steel finish caulked enclosure panels
- Single belt version is available
- Fully seam-welded stainless steel enclosure
- Clean in Place (CIP) system
- Air Defrost (ADF) system
- Steam in freezer
- Stainless steel motors
- High-hygiene evaporator coil and multiple heat exchanger sizes
- A patented low volume refrigerant feed (LVS) system

#### Capacity/Size Range:

The GYRoCOMPACT M8 Twin Belt has a 29.7 in. wide usable belt, 16-50+ tiers and belt speeds up to 145+ fpm. It is capable of freezing or chilling up to 8600 lbs. per hour on the twin belt version dependent on product and application.

#### **Self-Stacking Spiral Systems**



#### Frigoscandia GYRoCOMPACT® M9

A flexible and fully featured modular design, self-stacking spiral belt freezing and chilling system utilizing FRIGoBELT® wide belt for unparalleled performance and product zone hygiene in a vertical down airflow configuration.

#### Designed For:

Freezing, chilling, drying and proofing food products, both packaged and IQF, including dairy, grain based and protein items.

#### **Kev Features:**

- Self-stacking stainless steel spiral mesh belt
- Clockwise (CR) and Counter Clockwise (CCR) belt rotation
- Stainless steel floor and belt drive
- Caulked enclosure panels for ease of installation and start up
- Tube and fin heat exchanger
- Vertical airflow with counter current heat transfer

#### Options:

- Available with multiple belt options:
  - Vertical side link heights (tier height)
  - Total belt lengths (no. of tiers)
  - Mesh belt sizes
- Straight through, U-shaped and angled belt layouts are available
- Enameled or stainless steel finish caulked enclosure panels
- Fully seam-welded stainless steel enclosure
- Clean in Place (CIP) system
- Seguential defrost
- Air Defrost (ADF) system
- Steam in freezer
- Stainless steel motors
- High-hygiene evaporator coil
- Multiple heat exchanger sizes and number of fans
- Optional layouts include:
  - Descending stack
  - Twin stack/double spiral
- A patented low volume refrigerant feed (LVS) system

#### Capacity/Size Range:

The GYRoCOMPACT M9 has a 34.5 in. wide usable belt, 13-40+ tiers and belt speeds up to 130+ fpm. It is capable of freezing or chilling up to 11300 lbs. per hour dependent on product and application.





#### Frigoscandia GYRoCOMPACT® M10

A flexible and fully featured modular design, self-stacking spiral belt freezing and chilling system utilizing FRIGoBELT® wide belt for unparalleled performance and product zone hygiene in a vertical down airflow configuration.

#### Designed For:

Freezing, chilling, drying and proofing food products, both packaged and IQF, including dairy, grain based and protein items.

#### **Key Features:**

- Self-stacking stainless steel spiral mesh belt
- Clockwise (CR) and Counter Clockwise (CCR) belt rotation
- Stainless steel floor and belt drive
- Caulked enclosure panels for ease of installation and start up
- Tube and fin heat exchanger
- Vertical airflow with counter current heat transfer

#### Options:

- Available with multiple belt options:
  - Vertical side link heights (tier height)
  - Total belt lengths (no. of tiers)
  - Mesh belt sizes
- Straight through, U-shaped and angled belt layouts are available
- Enameled or stainless steel finish caulked enclosure panels
- Fully seam-welded stainless steel enclosure
- Clean in Place (CIP) system
- Sequential defrost
- Air Defrost (ADF) system
- Steam in freezer
- Stainless steel motors
- High-hygiene evaporator coil
- Multiple heat exchanger sizes and number of fans
- Optional layouts include:
  - Descending stack
  - Twin stack/double spiral
- A patented low volume refrigerant feed (LVS) system is also available

#### Capacity/Size Range:

The GYRoCOMPACT M10 has a 40 in. wide usable belt, 13-40+ tiers and belt speeds up to 130+ fpm. It is capable of freezing or chilling up to 15700 lbs. per hour dependent on product and application.

#### **Structure-Supported Spirals**



#### Northfield SuperTRAK®

A fully flexible, robust design, track-supported spiral freezing and chilling system with a wide range of belt options.

#### **Designed For:**

Freezing, chilling, drying and proofing food products, both packaged and IQF, including dairy, grain based and protein items. Ideal for tall products and heavy belt loads.

#### **Key Features:**

- Stainless steel or plastic belt options
- Clockwise (CR) and Counter Clockwise (CCR) belt rotation
- Fully seam-welded stainless steel floor
- Direct drum (cage) drive
- Caulked enclosure panels for ease of installation and start up
- Tube and fin heat exchanger

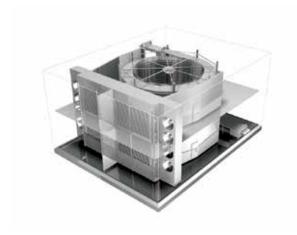
#### Options:

- Available with infinite design combinations:
  - Tier pitch (height between tiers)
  - Belt lengths (no. of tiers)
  - Usable belt widths
  - Belting material options
- Multiple heat exchanger sizes and number of fans
- Enameled or stainless steel finish caulked enclosure panels
- Fully seam-welded stainless steel enclosure
- Clean in Place (CIP) system
- Sequential defrost
- Air Defrost (ADF) system
- High-hygiene evaporator coil
- Optional layouts include:
- Descending stack
- Double spiral/twin stack
- Duplex/twin belt
- Optional airflows include:
  - Horizontal, over/under
  - Vertical up flow or down flow
  - Double vertical up and down flow
- A patented low volume refrigerant feed (LVS) system is also available

#### Capacity/Size Range:

The Northfield SuperTRAK® is available with usable belt widths from 12 to 48 in., 5 - 35+ tiers and belt speeds up to 130+ fpm. It is custom designed to meet a wide range of capacity and application requirements.





