

Mar del Plata, 2025.-

Señores:

ANCHOAS PATAGONICAS

TRELEW
CHUBUT
, Argentina.-

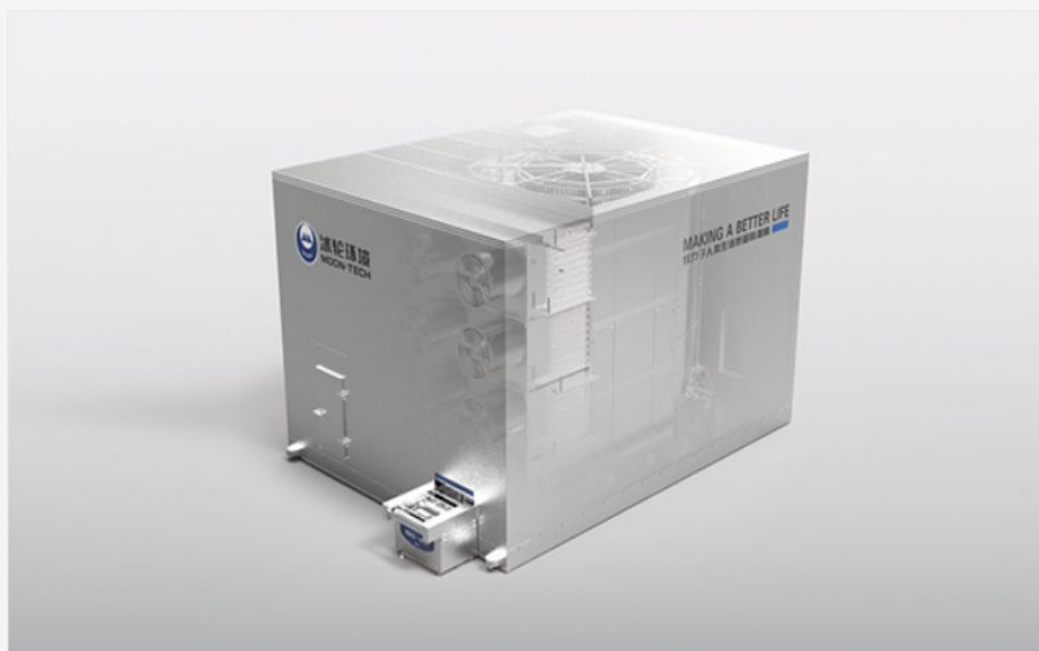
TOTAL PAGINAS: 6

De Vuestra consideración:

Tenemos el agrado de presentar la siguiente propuesta técnica por la provisión de equipamiento frigorífico utilizando R 404 A como refrigerante, según el siguiente proyecto descripto en el siguiente informe técnico:

