



TUNNEL QUICK FREEZER



Quick freezing to create safer and more reliable frozen food.

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The data will be modified without notice for technique improvement.

BRIEF INTRODUCTION

大连冰山菱设速冻设备有限公司采用日本菱设工业株式会社的工艺技术，以“三个同步”为原则，即与日本菱设技术同步、生产管理同步、质量标准同步，产品设计及制造采用日本工业厅标准，自公司成立以来，产品已覆盖至阿根廷、俄罗斯、日本、韩国、智利、巴西、印尼、马来西亚、菲律宾、孟加拉、缅甸、越南、比利时、非洲、欧洲等多个国家，现已拥有几百个国内外知名用户。公司始终以“快速冻结，创造更加安全、放心的冷冻食品”为企业宗旨；以“诚实守信、敬业务实、创新高效、追求卓越”为企业价值观；以“持续以领先速冻技术，为客户提供高品质产品”为质量方针；以“一切为了用户，快速反应到位”为服务方针。公司已于2006年2月17日通过莱茵公司ISO-9001(2000)认证。冰山菱设已成为国内速冻机行业的最高端品牌。

Dalian Bingshan Ryosetsu Quick Freezing Equipment Co., Ltd. adhere to the principle of "Three Synchronization" with Japan Ryosetsu Industries Co., Ltd., technical synchronization, production management synchronization, quality standard synchronization. Our design and manufacture adopt Japan industry standard. Since foundation in 2003, our products have been sold to Argentina, Russia, Japan, South Korea, Chile, Brazil, Indonesia, Malaysia, Philippines, Bangladesh, Myanmar, Vietnam, Belgium, Africa, Europe and etc. With the "quick freeze, to create safer and more secured frozen food" as business purpose; "honest and trustworthy, dedicated and pragmatic, innovative and efficient, the pursuit of excellence" as the corporate values; "leading the frozen technology continuously, to provide customers with high quality product" as quality policy; "All for customer, quick response" as principle of service, the company was granted TUV ISO-9001(2000) certificate on February 17, 2006. Bingshan Ryosetsu has become the top-brand of domestic quick freezing industry.



Company 公司简介 Introduction



大连冰山菱设速冻设备有限公司是由冰山集团大连冷冻机股份有限公司与日本菱设工业株式会社共同出资兴建的合资公司，主要生产具有世界先进水平的高品质速冻机，于2006年2月通过莱茵公司ISO-9001(2000)认证。

冰山集团是国家机电产品出口基地和国家一级企业，在工业制冷行业一直处于排头兵地位，是国家“六五”、“七五”、“八五”、“九五”期间技术改造企业之一，是中国机械工业100强，国有优秀500家之一和国家重点扶持的520家企业之一。“冰山”标志作为被国家工商局指定的中国工业制冷空调行业唯一驰名商标，“冰山”产品被誉为中国名牌和中国出口名牌，是国家重点支持和发展的出口名牌。

菱设工业株式会社是日本从事专业速冻设备制造的公司，于1960年成立，是世界上少数技术领先的速冻机公司之一，其多项专利技术于世界领先。其中部分速冻设备直接为前川、三菱冷热配套制造，日本菱设是日本MYCOM、三菱的螺旋速冻机OEM工厂。

Dalian Bingshan Ryosetsu Quick Freezing Equipment Co., Which Ltd. is a joint venture of Dalian Refrigeration Co., Ltd. and Japan Ryosetsu Industrial Co. Ltd, mainly produces quick freezer with top advanced technology & superior quality. The company got the certificate of ISO9001 (2000) on Feb, 2006.

Dalian Bingshan Group is a national mechanical and electrical products export base, ranked among the top 10 National machinery industrial enterprises, the top 500 excellent state-owned enterprises, and 520 enterprises under the back up by the government. "Bingshan" brand is approved for the unique "Best Trademark" in the refrigeration and air conditioning industry of China by State Administration of Industry and Commerce, "Bingshan" brand is the famous brand supported to develop by the state for export. "Bingshan" Brand is conferred China Famous Brand and China Export Famous Brand.

Japan Ryosetsu Industry Co., Ltd is a quick freezing equipment manufacturer, founded in 1960, owns a number of world-leading patented technology.

