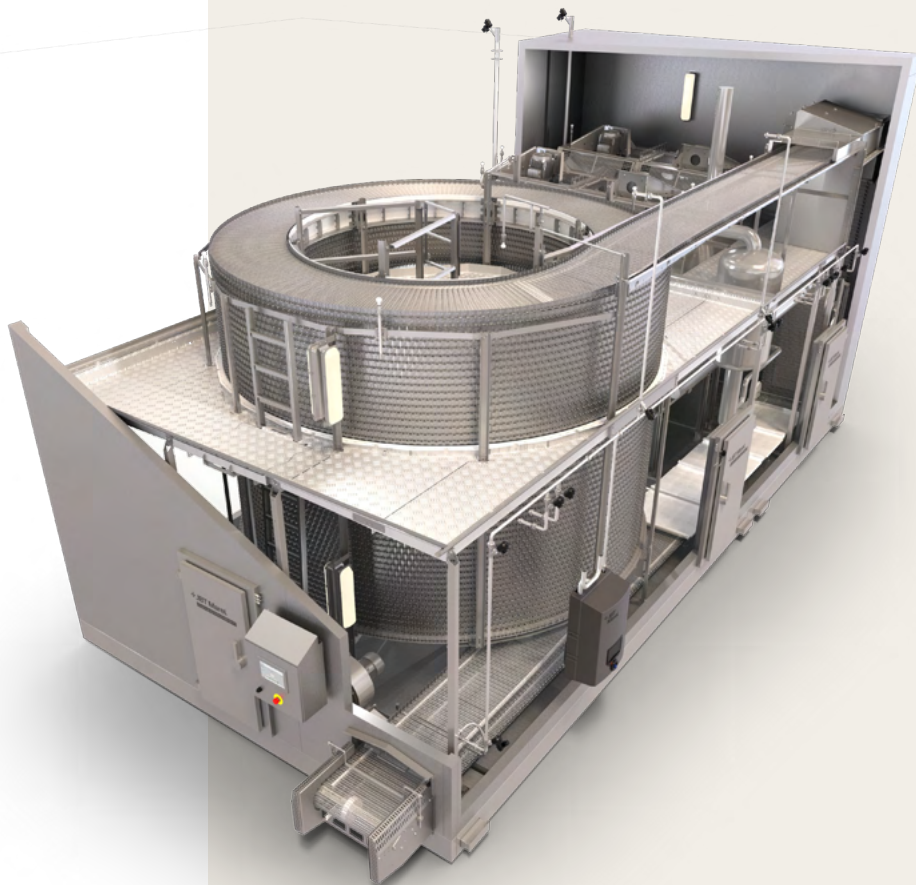




Highly modular and flexible  
self-stacking spiral freezer

# Frigoscandia GYRoCOMPACT® M9-M10 Spiral Freezer

Freezer, Chiller & Proofer



# Flexible design. Powerful results. Proven reliability.

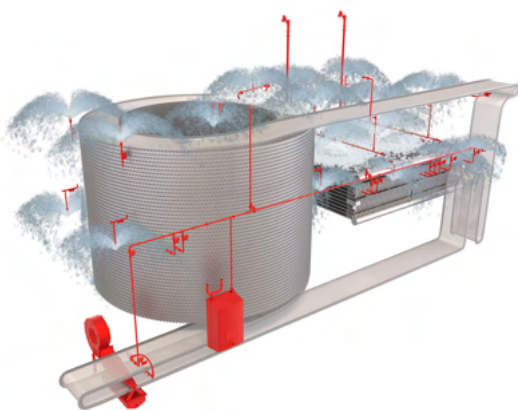
Our Frigoscandia GYRoCOMPACT "M" Series freezing system is in a long line of successful self-stacking belt spiral freezers, chillers, and proofers. It is a fully featured, flexible, modular design that utilizes the patented FRIGoBELT® W belt and no-tension drive system for unparalleled performance.

Our spiral freezers outperforms all other spiral freezers on the market with over 5,000 installations worldwide. The unique self-stacking belt provides a self-contained, 100% cleanable product zone with a vertical controlled airflow that delivers uniform air distribution across and through the belt stack.

## Fast cleaning system

Four levels of cleaning systems to match your product and production requirements. These systems will give you shorter cleaning times, lower water, chemical and energy consumption, less maintenance, consistent cleaning results – and peace of mind!

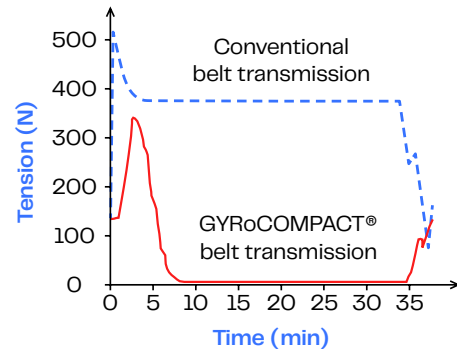
- Level 1 - Belt rinse
- Level 2- Belt CIP
- Level 3 - Basic CIP
- Level 4 - Extended CIP



## No-tension drive system

The self-stacking spiral gives smooth, reliable, jam-free operation. No "christmas-treeing", over-stretching, 'flipping' of the belt or manual lubrication.

