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MADE IN ITALY

## Food Processing Machinery



EASY Freeze 25 ASR



EASY Freeze 50 ASR



EASY Freeze 80 ASR

# The Art of Freezing EASY Freeze

Redefining IQF With Adaptable Air Flow

# EASY Freeze

Redefining IQF Technology  
With Adaptable Air Flow



## EASY Freeze FAMILY:

Model	Capacity based on Peas
EASY Freeze 5 M	500 kg/h
EASY Freeze 10 M	1.000 kg/h
EASY Freeze 15 ASR	1.500 kg/h
EASY Freeze 20 ASR	2.000 kg/h
EASY Freeze 25 ASR	2.500 kg/h
EASY Freeze 35 ASR	3.500 kg/h
EASY Freeze 50 ASR	5.000 kg/h
EASY Freeze 60 ASR	6.000 kg/h
EASY Freeze 80 ASR	8.000 kg/h
EASY Freeze 100 ASR	10.000 kg/h
EASY Freeze 120 ASR	12.000 kg/h
EASY Freeze 140 ASR	14.000 kg/h
EASY Freeze 160-260 ASR	16.000-26.000 kg/h

> **Perfect shape of IQF product and no clumps**  
**Full controlled fluidisation method** keeps the product constantly suspended above the belt in a cushion of air. The result is the immediate crust freezing and efficient core freezing of individual pieces, regardless of type, variety or condition of product.

> **Up to several days or more continuous production** without any drop in freezing efficiency, thanks to the effect of powerful ASR (Automatic Snow Removal) system. No more interruptions to defrost even when running double shifts, which again should present some daily savings of operating costs.

> **Maximized freezing efficiency** for each unique product, whether the product is heavy, light, soft, sticky or fragile, thanks to Variable speed control of all fans and belts, allowing on-the-fly optimization of air flow conditions.

> **Interior video monitoring** allows for real-time supervising of operating conditions, allowing the complete control and adjustments of the entire process from outside, without necessity to entering into the freezer.

> **Entire machinery is constructed in stainless steel**, including powerful fans / turbines (produced by PIGO).

> **Maximized IQF quality.** Due to the air flow that is created from our proprietary fans (designed and manufactured by PIGO) our freezing method does not allow any settling or adhering together of product. The product remains in a state of fluctuation until it is crust frozen, thus ensuring free flowing IQF.

> **Custom freezing possibilities.** With variable control of all fans and belts (standard feature), our freezer is adaptable to virtually any small fruit regardless of ripeness, state of process, condition or size including all the berry types/varieties.





**Industry proven.** Our freezing method is not new. We have refined and improved some aspects of our technology over the years, but the general concept is highly proven to work on a variety of very difficult products. We have satisfied customers all over the world that can verify the successes of our freezing method.

EASY Freeze is considered as the freezer with the most superior sanitation, giving the possibility to user to freeze different products one after the other without risk of cross – contamination.

**NITROGEN FREE TECHNOLOGY APPLIED!** The obvious benefit is the direct cost savings but it should also be mentioned that eliminating the pre-crust freezing step will also prevent misshaped raspberries from staying misshaped. Our adaptable air flow (fluidization) method will actually help flattened raspberries to restore the original shape and that way improve the final quality of your packs.



### EASY Clean concept

> **OPEN DESIGN** allows direct access to all interior components for quick and easy cleaning cycles and maintenance. CIP (Clean in Place) options also available.

> **CLEAN BELT** for all the production cycle, the belt kept inside the freezer housing all the time.

> **NO CONTAMINATION OF THE EVAPORATOR** by product particles, thanks to built-in deflectors and fully controlled fluidization. The result is timesaving due to the elimination of unnecessary production stops and possibility of having several shifts or more days of non-stop working time.

> **EVAPORATORS EFFICIENTLY AND EASILY CLEANED** by built-in cleaning system, and efficiently dried due to their horizontal disposition (these operations are not that easily performed with vertically positioned ones).

EASY Freeze is **ENERGY SAVING** and **TROUBLE FREE** solution for all your freezing needs.

Verify that even the most difficult-to-IQF products are easily fluidized in our freezer.



