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Mr Amit Smadar  
Smadar Technologies

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Dear Sirs,

We offered you the latest generation freezer, in which we applied our latest technical and technological solutions that guarantee the highest quality of frozen products as well as hygiene and low operating costs.

**The freezer is equipped with many options that give the possibility to adapt to individual customer needs for both the frozen product – its type, quality and also required space, feeding the product to the freezer or receipt of frozen goods. New solutions allow you to adjust operation of fans in the first and second pressure chamber when working with a smaller amount of product which is associated with substantial savings in consumption of energy and refrigeration.**



## **COMPANY HISTORY**

Unidex J.Kania, J.Wiktor Sp. J. were founded in 1992, based on many years of experience in the industry dating back to early eighties. Its founders are engineers – with vast experience in the production of machinery for food processing.

Today the scope of activities ranges from design, production to on-site installation of fluidized freezing tunnels (IQF) intended for freezing fruits, vegetables, meat, poultry, fish and seafood. Unidex is also involved in production of machinery included in technological lines for processing of fruits and vegetables.

<b>ELEVATOR FEEDER</b>	for transferring fruits and vegetables to a specified height of the freezing tunnel with stainless steel mesh or plastic mesh and the drying fan.
<b>VIBRATING CONVEYORS:</b>	for fruits and vegetables
<b>HORIZONTAL CONVEYORS:</b>	with stainless steel mesh and fans for blowing out leaves and for drying the product
<b>AIR-WATER WASHERS:</b>	for fruits and vegetables
<b>BRUSH WASHERS:</b>	for fruits including berries
<b>EVAPORATORS:</b>	ammonia or freon, type steel-steel , for freezers

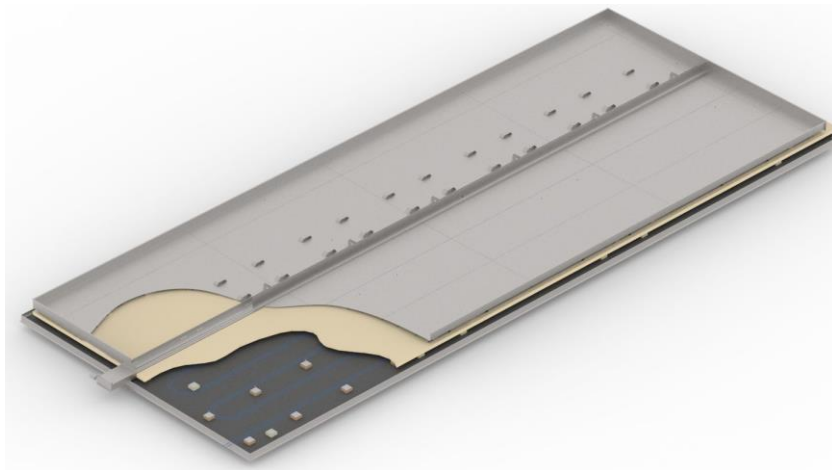
### **DESIGN OF THE FREEZER**

Freezer is placed on the concrete plate made by the Buyer. Unidex provide drawings of the frame to make the plate. Finally this frame constitutes stainless steel curb of the freezer.

### **FLOOR**

Welded, profiled stainless steel with slopes allowing drainage of water during cleaning and defrosting of freezer. One water outlet at the front of the freezer.

Directly under the floor, two-component polyurethane foam, forming the cold insulation, is injected. There is vapour check insulation and heating cable protecting ground against freezing between the top plate and polyurethane foam.



### **PANELS**

Polyurethane panels, type of sandwich. Panels inside from stainless steel.

External front wall from stainless steel, remaining external panels white.

The front door on the bottom and upper level from stainless steel with heated door's frame

Inspection window in the front wall above feeding vibrator.



## **INTERNAL CONSTRUCTION**

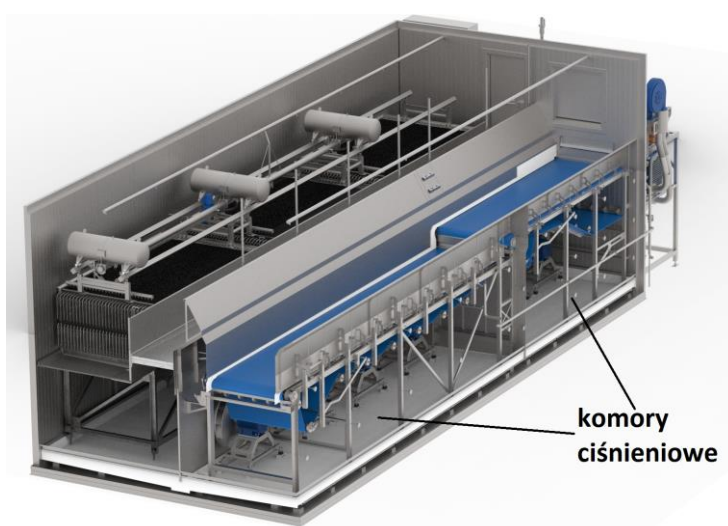
Separate pressure chambers under the 1st and 2nd belt.