LINEA DE PRODUCCION PARA CONGELADO

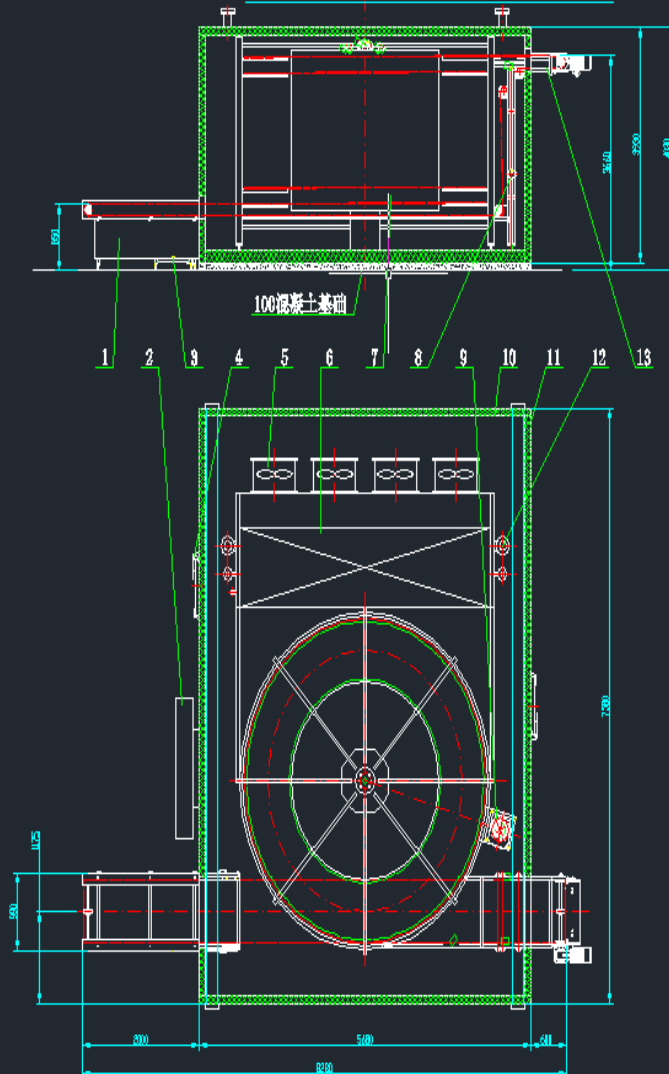
PROPUESTA



TECNICA N°157/24



LSS2518-800SPIRAL FREEZER



Specification

Capacity: 1000kg/h
Product: Raw shrimp
Inlet temp.: +10°C
Outlet temp.: -18°C
Dimensions (LxWxH): 8280x7580x4030mm
Cabinet (LxWxH): 7580x5580x3930mm
Belt width: 800mm, effective 730mm.
Belt length: ~360m
Freezing time: adjustable
Drum: 1
Drum dia: 2500mm
Layer pitch: 150mm (inlet 90mm)
Layer qty: 18
Cold capacity: 170kW
Refrigerant: R404
Power: ~30kW
Freezing temp.: below -35°C

1. Inlet 2. Control 3. Wash tube R1 4. door 5. Fan 6. Coil 7. Drum 8. Tension 9. Driving device 10. Insulation 11. Drain 12. Liquid/suction 13. outlet

ICT-AG-TEC240515 Date: 15/5/2023

To: Tecnotherm / tecnotherm.ar@gmail.com / Mr ing Alejandro perez

SPF-1000



FECHA DE COTIZACION	15.05.2024
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REFERENCIA	SPF-1000
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Valida FECHA	60 Days
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MAQUINAS COTIZADAS	Spiral Freezer + glazing machine + hardening freezer+cintas de transferencia + unidad carenada para túnel hardening freezer
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Producto	HOSO Argentine red shrimps
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Capacidad solo para referencia	1000 kg/h, +10/-18
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1. Single spiral freezer SPF-1000