#### Northfield Large Spiral Technology (L.S.T.)

A fully flexible, ultra-robust design, track-supported spiral freezing and chilling system with a wide range of belt options.

#### Designed For:

Freezing, chilling, drying and proofing food products, both packaged and IQF, including dairy, grain based and protein items. Ideal for tall products, heavy belt loads and high capacity requirements where extreme belt drive torque is required.

#### **Key Features:**

- Stainless steel or plastic belt options
- Clockwise (CR) or Counter Clockwise (CCR) belt rotation
- Fully seam-welded stainless steel floor
- Offset gear motor chain drive
- Caulked enclosure panels for ease of installation and start up
- Tube and fin heat exchanger

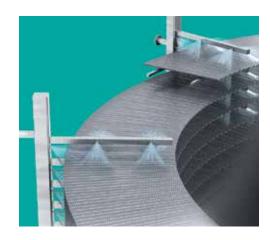
#### Options:

- Available with infinite design combinations:
  - Tier pitch (height between tiers)
  - Belt lengths (no. of tiers)
  - Usable belt widths
  - Belting material options
- Multiple heat exchanger sizes and number of fans
- Enameled or stainless steel finish caulked enclosure panels
- Fully seam-welded stainless steel enclosure
- Clean in Place (CIP) system
- Sequential defrost
- Air Defrost (ADF) system
- High-hygiene evaporator
- Optional layouts include:
- Descending stack
- Double spiral/twin stack
- Duplex/twin belt
- Optional airflows include:
  - Horizontal, over/under
  - Vertical up flow or down flow
  - Double vertical/up flow and down flow
- Optional patented low volume refrigerant feed (LVS) system is also available

#### Capacity/Size Range:

The Northfield Large Spiral Technology is available with usable belt widths from 24 to 60 in., 5 - 35+ tiers and belt speeds up to 130+ fpm. It is custom designed to meet a wide range of capacity and application requirements.

#### **Structure-Supported Spirals**



#### Northfield AquaTRAK™ Spiral Chilling System

A fully flexible robust design, track-supported spiral water chilling system with a wide range of belt options.

#### **Designed For:**

Chilling a wide range of packaged products. Ideal for large products and heavy belt loads.

#### **Key Features:**

- Stainless steel or plastic belt options
- Clockwise (CR) and counter clockwise (CCR) belt rotation
- Fully seam-welded stainless steel floor
- Direct drum or offset chain drive
- Caulked enclosure panels for ease of installation and start up

#### Options:

- Available with infinite design combinations:
  - Tier pitch (height between tiers)
  - Belt lengths (no. of tiers)
  - Usable belt widths
  - Belting material options
- Enameled or stainless steel finish caulked enclosure panels
- Fully seam-welded stainless steel enclosure
- Clean in Place (CIP) system
- Optional layouts include:
  - Descending stack
  - Double spiral/twin stack
  - Duplex/twin belt

#### Capacity/Size Range:

The Northfield AquaTRAK is available with usable belt widths from 12 to 60 in., 5 - 35+ tiers and belt speeds up to 75+ fpm. It is custom designed to meet a wide range of capacity and applications requirements.





#### **Northfield Ambient Spiral Cooler**

A fully flexible robust design, track-supported spiral belt ambient air cooling system with a wide range of belt options.

#### **Designed For:**

Ambient cooling of a wide range of bakery products.

#### **Key Features:**

- Stainless steel or plastic belt options
- Clockwise (CR) or counter clockwise (CCR) belt rotation
- Fully seam-welded stainless steel floor
- Direct drum or offset chain drive

#### Options:

- Available with infinite design combinations:
  - Tier pitch (height between tiers)
  - Belt lengths (no. of tiers)
  - Usable belt widths
  - Belting material options
- Optional layouts include:
  - Descending
  - Double spiral/twin stack
  - Duplex/twin belt

#### Capacity/Size Range:

The Northfield Ambient Spiral Cooler is available with usable belt widths from 12 to 60 in., 5 - 35+ tiers and belt speeds up to 100+ fpm. It is custom designed to meet a wide range of capacity and application requirements.