Pressure chamber under the 1st belt can be divided, fans with inverters as option.

Radial fans installed directly on the freezer floor, unoused, mounted directly on the motor shaft.

Air by-passes installed in the wall with fans to adjust amount of the air passing through the layer of product on the belt.

All elements having contact with product are made from stainless steel.



## **VIBRATING FEEDING UNIT**

Made from stainless steel with slotted screen 1400 mm, for removing water from the product and even feeding of the product to the freezer. Special distributing triangle at the front of the unit for very good distribution of the product on the whole width of vibrator. With heating nose.

With 9 levels of adjustments which allows frequency adjustment to each kind and quality of product even so sensitive as raspberries.

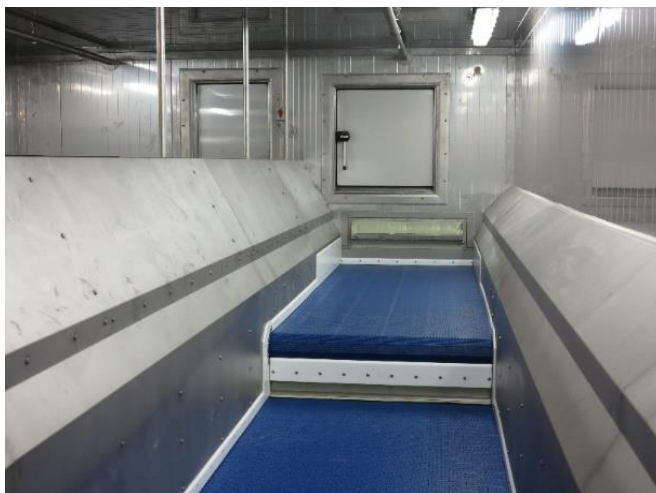


### **Belt I and II**

Made from blue acetal for individual order of UNIDEX by company INTRALOX USA.  
Drive system with variable speed belt on the 1st and the 2nd belt.

From the bottom, belt is supported on stainless steel and plastic slides.  
From the top located in the high tray of stainless steel and in the bottom part additional side guides made from plastic.

All gearmotors in the freezer are from company NORD in Germany.

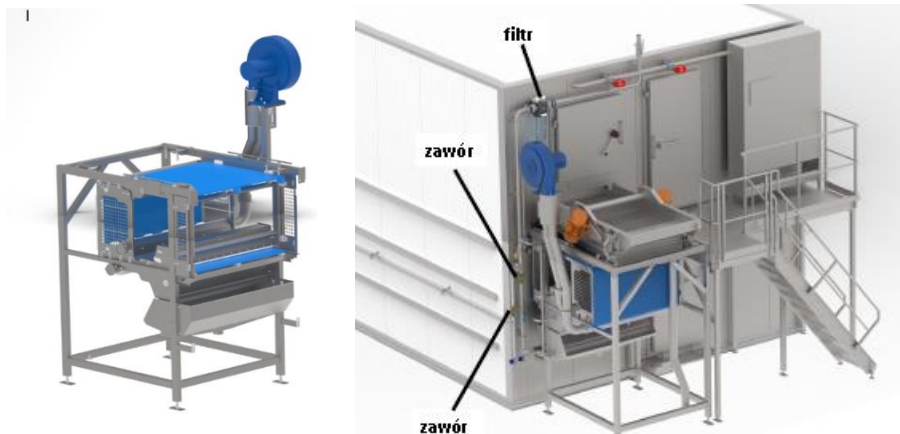


### **PULSATOR**

Pulsator on the 1st belt as standard and on the 2nd belt as option. Pulsator with frequency converter with 9 different speed.

### **WASHING BELT EXTERNAL SYSTEM**

Installed outside of the freezer. Allows for periodic washing and drying of the 1st belt during production, without necessity to stop production. Possible automatic operation at specified by the operator cycles. Required temperature of the water from +8 to + 50°C.  
The system includes a filter and water valves.