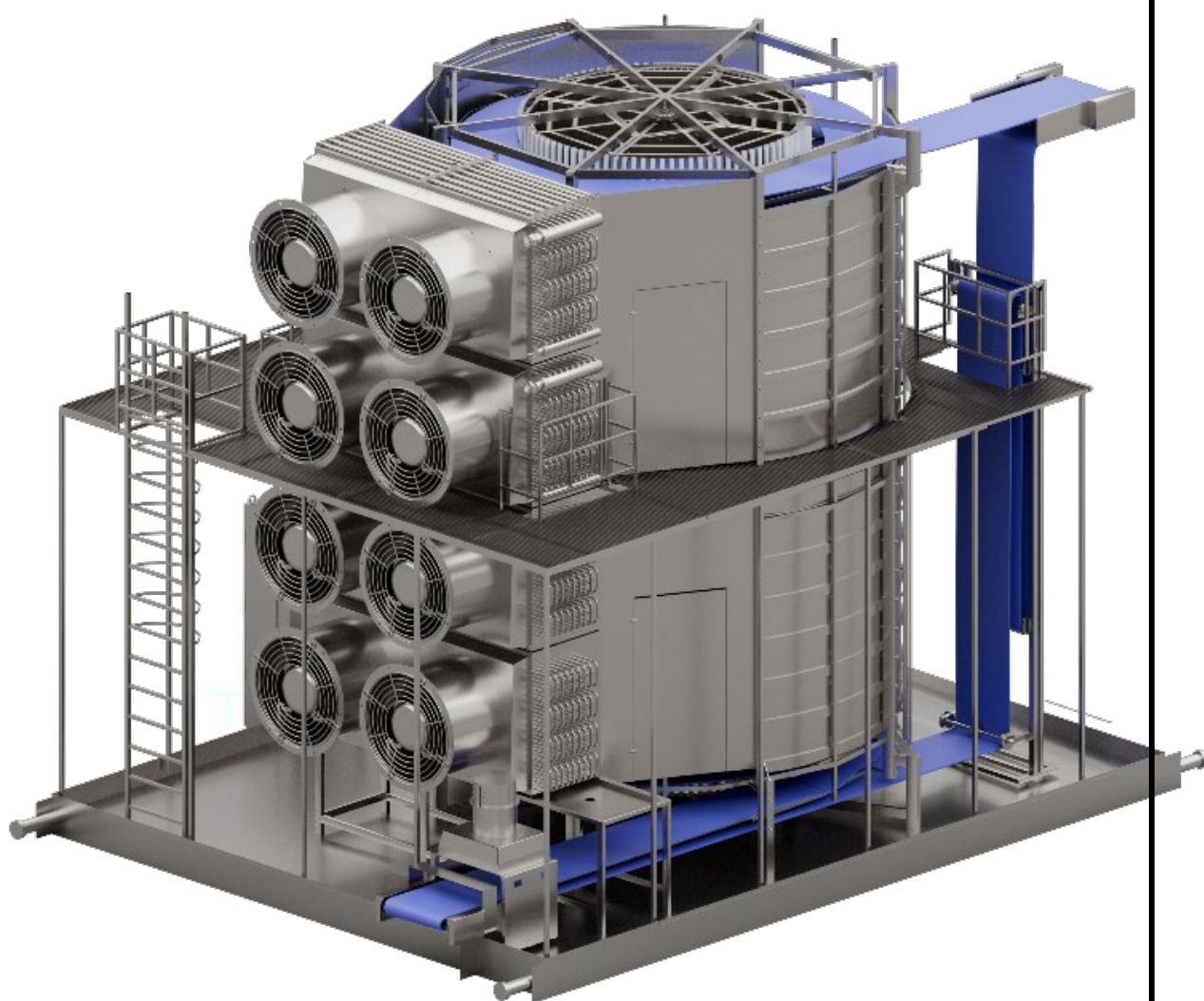


Imagen solo como referencia

Items	Descriptions
Equipment	Single spiral freezer
Capacity	1000kg/h
Model	SPF-1000
Qty.	1 unit icesta [®]
Structure	
Structure	Single Spiral Freezer
Cage dia.	2500mm
Tier	18
Effective net tier pitch (distance)	80mm
Panels	120mm
Panel surface	Outside 0.7mm/ inside 0.6mm stainless steel
Belt	
Belt	Stainless steel mesh belt
Width	762mm
Length	260m
Infeed length	1600mm or the length customized
Outfeed length	300mm
Electrical data	
Power supply	380V/50HZ/3P
Installed power	29 KW
Electrical standard	NEMA4
Fan	4KW*6
Fan motor	IP55
Drive motor	3KW, SEW or NORD
Tension motor	0.75KW
Refrigeration data	
Evaporator tube	Aluminum
Evaporator fin	Aluminum, 0.4mm



Refrigerant and refrigeration system	R404 A DIRECT EXPANSION TO LCUSA 225 RACK ICESTA (-42°C ;+45°C) 145 kw Unidad independiente de 30 kw para hardening freezer dryer
Cold consumption	145 kw
Defrosting	Water
Evaporating temperature	-42°C
Condensing temperature	+35°C

Product information

Items	Descripciones
Producto	HOSO Argentine red shrimps
Ingreso promedio temp.	+10°C
Egreso promedio temp.	-18°C

1.2 Project Contents

[descripción general](#) [Detalle](#)

Temp. de evaporación	-42,00 °C
Temp. de condensación	45,0 °C

Compresor	Total
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Escalones de capacidad

Potencia frigorífica	145,4 kW
Potencia frigorífica *	--
Potencia en el evap.	145,4 kW
Ratio	--
Potencia absorbida	176,1 kW
Corriente (400V)	281 A
Gama de tensiones	--
Capacidad del condensador	255 kW
COP/EER	0,83
COP/EER *	--
Caudal másico BP	3484 kg/h
Caudal másico AP	5767 kg/h
Modo de funcionamiento	Economizador
Temp. del líquido (se)	--
Caudal másico ECO	2283 kg/h
Potencia subenfriador	66,1 kW
Temp. Saturada ECO	-5,29 °C
Presión ECO	--
Caudal aceite	6,32 m³/h
Salida enfriador aceite	59,5 °C