## **Spiral Freezer Options and Sizes**

		Freezer Styl	le	Usable Belt W	idth (in.)	Std. Belt Speed	(ft./min.)	Residence Time	(min.)*	Per Tier			General S	Specifications				60mm	Link Height		
Standard Optional N/A Not Applicable	Self-Stackin	Structure. Supporte.	Minim	Maximum	Min	Maximum	Minic	Meximum	Length (ft.)	$A_{\text{rea}}(R,2)$	Product Clearance Heistance	Minimum Ti.	Minimum Belt Length (#)	Maximum Tie	Maximum Length (#, Belt	Product Clearance Heich	Minimum T.	Minimum Belt	Maximum	Maximum Belt	Product Clearance Heisance
Equipment	Equipment																				
GYRoCOMPACT Classic 400	4		N/A	14.8	6.6	59	8.3	111.5	22.3	22.6	N/A	N/A	N/A	N/A	N/A	1.75	23	512.9	33	735.9	N/A
GYRoCOMPACT Classic 600	4		N/A	23.8	11.5	98.4	9.0	134	36.7	61.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.5
GYROCOMPACT M6	4		N/A	24.3	11.5	98.4	6.0	128.7	37	61	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.5
GYRoCOMPACT M7	4		N/A	28.1	11.5	98.4	7	149.6	43	83	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.5
GYRoCOMPACT M8 Twin Belt	4		N/A	29.7	14.8	147.6	5.0	155.1	45.9	94.2	N/A	N/A	N/A	N/A	N/A						2.5
GYRoCOMPACT M10 Tight Curve	4		N/A	40	11.5	75.5	8.3	128.3	32.8	107.64	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.5
GYRoCOMPACT M9	4		N/A	34.5	11.5	98.4	7.7	203.1	58.4	141.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.5
GYRoCOMPACT M10	4		N/A	40	11.5	98.4	8.9	233.9	67.25	188.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.5
SuperTRAK		4	12	48	6.1	125	Calc.	Calc.	Calc.	Calc.	4.5-20	4	Calc.	48	Calc.	N/A	N/A	N/A	N/A	N/A	N/A
Large Spiral Technology (L.S.T.)		4	24	60	6.1	125	Calc.	Calc.	Calc.	Calc.	5.5-20	4	Calc.	59	Calc.	N/A	N/A	N/A	N/A	N/A	N/A
AquaTRAK		4	12	60	6.1	75	Calc.	Calc.	Calc.	Calc.	4.5-20	4	Calc.	48	Calc.	N/A	N/A	N/A	N/A	N/A	N/A
Ambient Cooler		4	12	60	6.1	100	Calc.	Calc.	Calc.	Calc.	4.5-20	4	Calc.	59	Calc.	N/A	N/A	N/A	N/A	N/A	N/A

<sup>\*</sup> Based on maximum and minimum number of tiers (total belt length) and standard minimum and maximum belt speeds.



						Tier P	itch (Height)																
	80mm Link Height 90mm Link Height					100mm Link Height						120mn			150mm Link Height								
Minimum T.	Minimum Belt	Maximum T	Maximum Length C. Belt	Product Clearing Hollestern	Minimum 7:	Minimum Length C. Belt	Maximum T.	Maximum Belt	Product Clearance Heistrance	Minimum Tr.	Minimum Bett	Maximum T.	Maximum Belt	Product Cleaner Tological	Minimum Ti.	Minimum Bett	Maximum T:	Maximum Belt	Product Clearance Heici ance	Minimum T.	Minimum Belt	Maximum Ti	Maximum Length (ft.)
N/A	N/A	N/A	N/A	3	22	490.6	22	490.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
24	881	42	1541	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
17	629	40	1480	N/A	N/A	N/A	N/A	N/A	3.375	16	592	40	1480	4.125	16	592	40	1480	N/A	N/A	N/A	N/A	N/A
16	688	40	1720	N/A	N/A	N/A	N/A	N/A	3.375	16	688	40	1720	4.125	16	688	40	1720	N/A	N/A	N/A	N/A	N/A
23	1056	50	2295						3.375	19	872	45	2065.5	4.125	16	734.4	40	1836					
27	886	45	1476	N/A	N/A	N/A	N/A	N/A	3.175	22	722	40	1312	4	19	623.2	35	1148	N/A	N/A	N/A	N/A	N/A
23	1343	40	2336	N/A	N/A	N/A	N/A	N/A	3.375	19	1110	40	2336	4.125	16	934.4	40	2336	5.375	13	759.2	37	2160.8
23	1547	40	2690	N/A	N/A	N/A	N/A	N/A	3.375	19	1278	40	2690	4.125	16	1076	40	2690	5.375	13	874.3	35	2353.8
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

#### **Spiral Freezer Options and Sizes**

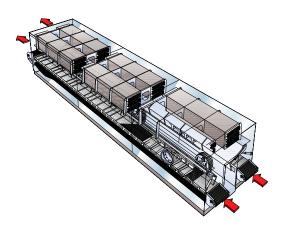




# Linear Freezing Systems

## Linear Freezing Systems

#### **Impingement Freezing Systems**



#### Frigoscandia Flat Products Freezer

A fully modular design, linear impingement freezing system for unparalleled performance and product zone hygiene in a double vertical high velocity impingement airflow configuration.

#### **Designed Specifically For:**

Freezing two raw hamburger processing lines into one freezer replacing the need for high-cost cryogenic gas systems.

#### **Key Features:**

- Dual parallel stainless steel mesh belts
- Stainless steel floor and belt drive
- Internally-welded stainless steel enclosure panels
- Stainless steel tube and aluminum fin heat exchanger
- Pre-manufactured modules for quick installation and start up
- Includes a patented low volume refrigerant feed (LVS) system

#### Options:

- Available with a minimum of two to a maximum of eight modules
- Stainless steel finish caulked panels
- Integrated wash down system
- Frost management/extended run time package
- Available with extremely low temperature (ELT 100° F) refrigeration system

#### Capacity/Size Range:

The Frigoscandia Flat Products Freezer (FPF) has an effective impingement zone of 13.55 ft. per module, with a minimum impingement zone of 27.1 ft. and a maximum of 108.1 ft. It has a usable belt width of 27.5 in. per each belt, with belt speeds up to 75+ fpm. The FPF accepts the output of two separate patty formers and is capable of freezing up to 16000 lbs. per hour of hamburger patties (2000 lbs. per hour per module).