安全可靠的设备配置

- 采用世界一流水平的关键零部件及电气元件；
- 内部架体全部采用不锈钢和进口高分子聚乙烯材料，符合欧盟食品标准；
- 支撑用的树脂托条为日本进口，在运转过程中不起毛刺，长久耐用。

多重的节能设计

- 先进的送风方式，可真正实现均匀布风，冻结效率高；
- 冻结速度快，合理风速，冷却效率高，干耗低；
- 回风效率高，同等风量风速下，风机功率低，节能；
- 弧形挡风板设计，无送风死角，减少运行损失；
- 先进的传动方式，滑动摩擦小，能量损失低；
- 冻结操作时利用变频器对传送速度进行无级调节，使速冻机对各种冻品的适应性强。

高品质的换热器

- 带亲水膜铝管铝片换热器，国内唯一采用美国的O A K 翅片生产线及欧洲进口的配套胀管机的生产线生产，可靠性高；
- 散热片带有亲水膜，完全避免翅片被氧化污染，使用寿命较普通铝翅片长1倍；
- 亲水膜使清洗和冲霜更容易、更彻底。在保证库内清洁环境的同时，可使冲霜水节省1倍以上；
- 变片距结构可使换热器换热效率提高，提高速冻机的冻结效率；
- 特有的变片距结构，可延长冲霜时间，使设备连续工作时间延长；
- 通风系统采用中美合资轴流风机，低温专用全封闭低温防潮防水电机，运转平稳，电机风叶、风筒为不锈钢。

国内顶尖库板

- 采用国内最先进的意大利生产线生产，电脑配料可保证泡沫容重达到38-40kg/m³，保温性能非常好；
- 采用双面不锈钢板，其中外板采用不锈钢拉丝板，耐腐蚀且不易留下各种印痕，美观、耐用。

SAFE AND RELIABLE PART

- World class parts and electric components.
- HACCP standard based on stainless steel and Hygeian PVC.
- Imported resin runner which never fuzz for belt running support.

MULTI PURPOSE DESIGN

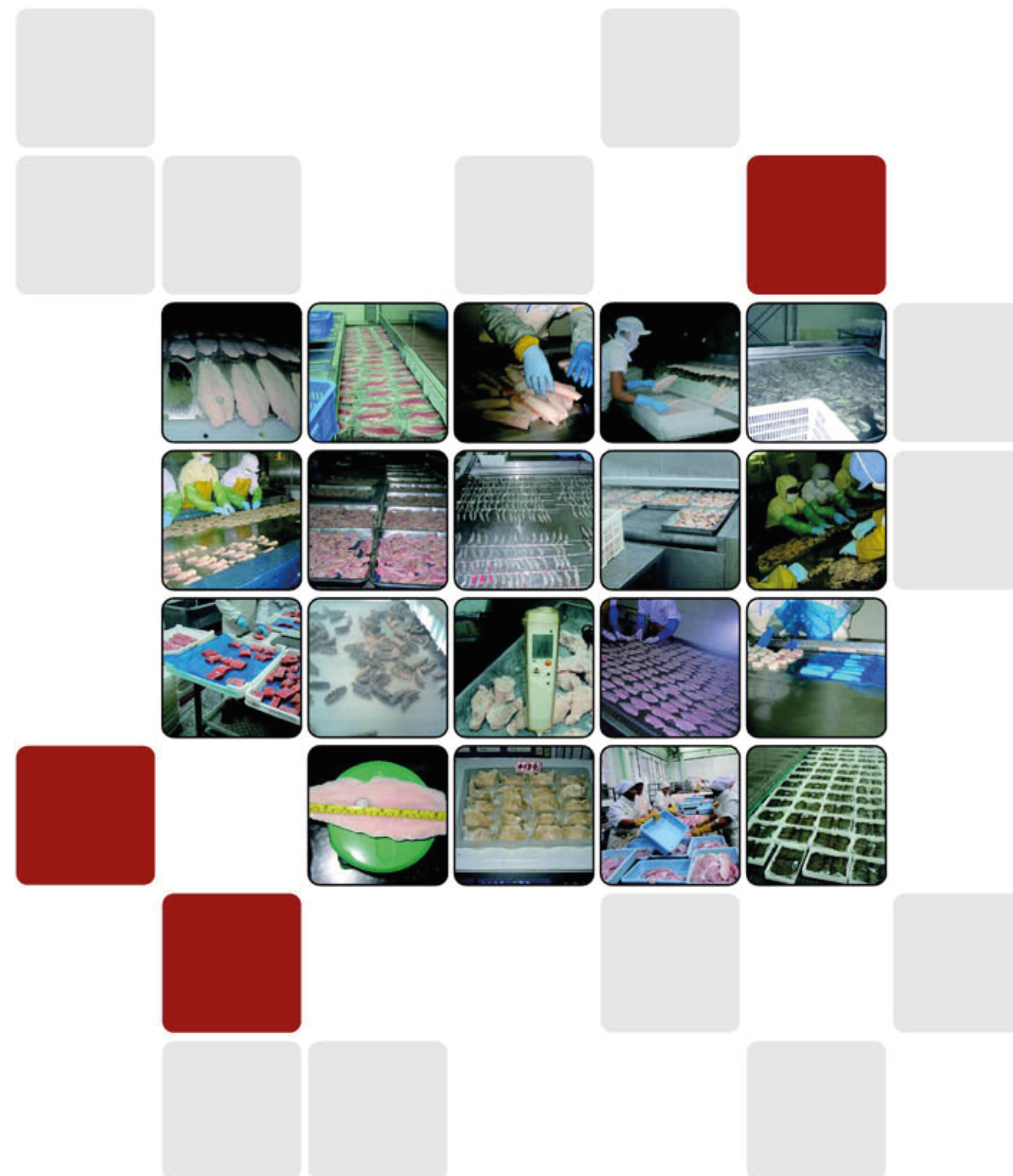
- Special air flow to fast freezing.
- Reasonable air speed and low shrinkage loss.
- Small motor fan to save energy.
- Arch air guide avoiding capacity loss.
- Advanced driving mode to reduce energy loss.
- Strong applicability for product based on invert controller.