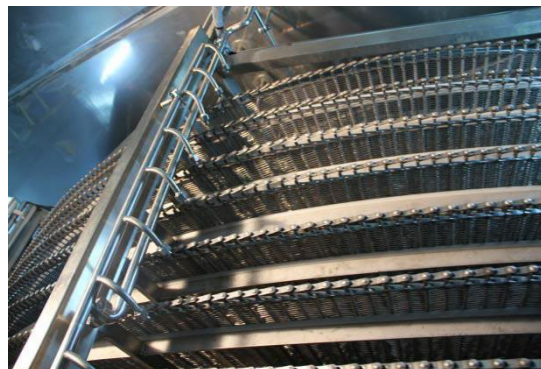
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2.3

Structure features

A. Open freezer design and structure

- Open freezer design with stainless steel structure, hygiene product zone.



- Structural support built with fully-welded stainless steel, prevents oil, dirt etc. from remaining on the surface.
- Stands fully-welded to floor, less death pot of hygiene.





B. Enclosure and floor

- Seamless assembled enclosure, with good insulation feature and guarantees hygiene.
- Stainless steel skinned sandwich panel, high density PU foamed (42kg/m^3). Panel thickness 150mm suitable for freezer insulation.
- PU sandwich panel processed by Italian PU foaming line and US stainless steel sheet forming line. High quality ensured.
- Stainless steel floor with ramps design with effective drainage, ensures faster cleaning, less down time and food hygiene.
- Water trough set at one side of insulated floor, slope height 190mm. Drain scuppers fully welded.

C. Evaporator



- Efficient evaporator design with high heat transfer rate, provides greater freezing capacity while saves valuable factory footprint space.
- Optimized high air pressure axial fans and motors give a maxim production capacity with the lowest energy consumption. Optimized air velocity through evaporator.



D. Drive

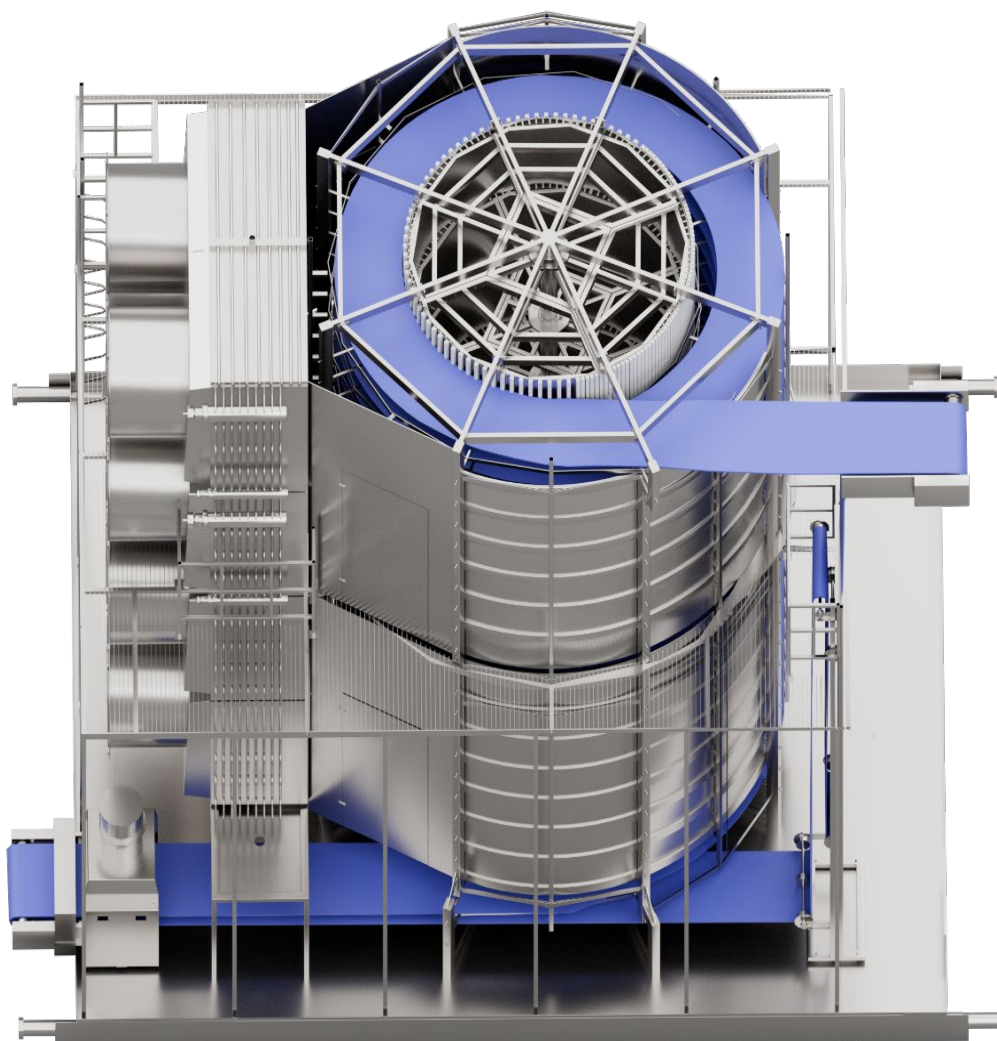
- Advanced synchronous control technology applied. Chain size approximate to cage diameter drives the system. Lower tension for chain and ensures a steady and reliable driving.
- Rich experience in manufacturing rigid drive cage ensures a reliable installation and operation of the system. Drive shaft of cage is composed by three sections from top to bottom for easier maintenance.
- Floor access to reducer, motor and chain.
- Completely sealed with stainless steel housing, against harsh environment for better hygiene, while easy to service or clean.
- Reliable plastic belt conveyor.
- Food grade lubricant used, prevent food and equipment from pollution.