#### Frigoscandia ADVANTEC™ 1250, 1850 & Compact Chiller (CC)

A fully modular design, linear impingement freezing system for unparalleled performance and product zone hygiene in a double vertical high velocity impingement airflow configuration.

#### **Designed Specifically For:**

Quick complete freezing or crust freezing of thin products. Including, but not limited to, crust freezing of raw chicken and completely freezing egg patties.

#### **Key Features:**

- Stainless steel mesh belt
- Stainless steel floor and belt drive
- Insulated stainless steel enclosure panels
- Stainless steel tube and aluminum fin heat exchanger
- Pre-manufactured modules for quick installation and start up

#### Options:

- ADVANTEC 1250: A single 48 in. or dual 23.5 in. parallel stainless steel mesh belt
- ADVANTEC 1850: A single 69 in. belt or dual 34.25 in. parallel stainless steel mesh belts
- ADVANTEC CC: Plug-and-play in-line chiller for small and mid-sized processors
- Available with one to four modules
- Stainless steel finish caulked panels
- Integrated wash down system
- Frost management/extended run time package
- Includes a patented low volume refrigerant feed (LVS) system

#### Capacity/Size Range:

The Frigoscandia ADVANTEC has an effective impingement zone of 15.5 ft. per module with a maximum of 62 ft. and belt speeds up to 80+ fpm. It is custom designed to meet a wide range of capacity and application requirements.



#### **Contact Freezing Systems**



#### Northfield SuperCONTACT® Contact Freezer

A linear, fully modular, contact crust freezing system utilizing a disposable film conveyor. Surface or crust freezing is achieved by contact with a refrigerated plate.

#### Designed For:

Crust freezing the bottom of a variety of soft and sticky items prior to the full freezing step, to improve material handling, yield and minimize mesh belt marks.

#### **Key Features:**

- Disposable film makes the conveyor system ultra-hygienic
- Simplified installation and start up
- Stainless steel frame

#### Options:

- Available in multiple widths and lengths
- Top air assist to crust freeze top of product

#### Capacity/Size Range:

The Northfield SuperCONTACT is available in usable belt widths of 36 and 42 in. with a 10 ft. module length, and 72 in. belt widths with a 14 ft. module length. It has a crust freezing capacity ranges up to 10000+ lbs. per hour dependent on product.

## Linear Freezing Systems

#### **Tray Pack Freezing System**

#### Northfield Trolley Freeze™

A low cost linear air blast freeze tunnel, utilizing horizontal air flow, with a specialized conveyance system for handling wheeled trolleys loaded with tray packed products.

#### **Designed Specifically For:**

Crust freezing tray packed poultry.

#### **Key Features:**

- Eliminates batch freezing process and minimizes labor
- Semi-automated system
- Hydraulically driven

#### Options:

- Galvanized or stainless steel construction
- Multiple lane options and number of modules

#### Capacity/Size Range:

The Northfield Trolley Freeze is available with widths of one to four lanes and freezing tunnel lengths in module lengths of 15 ft.



#### Fluidized Bed Freezing Systems



#### Frigoscandia FLoFREEZE®

A linear fluidized bed IQF freezing tunnel.

#### Designed For:

Fast freezing of raw fruits and vegetables that demand a very high IQF (individually quick frozen) quality appearance.

#### **Key Features:**

- Air Defrost (ADF) system
- Vertical up flow air flow configuration
- Modular stainless steel floor and belt drive
- Caulked enclosure panels for ease of installation and start up
- Tube and fin heat exchanger

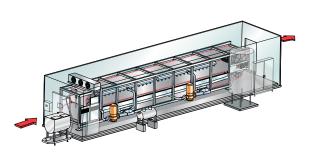
#### Options:

- Sequential defrost
- Fully seam-welded stainless steel enclosure
- Stainless steel tray or plastic belt.
- Optional features include the ability to agitate or pulse product in the product zone

#### Capacity/Size Range:

The Frigoscandia FLoFREEZE is custom designed to meet a wide range of capacity requirements up to 33000 lbs. per hour of IQF peas.

#### **Liquid/Semi-Liquid Pellet Freezing Systems**



#### Frigoscandia PELLoFREEZE®

A linear contact freezer which converts liquid or semi liquid products to solid pellets.

#### Designed For:

Fully freezing a wide variety of sauce, fruit pulps and puree type products.

#### **Key Features:**

- High-capacity, one size fits all applications
- Stainless steel product contact surfaces

#### Options:

Galvanized or stainless steel construction

#### Capacity/Size Range:

The Frigoscandia PELLoFREEZE enclosure is 58 ft. long, 13.5 ft. wide and 11.7 ft. tall. It has capacity capabilities up to 7700 lbs. per hour of spinach sauce pellets.