HIGH QUALITY EVAPORATOR

- Top class processing line ensures fine fabrication of evaporator.
- Extend Long life of heat exchange fin with epoxy to avoiding being oxidated.
- Great saving of defrosting water and ensuring the clean space inside.
- Various fin space to enhance the efficiency of heat exchange for freezer.
- Various fin space extend the interval of defrosting to prolong processing time.
- Professional Credit Axial fan & motor for stable & smooth running.

TOP QUALITY INSULATED PANEL

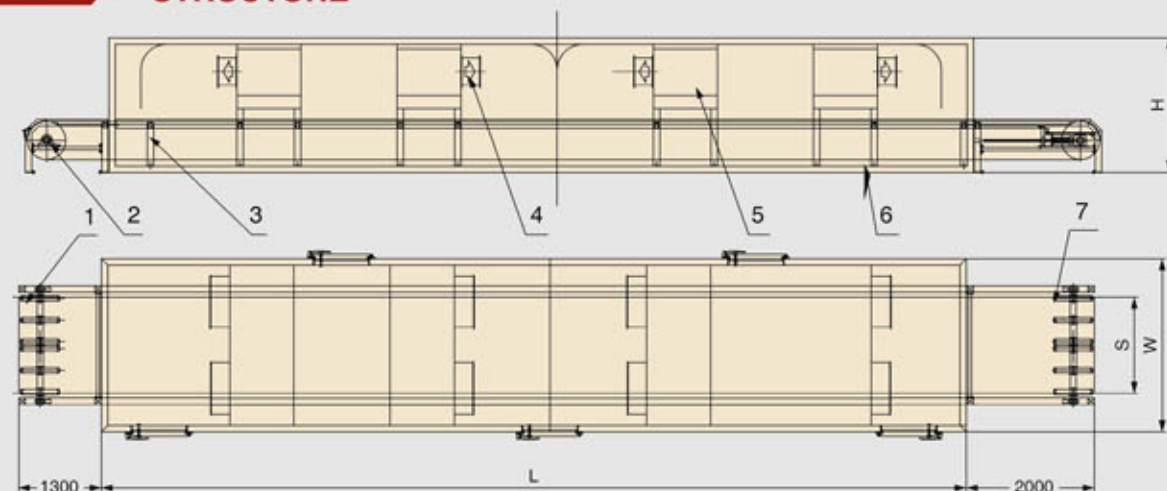
- Automatic product line from Italy to make the high density insulation panel.
- Stainless steel sheet for insulated panel to good outlook surface and reliability.



板带特点 / FEATURE OF PLATE-BELT FREEZER

- 采用进口不锈钢板带，韧性高，表面平整，负载不易变形；
- 采用日本进口胶条，并使用日本先进工艺进行粘结，胶条长期使用不脱落，保证了板带的正常运行；
- 采用库内回板带的结构方式，避免板带被外界环境污染，减少了板带返回过程中冷量损失。
- Imported strong Intensity stainless steel plate.
- High stick on plastic strip imported from Japan keep the belt normal running.
- Belt running inside to avoid outside pollution and cold loss.

结构型式 / STRUCTURE



1. 出料口 Out feed 2. 电机及减速机 Motor and Speed-reduced Motor 3. 架体 Steel Frame 4. 轴流风机 Axial Fans
5. 蒸发器 Evaporate 6. 维护结构 Insulation Panel 7. 进料口 Infeed