E. Smart and reliable control

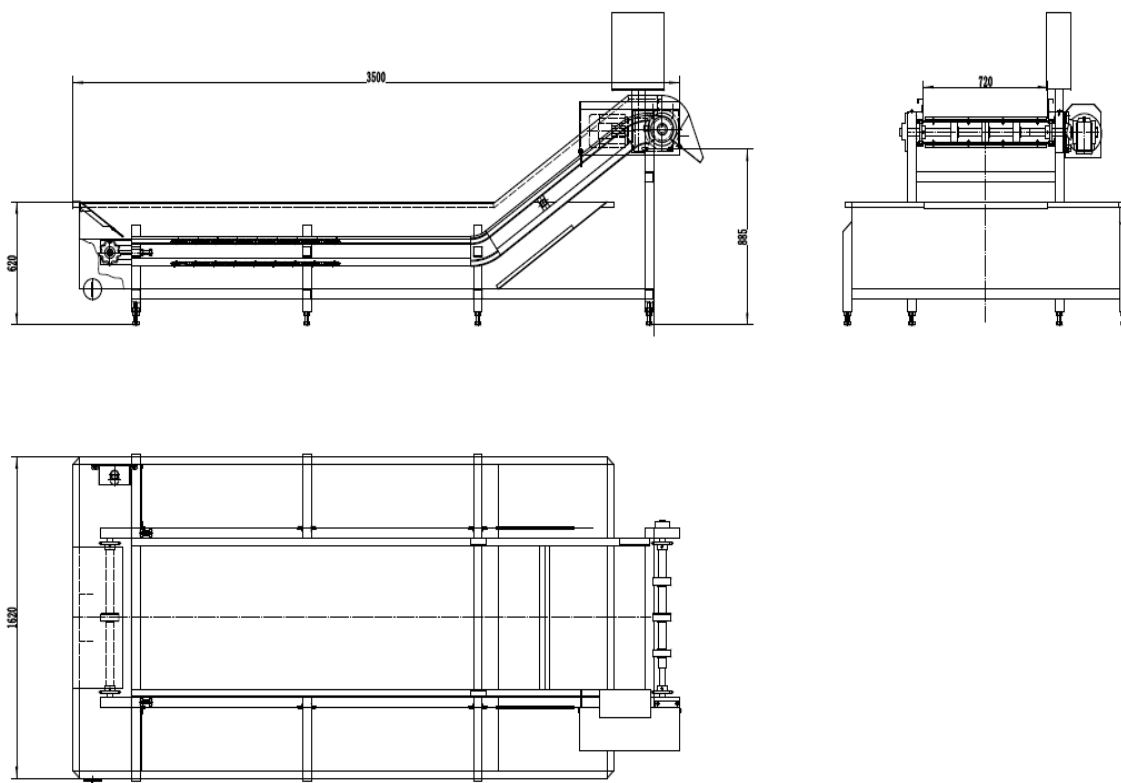
- Leasing control element from Schneider etc. Guarantee quality and precise of control.
- Imported stainless steel switch box and other electrical elements meet NEMA-4 (IP55) international standard.
- Auto heater equipped inside switch box, prevents elements from moisture and frost extends service life.
- PLC with operator interface: touch screen data recording and remote control options.
- Complete alarm system including limit switch, approach switch and door magnetic switch etc., guarantee the safety of operator and equipment.