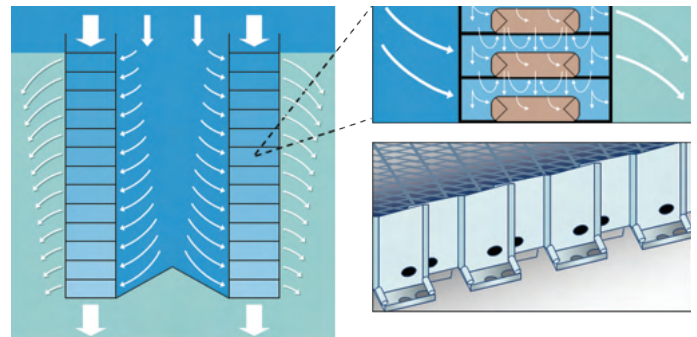
- No drum to wrap the belt around
- No risk of overstretching the belt
- All forces in the drive system instead of in the belt



## Vertical controlled airflow

Vertical counter-current airflow quickly and uniformly reaches all food product surfaces throughout the stack, for accurate cost-effective freezing every time

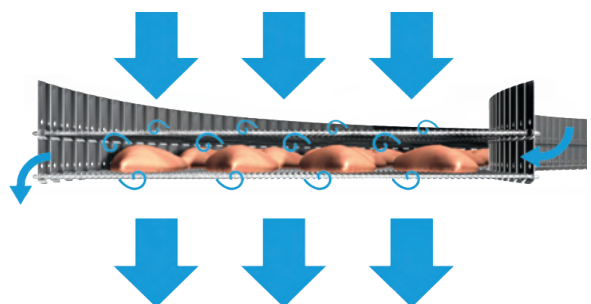
- Highest possible heat transfer
- No risk for moving products
- Even product temperature



## Self-supporting freezing zone

Unique FRIGoBELT® self-stacking conveyor puts your product in a self-contained freezing zone, for gentle, uniform handling and superior food safety.

- The belt forms its own support structure
- 100 % cleanable
- No glide strips or support structure in the product zone





Designed for

**Freezing, chilling,  
and proofing of dairy,  
grain based and  
protein products, both  
packaged and IQF**

#### **Reliability and Safety**

- Tested and proven, the GYRoCOMPACT spiral is both reliable and easy to operate.
- It offers great commonality, in terms of operating procedures and food processing solutions, and with upstream and downstream equipment.
- Safe-service handle, two-stage operator commands and self-closing mezzanine hatches ensure operator safety.
- PRoLINK control system for safe and reliable operation.

#### **Performance**

- Fan placement on evaporator 'dry side' minimizes snow build-up, extends profitable production uptime, and delivers greater freezing capacity.
- Optimized air velocity through the evaporator and stack maximizes heat transfer and performance.
- FRIGoDRIVE® drive system minimizes belt tension for greater capacity and longer belt life.
- PRoLINK control system ensures fast product changeover and start-up.



### Hygiene by design

- The industry's only self-contained freezing zone, 100% cleanable.
- Great accessibility throughout the enclosure, without compromising compactness.
- Easy evaporator access from all sides, for fast, thorough cleaning.
- In- and out-feed units are easy to access and easy to keep clean.
- Fully welded 'open plan' stainless steel floor, with elevated floor-to-wall joints, sloping to fully welded drains, for easy cleaning and complete drainage.

### Flexibility

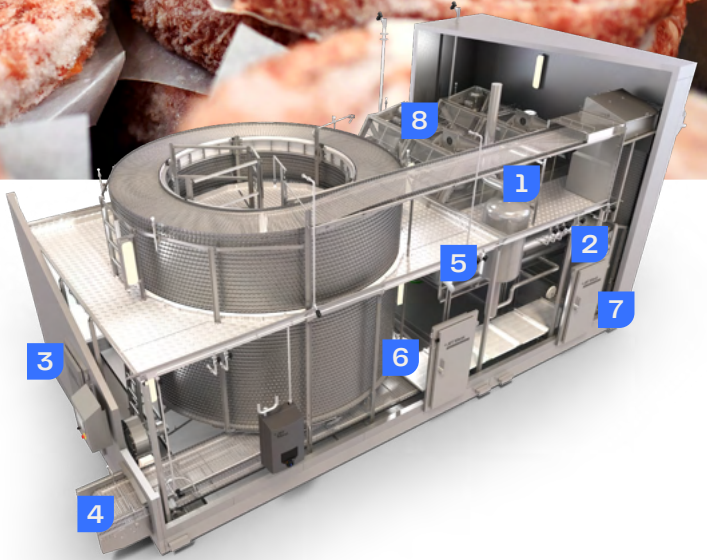
- Plan your future capacity needs and expand your production output and variety, without expanding your premises.
- Uniform stand design makes it easy to match freezer configurations to present and future production requirements.
- Match freezing, chilling or proofing needs precisely with fully customizable enclosures, up to six fan/evaporator blocks, 35 evaporator sizes, six tiers heights, multiple No. of tiers, five mesh alternatives and userfriendly touchscreen controls