技术参数 / DATA OF PLATE-BELT FREEZER

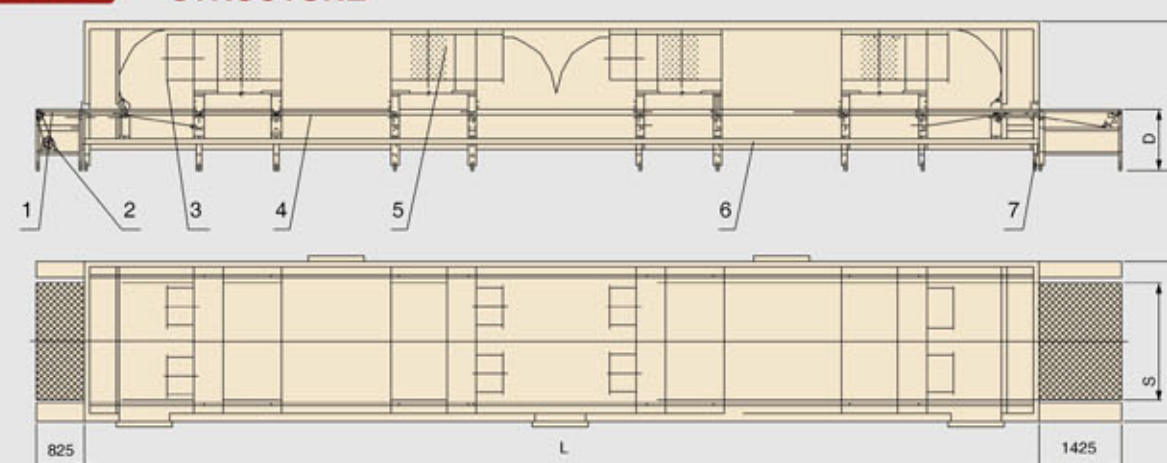
项目 Item	冻结能力 Freezing kg/h	配机冷量 Ref.load kw	装机容量 Motor Power kw	冻结时间 Freezing Time T. min	入料温度 Temp.in °C	出料温度 Temp.out °C	库内温度 Chamber Temp. °C	制冷剂 RFNT	板带宽度 Belt Width mm	库体外形尺寸 Overall Dim. L × W × H(m)
型号 Model										
RSB-1209-250	250	46	10.5							9 × 2.3 × 2.7
RSB-1220-500	500	80	19.5						1200	20 × 2.3 × 2.7
RSB-1224-600	600	100	20.5							24 × 2.3 × 2.7
SRSB-1220-1000	1000	155	43	15~60	+15	-18	-35	R717		20 × 4.5 × 3.15
SRSB-1520-1250	1250	185	43						1500	20 × 4.7 × 3.15
SRSB-1524-1500	1500	210	48							24 × 4.7 × 3.15

注：1. 制冷剂除标准R717，也可采用R22等氟利昂工质。2. 冻结能力以扇贝丁为准。
Note: 1. Refrigerant: Ammonia R717, Freon R22. 2. Freezing capacity is calculated based on scallop.

网带特点 / FEATURE OF MESH-BELT FREEZER

- 独有专利的传动方式，使网带传动更平稳；
- 弹簧不锈钢丝制作高品质网带，弹性好，表面平整，负载不易变形；
- 采用宽网带设计，适应范围广，承载能力强；
- 采用气泵自动调节方式进行调偏，在网带运行异常时，感应装置自动发送信号给防偏系统，气泵运行，使网带回到正常状态。
- Special patent driving ensures belt smooth running.
- No distortion while loading based on high quality S.S spring for belt.
- Wide belt design for wide product scope, strong carry load.
- Keep the belt correct running by air pump while occurs deflective running.