F. Air flow

- Horizontal air flow: Ensures higher density of products, more efficient heat transfer while lower energy consumption.
- Annular air flow duct: Best air flow and guarantees even product temperature.
- Balanced air pressure inside structure, less cold loss at outfeed end.
- The system cleans the internal structure completely with water and disinfectants to meet the hygiene requirement of food processing.



2. Glazing Machine



2.1 Description for Immersive Glazing Machine

Immersive glazing machine is used to wrap ice on the surface of shrimp or fish fillet after quick freezing. It is mainly composed of water tank, conveying mechanism, air pump and drain valve. Under the condition that the user uses chiller to supply water and the water temperature in the water tank is 0 Celsius, the rate of immersion icing can reach about 8-12%.

2.2 Main Features

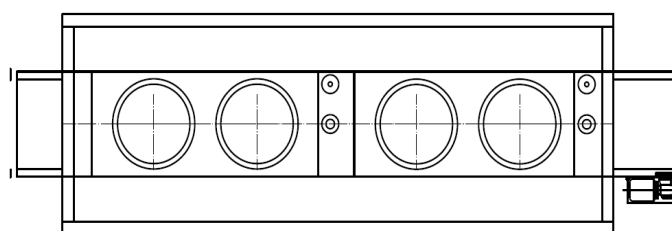
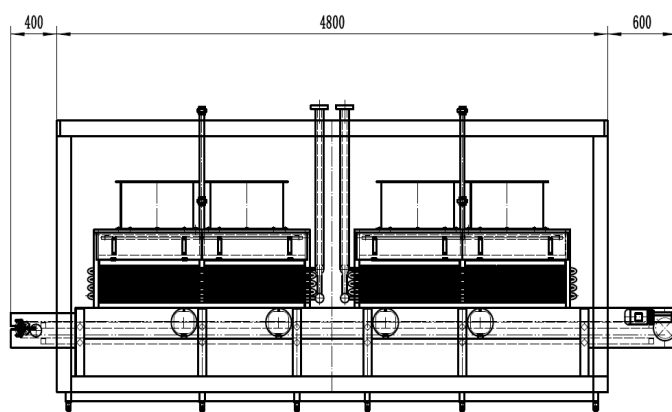
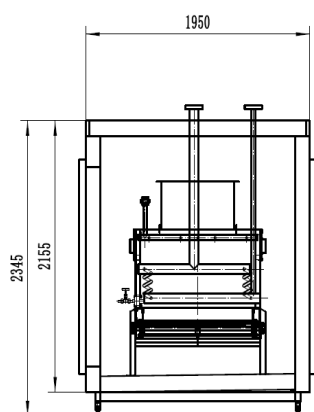
1. The air pump forced water roll to prevent frozen adhesion.
2. The operation of the belt adopts variable frequency speed control.
3. Adopt SUS304 stainless steel material to meet the hygienic requirements of food processing.

3. Hardening Freezer

Hardening Freezer is mainly used to freeze the surface of the fish after the ice coat, so that the fish surface is rapidly cooled and dried.

Hardening Freezer adopts the configuration of the downwards blowing along the longitudinal multiple axial flow fan in the tunnel. Frozen after entering a tunnel by freezing air blown from the top down, the fish body surface rapid cooling, drying. The device adopts all aluminum alloy coil evaporator and large distance.

The frost is controlled by the external water valve. The transmission network belt, the library body outsourcing, the support and so on are made of high-quality stainless steel. Most of the internal structure uses stainless steel and rust proof aluminum alloy to ensure sanitary conditions. The insulation layer is filled with rigid polyurethane foam, and its thermal insulation performance is good.