## Linear Freezing Systems

#### **Linear Freezer Options and Sizes**

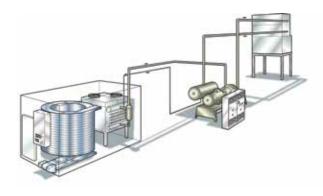
inear Freezer	Options and	Sizes																		
				Usab	le Belt Wid	lth	Standar	d Belt					Usable Le	ngth (ft.) (e	ffective)					Maximum 1
				Proc	luct Path (ir	n.)	Spee	ed					Numb	er of Modu	iles					Product I
N/A Not Applicable  * Varies by No. of Modules			Number	1X (in.)	2X (in.)	Minimum	Maximum (ft./	('illin')	7.5	~	2.5	~ ~	3.5	\\ \	\/ v <sub>2</sub>	9	/^	<b>O</b>	Stands	Optional C
Equipment	Freezer Style	Belt Material																		
Frigoscandia Flat Products Freezer M	Impingement	Stainless Mesh	2		27.6	11.5 *	65.5 *			27.1		40.7		54.2	67.8	81.3	94.9	108.4	2.0	TBD
Frigoscandia ADVANTEC 1250-1	Impingement	Stainless Mesh	1	48.0		1.0 *	79.0 *	15.5	22.9	31.0	38.4	46.5		62.0					1.4	7.9
Frigoscandia ADVANTEC 1250-2	Impingement	Stainless Mesh	2		23.5	1.0 *	79.0 *	15.5	22.9	31.0	38.4	46.5		62.0					1.4	7.9
Frigoscandia ADVANTEC 1800-1	Impingement	Stainless Mesh	1	69.8		1.0 *	79.0 *	15.5	22.9	31.0	38.4	46.5		62.0					1.4	7.9
Frigoscandia ADVANTEC 1800-2	Impingement	Stainless Mesh	2		34.2	1.0 *	79.0 *	15.5	22.9	31.0	38.4	46.5		62.0					1.4	7.9
Frigoscandia ADVANTEC CC 15-1	Impingement	Stainless Mesh	1	48.0		0.5	7.3	4.9											1.4	7.9
Frigoscandia ADVANTEC CC 15-2	Impingement	Stainless Mesh	2		23.4	0.5	7.3	4.9											1.4	7.9
rigoscandia ADVANTEC CC 18-1	Impingement	Stainless Mesh	1	48.0		0.5	7.3	5.9											1.4	7.9
rigoscandia ADVANTEC CC 18-2	Impingement	Stainless Mesh	2		23.4	0.5	7.3	5.9											1.4	7.9
rigoscandia ADVANTEC CC 21-1	Impingement	Stainless Mesh	1	48.0		0.5	7.3	6.9											1.4	7.9
rigoscandia ADVANTEC CC 21-2	Impingement	Stainless Mesh	2		23.4	0.5	7.3	6.9											1.4	7.9
rigoscandia PRoFREEZE -48	Contact/Crust Freezer	Teflon®	1	31.5		6.5	98.4	15.75											3.1	TBD
rigoscandia PRoFREEZE -72	Contact/Crust Freezer	Teflon®	1	31.5		6.5	98.4	23.6											3.1	TBD
rigoscandia PRoFREEZE -72	Contact/Crust Freezer	Teflon®	1	41.7		6.5	98.4	23.6											3.1	TBD
Frigoscandia PRoFREEZE -108	Contact/Crust Freezer	Teflon®	1	41.7		6.5	98.4	35.4											3.1	TBD
Northfield SuperCONTACT - SC 36	Contact/Crust Freezer	Disposable Film	1	36		•		10.0	15.0	20.0	25.0	30.0	35.0	40.0					N/A	N/A
Northfield SuperCONTACT - SC 42	Contact/Crust Freezer	Disposable Film	1	42				10.0	15.0	20.0	25.0	30.0	35.0	40.0					N/A	N/A
Northfield SuperCONTACT - SC 72	Contact/Crust Freezer	Disposable Film	1	72		•	•	14.0		28.0		42.0		56.0					N/A	N/A
orthfield Trolley Freeze	Tray Pack Crust Freezer	Variable	3	N/A				15		30		45		60	75	90	105		4.5	9.0
rigoscandia PELLoFREEZE	Liquid - Semi Liquid Pellet Freezer	Stainless Steel	1	N/A		•	•	49.0											0.32	N/A
rigoscandia FLoFREEZE - FF M	Fluidized Bed	Plastic	2	47.3				20.4		32.4		44.4		56.3		68.3			N/A	N/A
rigoscandia FLoFREEZE - FF A 10	Fluidized Bed	Plastic	2	23.6			٠	9.5											N/A	N/A
rigoscandia FLoFREEZE - FF A 20	Fluidized Bed	Plastic	2	29.5				15.1											N/A	N/A
rigoscandia FLoFREEZE - FF A 30	Fluidized Bed	Plastic	2	35.4			•	18.9											N/A	N/A
rigoscandia FLoFREEZE - FF A 40	Fluidized Bed	Plastic	2	35.4				23.8											N/A	N/A



# Refrigeration Systems & Accessories

## Refrigeration Systems & Accessories

#### **Ammonia Refrigeration System**



#### **FRIGoPAK®**

A compact refrigeration system complete with a screw compressor unit with oil cooler, refrigerant sub-cooler, an evaporative condenser, a high-pressure receiver, a non-condensable purger and compressor protection vessel.

#### Designed For:

Supporting freezing and chilling systems by supplying and managing refrigerant to and from freezing and chilling equipment, including but not limited to all lines of JBT spiral and linear freezing systems with a wide range of capacities.