结构型式 / STRUCTURE

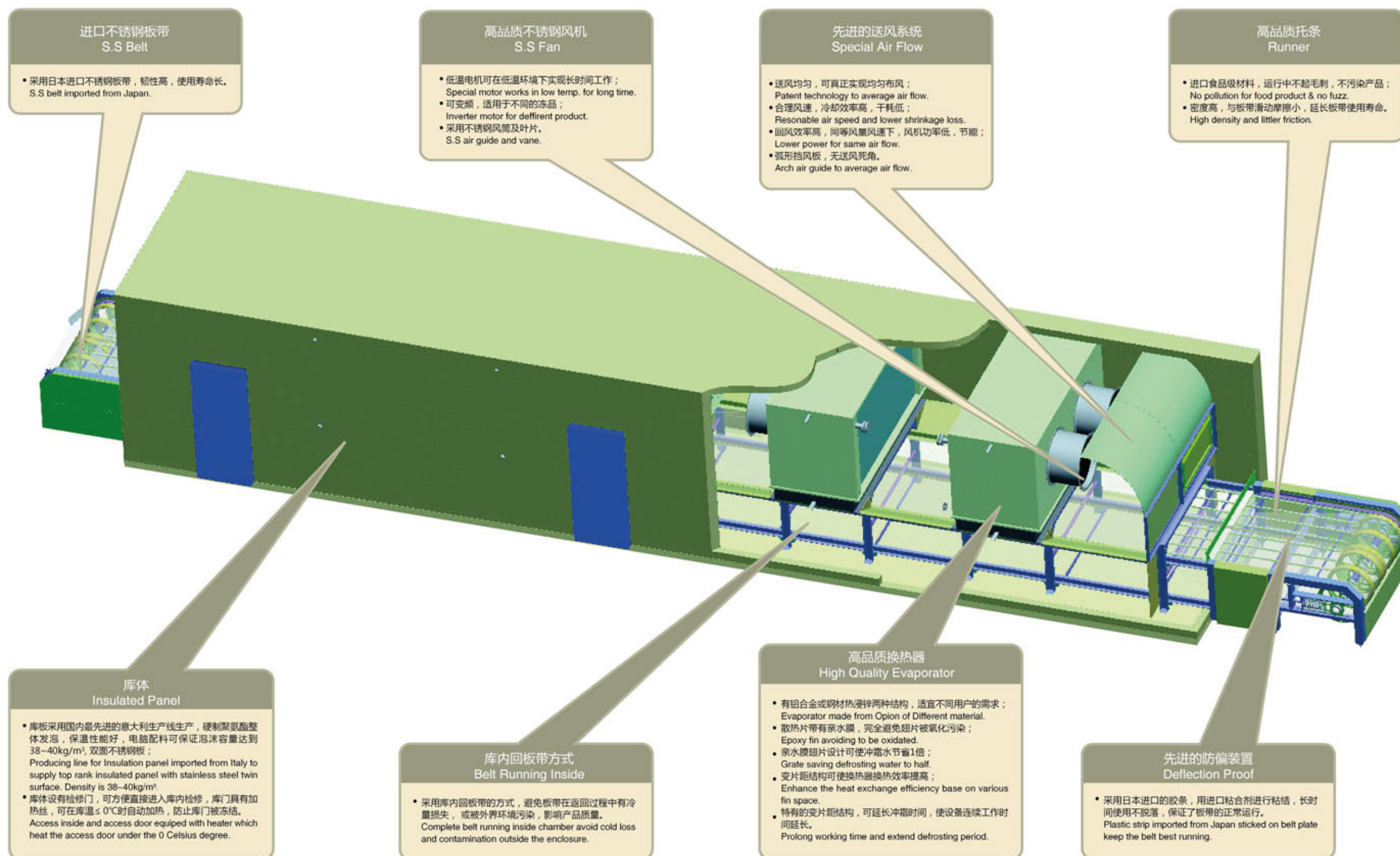


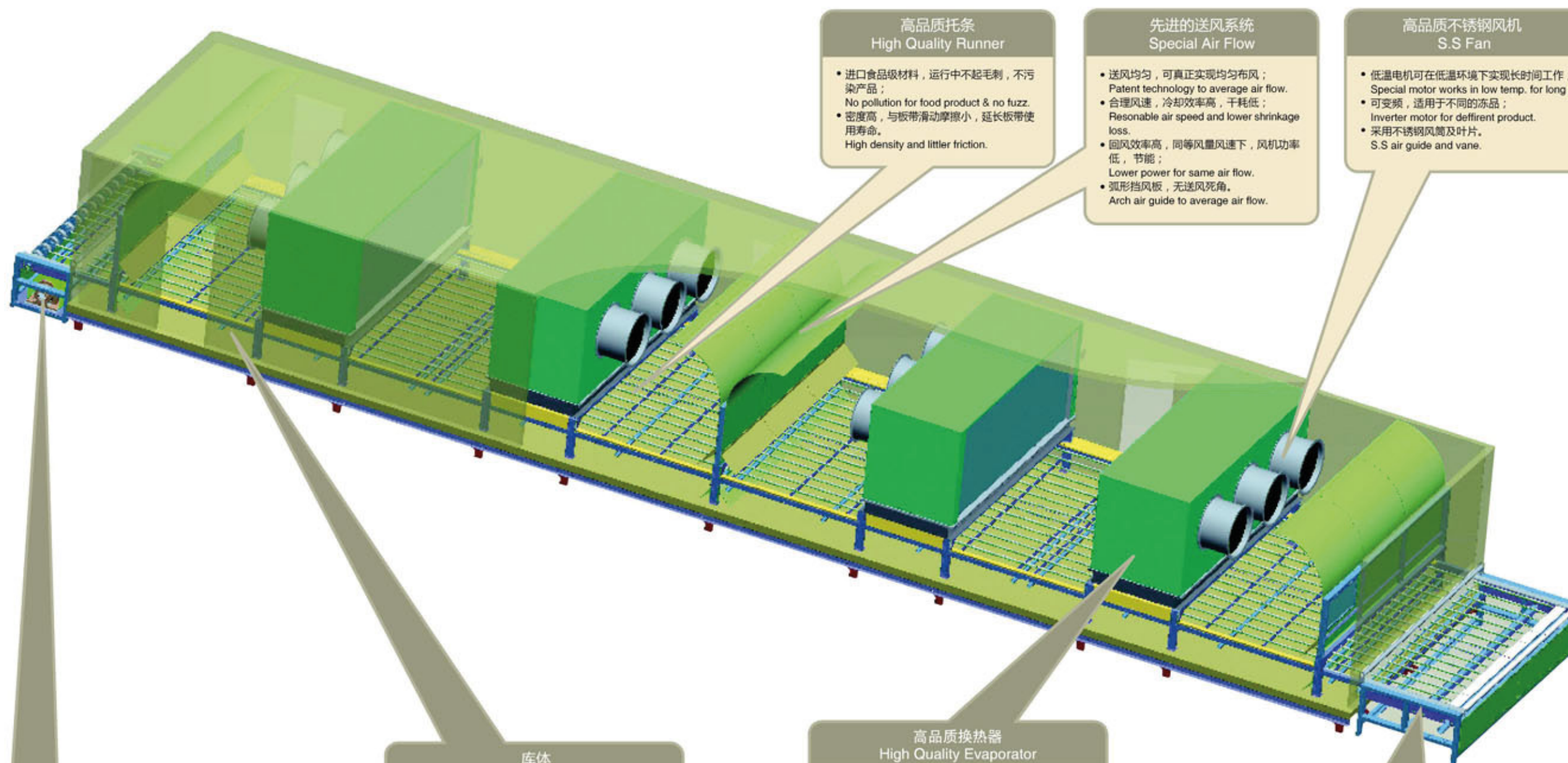
1. 出料机构 Out Feed 2. 减速机 Speed-reduced Motor 3. 风机 Axial Fans 4. 架体 S.S. Frame 5. 蒸发器 Evaporator
6. 维护结构 Insulation Panel 7. 进料机构 Infeed