1. Cold consumption: 30kw(+35° C -42° C)
2. Installed Power: Reducer: 0.75kw, speed stepless, 1 unit
Fan: 0.75kw, 4 units

4. Commercial Terms precios adjuntados en la proforma .-

4.2 Delivery Terms

Terms of delivery	FOB China port
Time of delivery	100 days basing on: 100% of contract price received at account. (According to Payment Terms)

4.3 Payment Terms

Payment terms	Payment and delivery schedule Payment terms: The contract shall come into force after 40% of the total contract price is paid by Party B. 60% of the contract price shall be paid 7 days before shipment.
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4.4 Offer Validity

Offer Validity	This proposal is valid within one month after quote date.
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4.5 Country of Origin

Country of origin	China. Please indicate the kind of certificate of origin upon order.
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4.6 Warranty

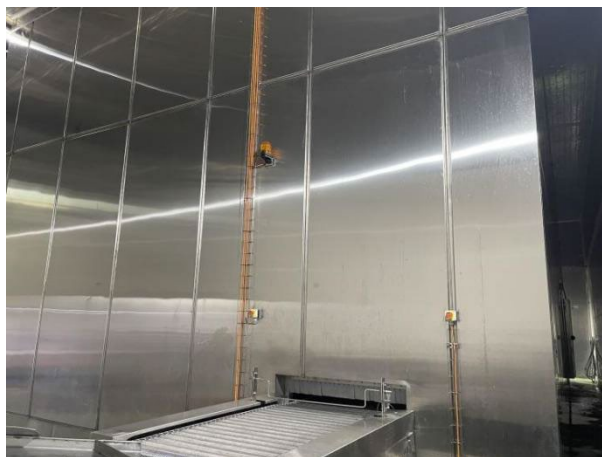
Warranty	The product is guaranteed to be free from defects in workmanship and parts in the warranty period. Defects that occur within this warranty period, under normal use and care will be repaired or replaced at our discretion. The warranty remains in effect for 1 years (12 months) from the date of the completion of commissioning, or EIGHTEEN months after delivery of the Machines, whichever expires first. Quality standard and warranty
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4.7 Installation and Commission

Installation & Commission	The seller shall send staffs to customer's site upon request to install and test the equipment. The buyer shall bear the installation staffs' round-trip air tickets, inland transportation, accommodation, meal and communication cost occurred and USD300 per day per person labor cost in customer's country. Installation and commission After the arrival of shipments, customers shall be responsible for unloading, lifting, movement and storage. Technicians will be arranged to guide the installation and commission work. During this period, forklift and scaffold shall be prepared by customers. Also, power shall be supplied to the designated place. The acceptance inspection shall be conducted by the client. Training Special training will be provided when the client required. Training on operation and trouble-shooting will be carried out after installation.
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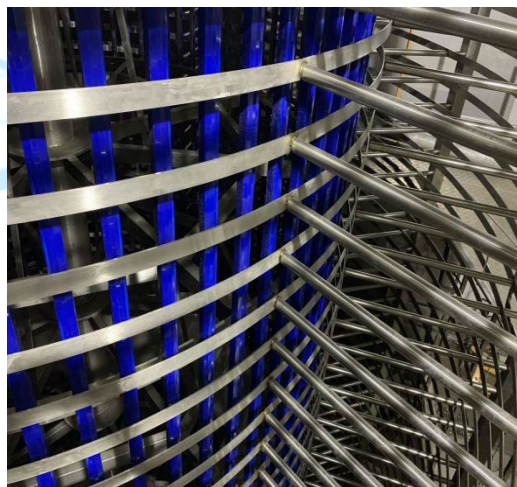
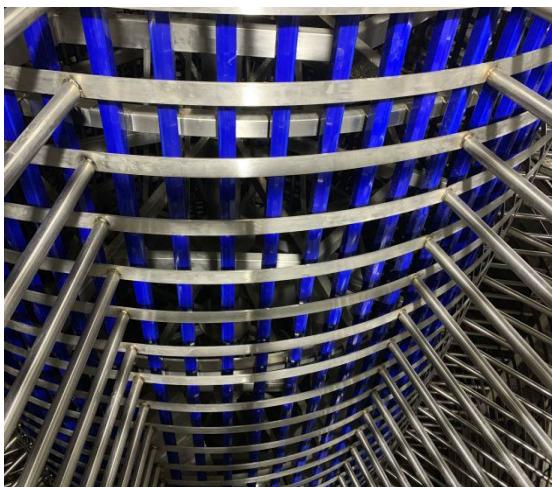
1) Insulating enclosure