#### **Key Features:**

- Skid built
- Sub-cooled liquid feed
- Variable frequency drive control on condenser
- Capacity control on compressor
- Horizontal vessels and thermosyphon oil cooling
- Single stage compression

#### Options:

- Field-built systems
- Vertical vessels
- Liquid injection oil cooling
- Pumped liquid feed
- Two-stage compression
- A patented low volume refrigerant feed (LVS) system
- Hot gas supply
- Ammonia or Freon refrigerant with capabilities of supporting brine systems

#### Capacity/Size Range:

The Frigoscandia FRIGoPAK comes in skid dimensions from (L  $\times$  W  $\times$  H) 26'  $\times$  9'  $\times$  14' up to 38'  $\times$  12'  $\times$  17' with capacities from 39 to 150 TR @ -40° F. Colder temperatures with higher capacities can be achieved with field-built systems.



#### **Refrigerant Feed System**



#### LVS Refrigeration Kit

LVS Refrigeration utilizes optimized low-pressure-drop evaporator design, in conjunction with specially designed LVS vessels, which maintain correct liquid flow through the evaporator to ensure optimal evaporator performance. No valve adjustment is needed to achieve this flow. It is a function of the design.

#### Designed For:

Supporting freezing and chilling systems by supplying and managing refrigerant to and from freezing and chilling equipment, including but not limited to all lines of JBT spiral and linear freezing systems with a wide range of capacities.

#### **Key Features:**

- Reduces pressure drop from freezer to compressor
- Improves the evaporator performance
- Eliminates fluctuating evaporation temperatures caused by liquid build-up in risers

- Eliminates the liquid distribution problems associated with various freezers working at different capacities
- Increases the refrigeration capacity of existing vessels and reduces the required refrigerant charge
- Enables operation at evaporation temperatures down to -50° C (-58° F) provided installed equipment is suitable for the required temperature
- Refrigerant pumps may either be eliminated or will work at lower flow rates, where they are generally less susceptible to cavitation problems
- Stainless Steel ASME Vessel for internal or external installation
- Wide range of evaporator temperatures available

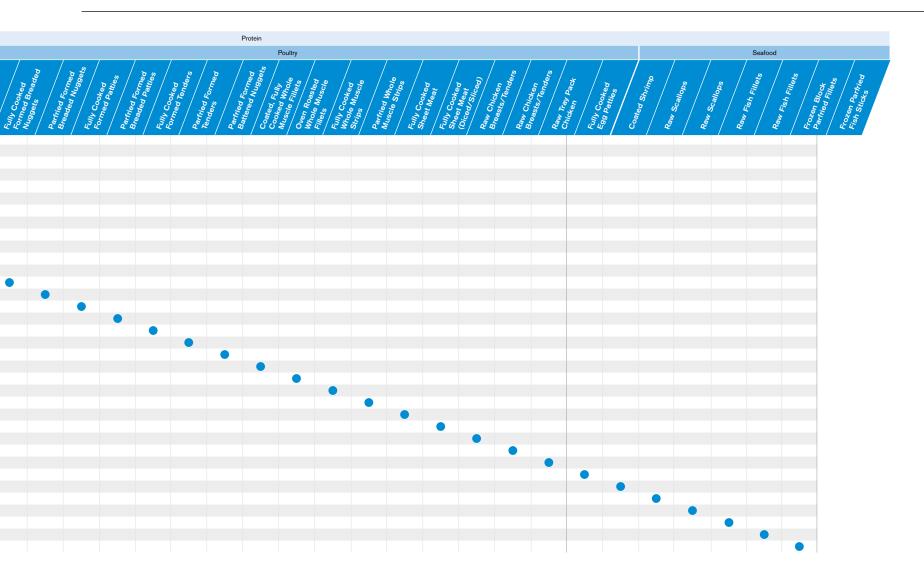
#### Capacity/Size Range:

5TR - 400TR @ -40° F Evaporator Temperature

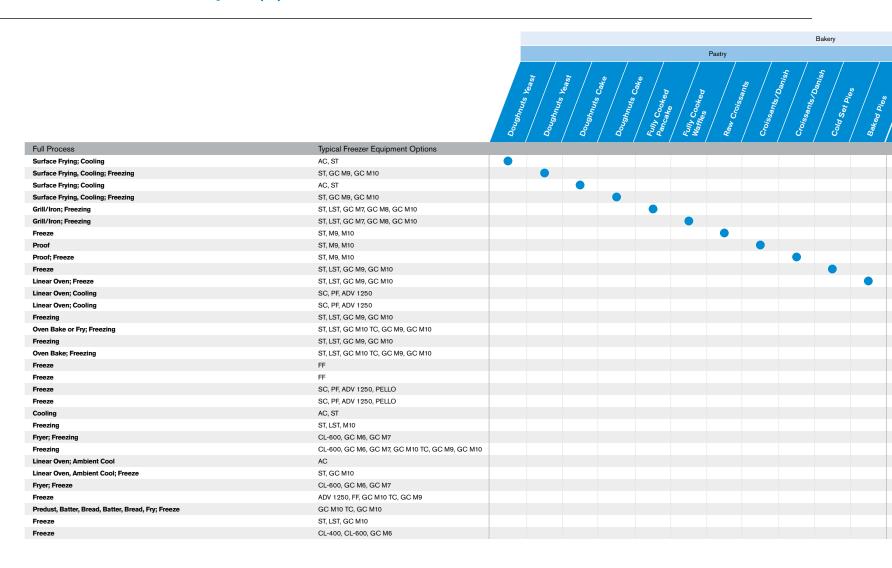
## Equipment Selection by Application

Full Process	Typical Freezer Equipment Options
Full Cook Oven or Full Cook Fryer; Freeze	GC M10 TC, GC M10
Full Cook Oven and Grill Marks; Freeze	GC M7, GC M10 TC, GC M10
Full Cook Oven and Grill Marks; Freeze	GC M7, GC M10 TC, GC M10
Predust, Batter, Bread, Fry; Freeze	GC M7, GC M10 TC, GC M10
Formed; Freeze	FPF, GC M8, GC M10
even Cook or Belt Grill; Chill	ADV CC, ADV 1250, GC M10, ST
pingement/Convection Oven Cook and Grill Mark or Infrared or Fry; Freeze	GC M7, GC M10 TC, GC M10
npingement Oven Cook or Convection Oven Cook; Freeze	GC M7, GC M10 TC, GC M10
pingement Oven Cook or Convection Oven Cook or Belt Grill; Freeze	GC M7, GC M10 TC, GC M10
redust, Batter & Bread, Fry, Spiral or Linear Oven Cook; Freeze	GC M9, GC M10
ry, Spiral or Linear Oven Cook; Glaze; Freeze	GC M9, GC M10
edust, Batter & Bread, Fry, Oven Cook; Freeze	GC M7, GC M10 TC, GC M9, GC M10
redust, Batter & Bread, Fry; Freeze	GC M7, GC M10 TC, GC M9, GC M10
edust, Batter, Bread, Fry, Oven Cook; Freeze	GC M7, GC M10 TC, GC M9, GC M10
redust, Batter & Bread, Fry; Freeze	GC M7, GC M10 TC, GC M9, GC M10
redust, Batter, Bread, Fry, Oven Cook; Freeze	GC M7, GC M10 TC, GC M9, GC M10
redust, Batter, Bread, Fry; Freeze	GC M7, GC M10 TC, GC M9, GC M10
Batter, Bread, Tempura, Fry; Freeze	GC M10 TC, GC M9, GC M10
redust, Batter, Bread, Fry, Spiral Oven or Linear Oven; Freeze	GC M7, GC M10 TC, GC M9, GC M10
Predust (marinade), Impingement or Convection Spiral /Linear Oven Cook; Freeze	GC M7, GC M10 TC, GC M9, GC M10
Predust, Batter, Bread, Fry, Convection Spiral Oven or Linear Oven; Freeze	GC M7, GC M10 TC, GC M9, GC M10
Predust, Batter, Bread, Fry; Freeze	GC M7, GC M10 TC, GC M9, GC M10
Belt Grill, Charmark, Impingement Linear or Spiral Convection Oven; Chill	GC M10 TC, GC M9, GC M10
Belt Grill, Charmark, Impingement Linear or Spiral Convection Oven, Chill, Dice; Freeze	GC M10 TC, GC M9, GC M10
Crust Freeze	SC, PF, ADV 1250
Crust Freeze; Freeze	GC M7, GC M10 TC, GC M9, GC M10
Crust Freeze	TF, ST, LST, GC M10
Freeze	ADV 1800, GC M7
Predust, Batter, Bread, Fry; Freeze	ST, CL-400, CL-600, GC M6, GC M10TC
Crust Freeze	SC, PF, ADV 1250
Crust Freeze; Freeze	ST, CL-400, CL-600, GC M6, GC M10TC
Crust Freeze	SC, PF, ADV 1250
Crust Freeze; Freeze	ST, CL-400, CL-600, GC M6, GC M10TC
Predust, Batter, Bread, Fry; Freeze	GC M7, GC M10 TC, GC M9, GC M10
Predust, Tempura Batter, Fry; Freeze	GC M7, GC M10 TC, GC M9, GC M10