技术参数 / DATA OF MESH-BELT FREEZER

项目 Item	冻结能力 Freezing kg/h	配机冷量 Ref.load kw	装机容量 Motor Power kw	冻结时间 Freezing Time T. min	入料温度 Temp.in °C	出料温度 Temp.out °C	库内温度 Chamber Temp. °C	制冷剂 RFNT	网带宽度 Belt Width mm	库体外形尺寸 Overall Dim. L × W × H(m)
型号 Model										
RSF-1007-150	150	30	12						1000	6.8 × 2 × 2.7
RSF-2012-500	500	85	12							12 × 2.7 × 2.7
RSF-3011-750	750	115	15						2000	11 × 3.7 × 2.7
RSF-3014-1000	1000	155	20							14 × 3.7 × 2.7
RSF-3017-1200	1200	180	20	15~60	+15	-18	-35	R717	3000	17 × 3.7 × 2.7
RSF-3220-1500	1500	215	30						3200	20 × 3.75 × 2.7
RSF-4021-2000	2000	300	42						4000	21 × 4.7 × 2.7
RSF-4820-2250	2250	330	55						4800	19.7 × 5.4 × 3

注：1. 制冷剂除标准R717，也可采用R22等氟利昂工质。2. 冻结能力按分割鸡块记。
Note: 1. Refrigerant: Ammonia R717, Freon R22. 2. Freezing capacity is calculated based on chicken cut.





高品质托条 High Quality Runner

- 进口食品级材料，运行中不起毛刺，不污染产品；
No pollution for food product & no fuzz.
- 密度高，与板带滑动摩擦小，延长板带使用寿命。
High density and littler friction.

先进的送风系统 Special Air Flow

- 送风均匀，可真正实现均匀布风；
Patent technology to average air flow.
- 合理风速，冷却效率高，干耗低；
Reasonable air speed and lower shrinkage loss.
- 回风效率高，同等风量风速下，风机功率低，节能；
Lower power for same air flow.
- 弧形挡风板，无送风死角。
Arch air guide to average air flow.

高品质不锈钢风机 S.S Fan

- 低温电机可在低温环境下实现长时间工作；
Special motor works in low temp. for long time.
- 可变频，适用于不同的冻品；
Inverter motor for different product.
- 采用不锈钢风筒及叶片。
S.S air guide and vane.

独有专利直接驱动方式 Patent Driving Method

- 采用专利的直接驱动方式，网带各部分受力均匀，延长网带使用寿命；
Prolong life of belt which driven based on patent technology.
- 进口专用设备制作的不锈钢丝网带，表面平整，弹性好，强度高，使用寿命长。
Smooth surface of S.S belt and good elasticity.

库体 Insulated Enclosure

- 库板采用国内最先进的意大利生产线生产，硬制聚氨酯整体发泡，保温性能好，电脑配料可保证泡沫容量达到38~40kg/m³，双面不锈钢板；
Producing line for Insulation panel imported from Italy to supply top rank insulated panel with stainless steel twin surface. Density is 38~40kg/m³.
- 库体设有检修门，可方便直接进入库内检修，库门具有加热丝，可在库温≤0℃时自动加热，防止库门被冻结。
Access inside and access door equipped with heater which heat the access door under the 0 Celsius degree.