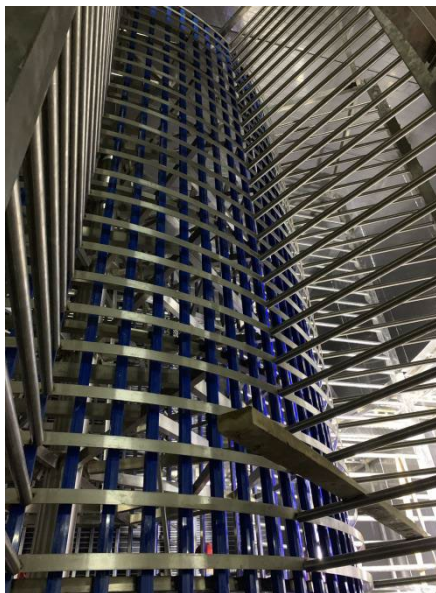


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2) Drum







3) Evaporator





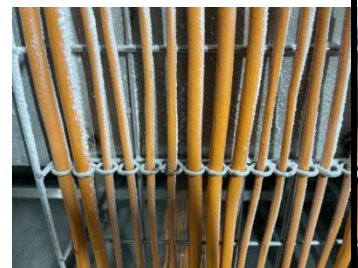
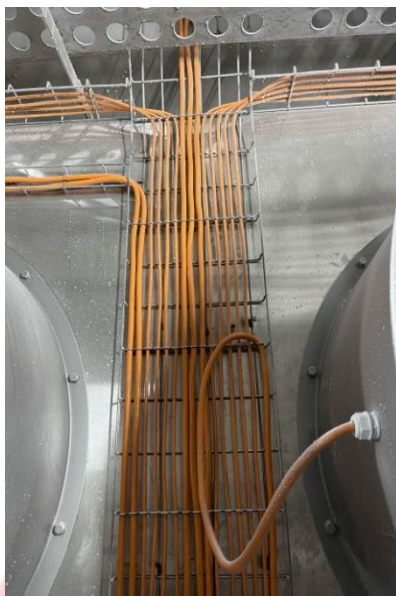

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4) Second floor

The second floor is for easy service and maintenance, and dividing the whole air flow into a high pressure and low-pressure zone.



5) Electrical control part



6) Infeed and Outfeed Device

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7) CIP-Cleaning system (optional)



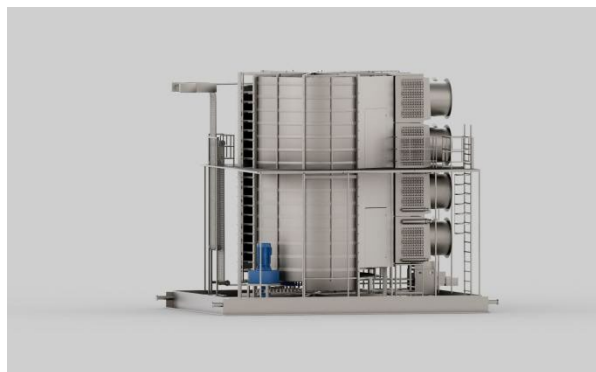
8) Inside of spiral freezer






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9) 3D pictures of Spiral freezer





Sin otro particular , enviamos saludos cordiales .-

(TECNOTHERM ARG)



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Schneider
Electric

COOLTECH
the science of cooling

SIEMENS

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ICE SYSTEMS



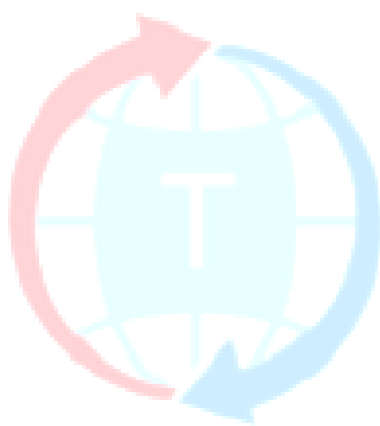
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