**High capacity in a small footprint**  
Capacity ranges from 2000 to 7500 kg per hour, depending on model and product

## 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 seamed welded stainless steel enclosures
- Clean-in-place (CIP)
- Sequential Defrost
- ADF Air Defrost
- High Hygiene evaporator coil and multiple heat exchanger sizes



# Frigoscandia GYRoCOMPACT® M9-M10

1

## Many evaporator combinations.

- Match any freezing needs precisely
- Easy access and easy cleaning
- Optimized base load

2

## Simplified belt take-up, with less winding. Absolute minimum of tension on the return rail.

- Even longer belt life
- Easier access for cleaning.

3

## Sloped floor and fully seal-welded drains in each corner of the freezer, with bevelled edges. Elevated floor-to-wall joint.

- Effective drainage where it's needed
- Faster cleaning and less downtime
- No bacterial traps.

4

## Fully integrated, pre-assembled, stainless steel infeed and outfeed. Simplified design with fewer parts.

- Easier access
- No accumulation of condensate
- No traps for bacterial growth

5

## Hygienic open freezer design. Large, self-closing hatches open 80°C.

- Convenient access for inspection, cleaning and maintenance
- Optimal operator safety

6

## Stands fully welded to the floor. Horizontal stand structures with solid rods.

- Design allows for thermal expansion and contraction
- No horizontal hollow sections to collect contamination
- No caulking to crack or damage

7

## Fully seal-welded, stainless steel floor design, open from door to door under conveyor and evaporator.

- Improved hygiene
- Instant inspection
- Easy access
- Faster cleaning

8

## Fans located on dry side of evaporator. Optimized air velocity through evaporator.

- Increased production uptime
- Greater freezing capacity increased reliability
- Maximum heat transfer and frost pick-up
- Easy cleaning

TECHNICAL DATA (SI-SYSTEM) – GC M9

<b>Conveyer belt</b>				
Link height (mm)	80	100	120	150
Vertical clearance for product (mm)	65	85	105	135
Number of tiers (min-max)	23-40		19-40	
Type	Frigoscandia FRIGoBELT® W Conveyer			
Mesh	M6-1.5, M9-1.5, M13-1.5, M20-1.5			
Width, total (mm)	930			
Width, net (mm)	875			
Width, between infeed covers (mm)	864			
Length per tier (m)	17.8			
Effective belt area per tier (m <sup>2</sup> )	13.15			
Conveyer belt speed (m/min)	3.5 - 30 (standard speed range), 2.0 - 15 (optional speed range)			

<b>Electrical data</b>	3 fans	4 fans	5 fans
Main voltage	3 x 380 - 480 V / 3 x 575 V, 50 / 60 Hz		
Normal power consumption (kW) <sup>1) 2)</sup>	54	76	101

<b>Refrigeration data</b>	3 fans	4 fans	5 fans
Base load (kW) <sup>2)</sup>	57	80	105
Standard design	R717 (Ammonia): Pump circulation ratio = 4-6 times evap.		

<b>Defrosting system</b>	3 fans	4 fans	5 fans
Defrosting media	Hot gas or potable water		
Water consumption (L/min) (at 300 kPa = 3 bar, min 1 bar) <sup>3) 4)</sup>	180	360	360
Minimum water temp. (°C) <sup>3) 4)</sup>	+15 / +25		

<b>Noise emissions</b>			
Along equipment walls	77 dB(A)		
In front of infeed and outfeed openings	89 dB(A)		
Peak level	111 dB(C)		

<b>Application data</b>			
Normal loading distance on straight conveyer belt	Rectangular products: 1.7 x product length Round products: 1.5 x product diameter		

<sup>1)</sup> Does not include dimensioning of power supply fuses/cables. Refer to customer drawings for maximum power requirement.  
<sup>2)</sup> All consumption values are calculated for a nominal case. Customer specific values available on request – contact sales support  
<sup>3)</sup> Must be potable water.  
<sup>4)</sup> Make sure refrigeration system is safe for water temperature in use.

FREEZER LENGTH	NUMBER OF FANS		
	3	4	5
L	10.260	10.990	11.720