高品质换热器 High Quality Evaporator

- 有铝合金或钢材热镀锌两种结构，适宜不同用户的需求；
Evaporator made from Opion of Different material.
- 散热片带有亲水膜，完全避免翅片被氧化污染；
Epoxy fin avoiding to be oxidated.
- 亲水膜翅片设计可使冲霜水节省1倍；
Grate saving defrosting water to half.
- 变片距结构可使换热器换热效率提高；
Enhance the heat exchange efficiency base on various fin space.
- 特有的变片距结构，可延长冲霜时间，使设备连续工作时间延长。
Prolong working time and extend defrosting period.

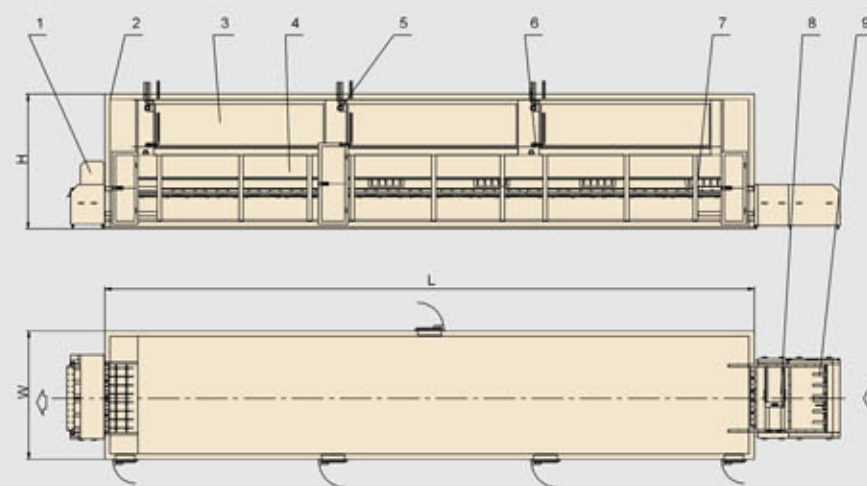
先进的防偏装置 Deflection-proof

- 采用气泵自动调节方式，在网带运行异常时，感应装置自动发送信号给防偏系统，气泵运行，使网带回到正常状态。
Keep the belt correct running by air pump while occurs deflective running.

高效板带、网带速冻机特点 / FEATURE OF HIGH EFFICIENCY PLATE/MESH-BELT FREEZER

- 快速冻结，200g鱼片，17min出货。
- 干耗低，干耗为普通速冻机的一半。
- 冷风系统的优化设计，增加板带上下喷嘴装置，风速加快，冷却效率高。
- 双板带式采用两条板带安装在同一库体内，中间加隔板，节省空间，外形体积小。
- 零部件采用无污染的材料制作，传动装置安装在速冻机外部，保证速冻机内部完全没有润滑油，结构简单。
- Quick freezing, passage time is 17min for fish filet 200g/pc.
- Lower moisture-lost.
- Optimized design of airflow system, adding the nozzle devices at the both sides of belt to enhance heat exchange efficiency.
- Two belts are installed in the same freezer where has partition to save room.
- Parts inside without any oil and outside driving device keep oil pollution from product processing.

高效板带速冻机结构型式 / STRUCTURE OF HIGH EFFICIENCY PLATE-BELT FREEZER



1. 出口驱动电机
2. 库体
3. 蒸发器
4. 离心风机
5. 回汽管
6. 供液管
7. 架体
8. 入口驱动电机
9. 板带

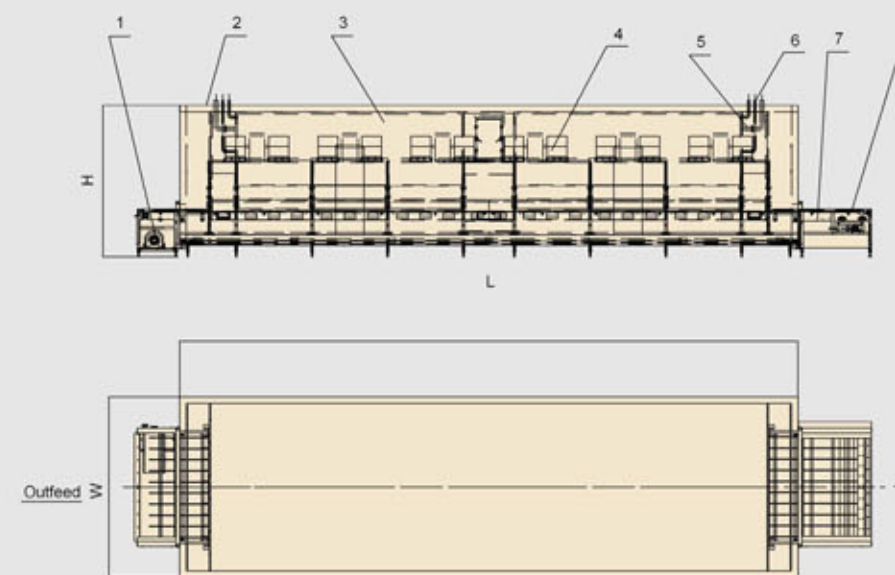
1. Outlet Driving Motor
2. Panel
3. Evaporator
4. Centrifugal Fan
5. Return Pipe
6. Liquid Supply Pipe
7. Support
8. Inlet Driving Motor
9. Belt