EASY Freeze Model	5 M	10 M	15 ASR	25 ASR	35 ASR	50 ASR	60 ASR	80 ASR	100 ASR	120 ASR	140 ASR	UP TO	240 ASR
FAN/TURBINE	1+1	2+2	1+1	1+2	2+2	3+3	3+4	4+5	6+6	7+7	8+8	...	13+14
Capacity kg/h (green peas):	500	1.000	1.500	2.500	3.500	5.000	6.000	8.000	10.200	12.000	14.000	...	24.000
Required refrigeration (green peas) in kW:	77	149	217	326	459	684	786	1038	1320	1575	1830	...	3098
Capacity kg/h (shrimps, peeled and cooked, 400-900 pcs/kg):	350	700	1.050	1.750	2.500	3.600	4.200	5.600	7.100	8.400	9.800	...	16.800
Required refrigeration (shrimps) in kW:	66	128	176	279	389	577	662	876	1114	1327	1541	...	2625
Capacity kg/h (sardines/sprat, mussels meat cooked)	300	600	900	1.500	2.200	3.000	3.600	4.800	6.100	7.200	8.400	...	14.400
Required refrigeration (sardines/sprat, mussels meat cooked) in kW:	62	118	162	259	369	545	639	849	1044	1260	1488	...	2495
Installed el. Power in kW (3x380V 50Hz):	20	38	38	51	70	105	120	155	210	244	279	...	510
Air consumption in l/sec (for ASR):	19	29	39	39	39	39	49	49	49	49	69	...	69
Water consumption during evaporator washing in l/min (+15 °C, 2 bar)	100	180	180	220	300	400	500	600	700	780	960	...	1600
Housing (LxBxH) in mm:	2350 x 3200 x 2450	4400 x 3200 x 2450	4060 x 4860 x 4450	5460 x 4860 x 4450	6420 x 4860 x 4450	9060 x 4860 x 4450	10440 x 4860 x 4450	13060 x 4860 x 4450	16660 x 4860 x 4450	18860 x 4860 x 4450	21660 x 4860 x 4450	...	34060 x 4860 x 4450



**PiGo®**

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- Freeze Drying
- Spiral Freezers
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- Spiral Proofing
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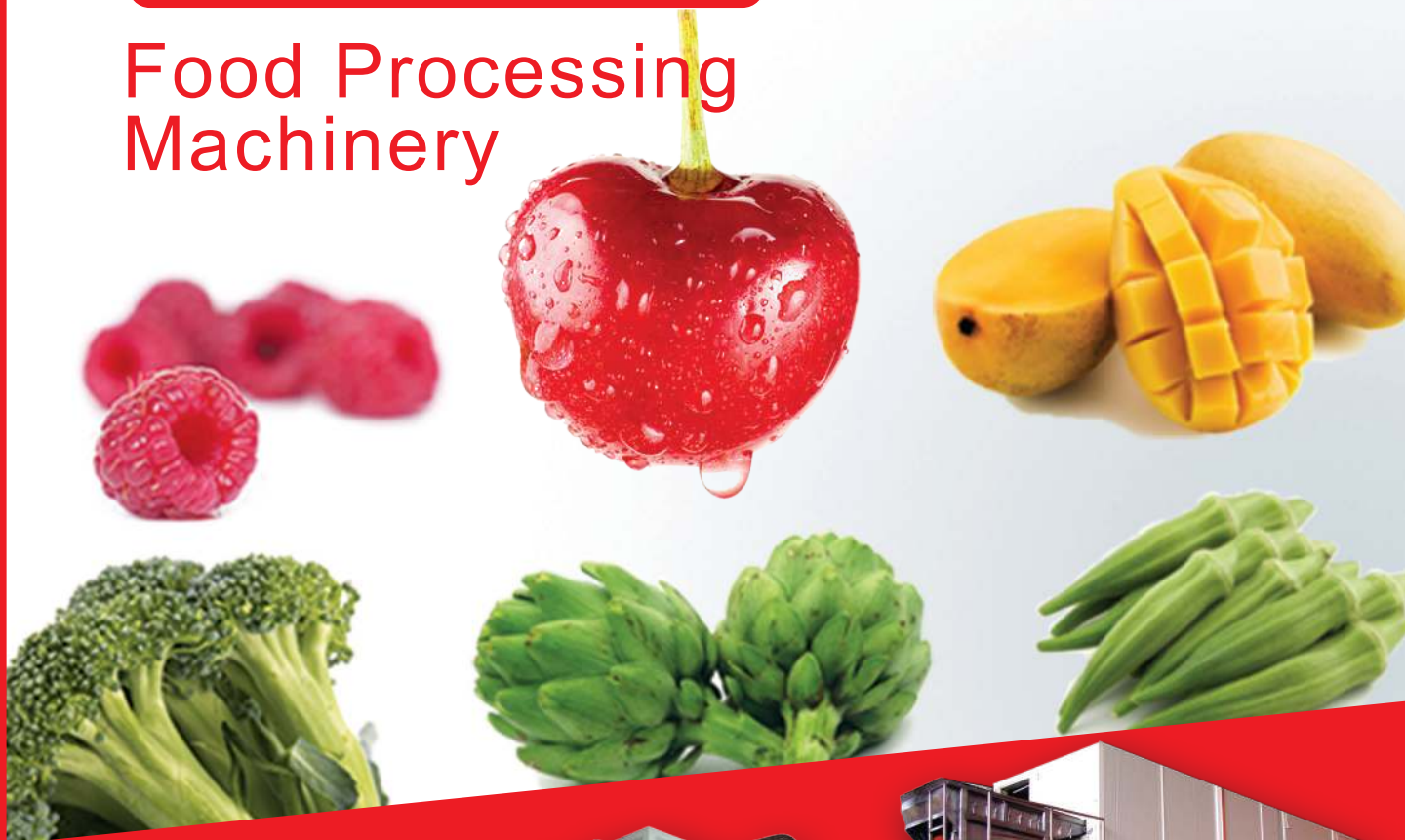