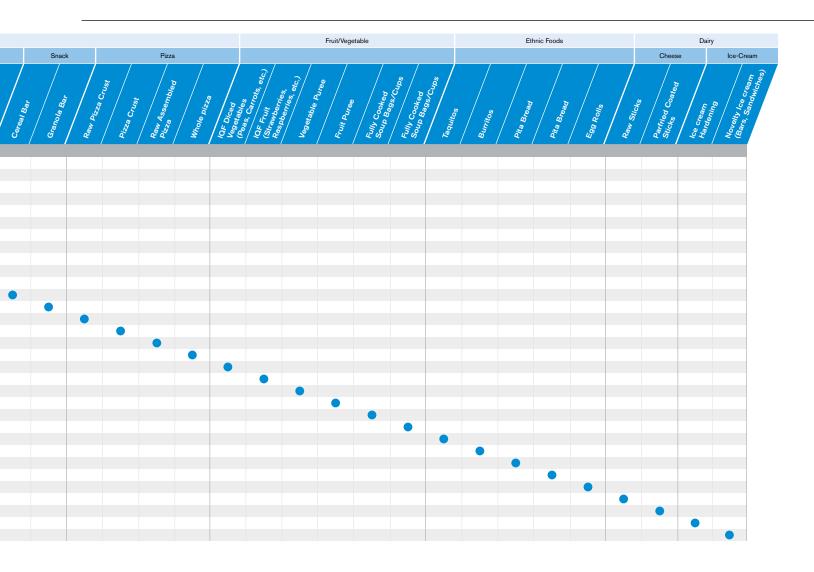




## **Equipment Selection by Application**







## Equipment Selection by Application

#### Portfolio Index

		CL-400	Frigoscandia GYRoCOMPACT Classic 400							
		CL-600	Frigoscandia GYRoCOMPACT Classic 600							
		GC M6	Frigoscandia GYRoCOMPACT M6							
	Self-Stacking	GC M7	Frigoscandia GYRoCOMPACT M7							
	Sell-Stacking	GC M8 TB	Frigoscandia GYRoCOMPACT M8 Twin Belt							
Spiral Freezing		GC M9	Frigoscandia GYRoCOMPACT M9							
Spiral Freezing		GC M10	Frigoscandia GYRoCOMPACT M10							
		GC M10 TC	Frigoscandia GYRoCOMPACT M10 Tight Curve							
		ST	Northfield SuperTRAK							
	Structure-Supported	LST	Northfield Large Spiral Technology (L.S.T.)							
	Ottucture Oupported	AT	Northfield AquaTRAK							
		AC	Northfield Ambient Cooler							
		FPF M	Frigoscandia Flat Products Freezer M							
	Impingement	ADV 1250	Frigoscandia ADVANTEC 1250							
	impingement	ADV 1850	Frigoscandia ADVANTEC 1850							
		ADV CC	Frigoscandia ADVANTEC CC							
Linear Freezing	Contact	PF	Frigoscandia PRoFREEZE							
	Contact	sc	Northfield SuperCONTACT							
	Tray Pack	TF	Northfield Trolley Freeze							
	Fluidized Bed	FF	Frigoscandia FLoFREEZE							
	Liquid Pellet	PELLO	Frigoscandia PELLoFREEZE							



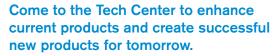




# Support Services

## Food Processing Technology & Training Center





For over 30 years, the JBT Technology & Training Center (Tech Center) in Sandusky, OH has been a popular destination for hundreds of food processors. You can come for training, product development, testing and to simulate runs in the privacy of our 30000 sq. ft. facility.

The Tech Center, with one of the most advanced processing lines in the world, provides you with a complete processing plant away from home. You can portion, form, slice, coat, fry, cook and freeze with our new and enhanced products in a totally secure and private environment. You will learn how to improve throughput, speed, product quality and consistency, the latest hygiene methods, food safety and more.

#### With the best knowledge comes the best product

There is no substitute for a knowledgeable staff. Keeping up with the latest technologies and trends is crucial to efficient production. Let JBT train your team, so you can always get the most value out of your product.

With a team of thought leaders, JBT can create a training program tailored to your exact needs. Whether it is process and equipment applications, preventative equipment maintenance, equipment sanitation procedures or another program, JBT 's 30000 ft. Tech Center in Sandusky, Ohio has all the equipment and resources to suit your needs. We also offer classroom and hands on lab sessions.

With knowledge in over 10000 different food-processing applications, we will train your team at our facility or yours to create the most value for you.

Reserve the Tech Center today and taste success tomorrow.

To make reservations for the Tech Center or training, call Lee Clarkson at 419 627 4319.



## Aftermarket Parts & Service







## Aftermarket parts and service... 24/7. Guaranteed.

Our goal is to assist you in maximizing your return on investment. The JBT Aftermarket Team is comprised of Customer Service Representatives and Field Service Technicians. Every professional in our Aftermarket Team is trained to minimize downtime and finish the job as cost efficiently as possible.

#### **Our Aftermarket Team:**

- Has over 200 combined years of industry experience
- Is committed to providing OEM quality parts and service
- Achieves a 96% on-time delivery rate
- Provides 24/7/365 parts and service support
- Offers easy access 24/7, with online spare parts management at myjbtfoodech.com
- Offers Service Inspection Agreements as a preventative maintenance program designed to maximize equipment uptime by checking critical components that may lead to an unscheduled breakdown
- Provides an Aftermarket Kit Program allowing you to upgrade your existing equipment to improve capacities, lengthen run times or extend the life of your equipment. Our kits focus on the cleanability and hygiene of existing equipment

JBT is one stop shopping for Aftermarket parts and service. We guarantee that a service professional will be at your site within 24 hours or the first day of service is free.

For immediate service, call 800 408 7788.

## PRoCARE™ Program The smart way to produce more tonnage per day

PRoCARE is a program that allows you to have scheduled preventive inspections and maintenance of your equipment and minimizes unexpected and budget shattering costs due to reactive maintenance.

A PRoCARE service agreement is designed to give you a predictable monthly cost based on actual equipment use and offers peace of mind allowing you to produce as planned.

#### Minimize downtime and control your budget

Your earnings and profits are directly related to how much you produce in a given time period, which depends on the performance, reliability and availability of your equipment.

Proactive and preventive maintenance are key to running smooth production operations. Proper maintenance allows you to predict potential downtime and avoid major breakdowns and stopped production.

To be able to minimize downtime, the equipment needs to be regularly serviced to optimize condition. Each minute of downtime means lost production that in some cases cannot be recovered. Having equipment needs met and proper planning lead to uptime and productivity.

#### **Benefits**

- Control your costs
- Improve performance
- Keep your equipment running
- Peace of mind

Contact Elizabeth Monasterio at elizabeth.monasterio@jbtc.com or 678 797 4262 for more information and options.





# We are your single source for profitable processing solutions

JBT can provide you with portioners, freezers and everything in between – including process control, food product development assistance, operator training and a full range of customer support alternatives.

Our Food Technology Centers have served leading processors in the development of many of the world's most popular food brands. Learn how to increase your processing potential by contacting your JBT Account Representative or by visiting our website.

We're with you right down the line.™



www.jbtfoodtech.com

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