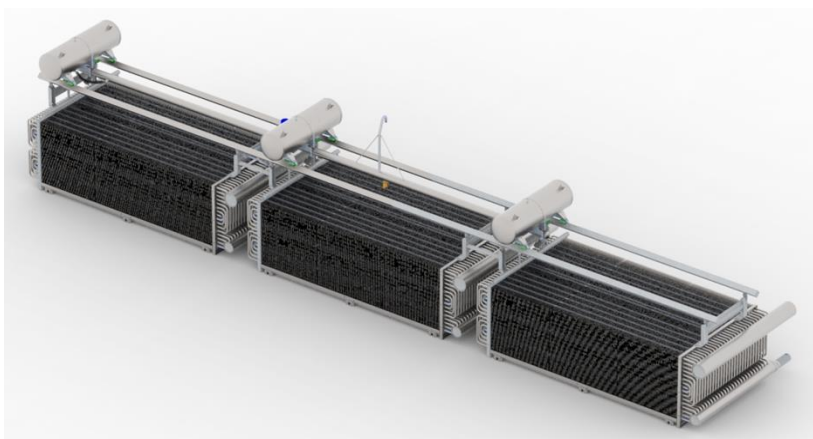


### **EVAPORATORS**

Made from pressure steel, galvanized, with suction and discharge collectors made of seamless tubes. Can be used in pump and DX system. They are suitable for hot gas defrost and / or water. Made with the support structure of galvanized steel.

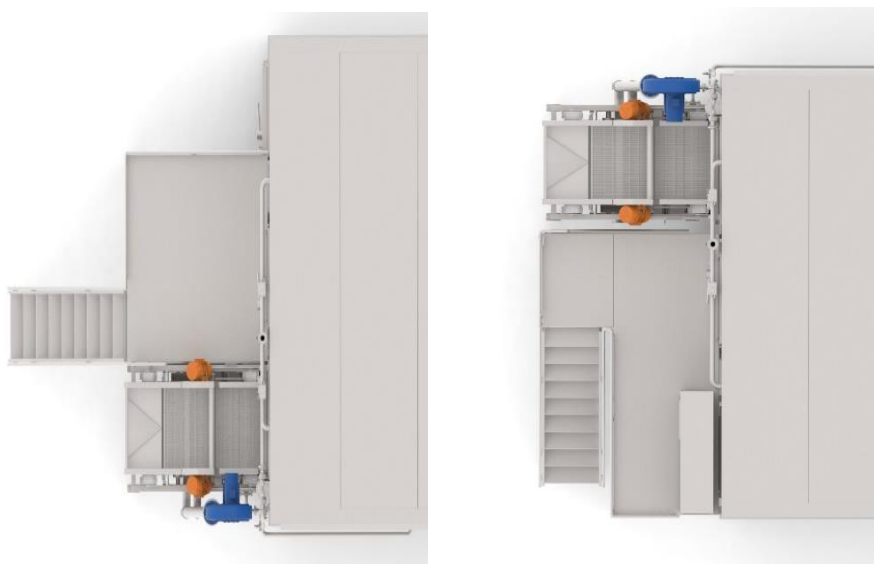
### **UDS – FROST REMOVAL SYSTEM**

Mounted directly on the evaporators for the continuous removal of frost during operation. Extends the operation time of the tunnel between defrosting.



### **FRONT PLATFORM**

There are three standard versions of the front platform. Front platform can be made also as an individual solution tailored to the needs of the buyer. Platform can be adapted to different machines for example cutters or for direct feeding of the product for example raspberries.



### **PRODUCT OUTFEED**

One outfeed tailored to individual customer needs included in the delivery. Made of stainless steel and adapted to receive the product on the belt, to containers or packing in bags or boxes. The design of the outfeed prevents ingress of cold air from the tunnel to the packing hall. It does not cause damage of frozen products.



### **ELECTRICAL AND CONTROL SYSTEM**

The electrical system designed to supply 3x400V, 50Hz. The control cabinet made of stainless steel, ventilated mechanically, with lockable, waterproof protective cover of the touch panel. Located on the platform or operating area close to the tunnel. The large external display of air temperature in the tunnel. Control system allows control over the work of all components from the main screen, displaying the history of temperatures and pressure level in the air chamber. There is possibility to record freezing parameters settings for each product.

Ability to view production statistics on a computer in the local network

Main components:

PLC , touch panel	Siemens
Inverters	Danfoss
Relais	Relpol
Contactors, motor switches	Eaton/ Moeller

### **CE CERTIFICATES:**

Both freezer and UDS comply with regulations and standards of European Union and provisions of for Technical Inspection. Equipment is manufactured in accordance with the directives:

- Pressure Equipment Directive PED (2014/68/UE),
- Machinery Directive (2006/42/WE),
- EMC Directive (2004/108/WE),
- LVD Directive (2006/95/EC)
- Hazard Analysis and Critical Control Point (HACCP)