高效板带速冻机技术参数 / DATA OF HIGH EFFICIENCY PLATE-BELT FREEZER

项目 Item	冻结能力 Freezing	配机冷量 Ref.load	装机容量 Motor Power	冻结时间 Freezing Time	入料温度 Temp.in	出料温度 Temp.out	库内温度 Chamber Temp.	制冷剂 RFNT	板带宽度 Belt Width	库体外形尺寸 Overall Dim.
型号 Model	kg/h	kw	kw	T. min	℃	℃	℃		mm	L × W × H(m)
RSBA-1513-500	500	120	41	10~40	+10	-18	-38	R717	1500	13 × 3.0 × 3.0
RSBA-1520-850	850	180	52							19.7 × 3.0 × 3.0
SRSBA-1525-1000	1000	230	66							25 × 3.0 × 3.0
SRSBA-1520-1700	1700	350	104							19.7 × 5.4 × 3.0

注：1. 制冷剂除标准R717，也可采用R22等氟利昂工质。2. 冻结能力按裸冻鱼片记。
Note: 1. Refrigerant: Ammonia R717, Freon R22 2. Freezing capacity is calculated based on raw fish filet.

高效网带速冻机结构型式 / STRUCTURE OF HIGH EFFICIENCY MESH-BELT FREEZER



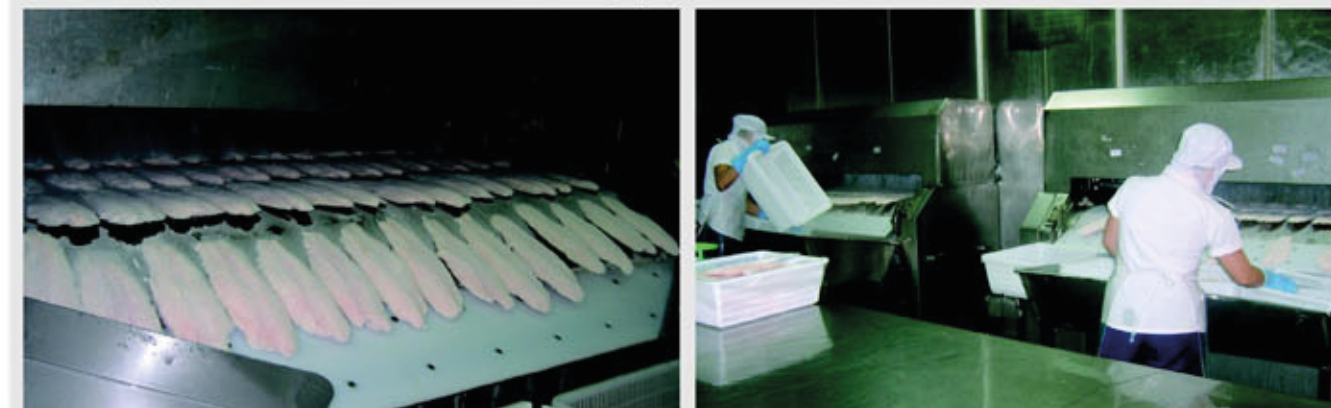
1. 出口驱动电机
2. 库体
3. 蒸发器
4. 离心风机
5. 回汽管
6. 供液管
7. 架体
8. 输送网带

1. Outlet Driving Motor
2. Panel
3. Evaporator
4. Centrifugal Fan
5. Return Pipe
6. Liquid Supply Pipe
7. Support
8. Belt

高效网带速冻机技术参数 / DATA OF HIGH EFFICIENCY MESH-BELT FREEZER

项目 Item	冻结能力 Freezing	配机冷量 Ref.load	装机容量 Motor Power	冻结时间 Freezing Time	入料温度 Temp.in	出料温度 Temp.out	库内温度 Chamber Temp.	制冷剂 RFNT	网带宽度 Belt Width	库体外形尺寸 Overall Dim.
型号 Model	kg/h	kw	kw	T. min	℃	℃	℃		mm	L × W × H(m)
RSFA-2012-500	500	125	35	10~40	+15	-18	-38	R717	2000	12 × 3.5 × 3.0
RSFA-2021-850	800	195	60				-35			21 × 3.5 × 3.0

注：1. 制冷剂除标准R717，也可采用R22等氟利昂工质。2. 冻结能力按裸冻鱼片记。
Note: 1. Refrigerant: Ammonia R717, Freon R22 2. Freezing capacity is calculated based on raw fish filet.



世界的冰山菱设

BINGSHAN RYOSETSU, CREATING THE WORLD BRAND