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<b>Required refrigeration</b> (green peas) in kW:	77	149	217	326	459	684	786	1038	1320	1575	1830	...	3098
<b>Capacity</b> kg/h (strawberries):	350	700	1.100	1.800	2.600	3.600	4.200	5.600	7.100	8.400	9.800	...	16.800
<b>Required refrigeration</b> (strawberries) in kW:	66	128	176	279	389	577	662	876	1114	1327	1541	...	2625
<b>Installed el. Power</b> in kW (3x380V 50Hz):	20	38	38	51	70	105	120	155	210	244	279	...	510
<b>Air consumption</b> in l/sec (for ASR):	19	29	39	39	39	39	49	49	49	49	69	...	69
<b>Water consumption</b> during evaporator washing in l/min (+15 °C, 2 bar)	100	180	180	220	300	400	500	600	700	780	960	...	1600
<b>Housing (LxBxH) in mm:</b>	2350 x 3200 x 2450	4400 x 3200 x 2450	4060 x 4860 x 4450	5460 x 4860 x 4450	6420 x 4860 x 4450	9060 x 4860 x 4450	10440 x 4860 x 4450	13060 x 4860 x 4450	16660 x 4860 x 4450	18860 x 4860 x 4450	21660 x 4860 x 4450	...	34060 x 4860 x 4450



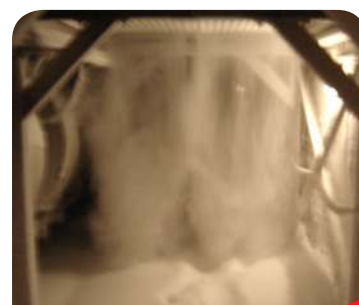
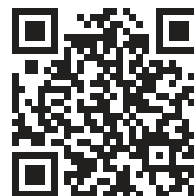
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MADE IN ITALY

Food Processing  
Machinery



**FREEZE DRYING**  
*Lyophilizer*

# EASY Freeze DRYER

Lyophilizers

# EASY Freeze DRYER

## Lyophilizer



### PIGO EASY Freeze DRYER - EFD

PIGO srl has established itself as a world-class leader in the design and manufacture of high technology freezing equipment and freeze dryers, as well as fruit and vegetable processing equipment.

PIGO srl designs, fabricates and assembles sophisticated pilot and production freeze dryers – lyophilizers, product line which includes a broad range of standard and custom units.

#### FREEZE DRYING

The freeze drying - dehydration technology allows to save delicate aromas while drying the frozen product under vacuum, producing premium quality product. The ice contained in the product is sublimated, hence transformed from solid to gas and then trapped inside the condensation system. Premium sensorial properties for finished product, absolutely superimposable to those of the fresh product.

#### FREEZE DRYING PROCESS

Freeze drying is the drying of an already frozen product in a vacuum below the “triple point” (6.2 mbar = 4.6 torr). Here, water will only be present in two phases: ice and vapour. The vacuum allows the ice to turn directly into vapour without first passing through the water stage, in a sublimation process.

Freeze drying is applied to dry a vast number of food products like fruit / berries / vegetables, meat / seafood, soup blocks, rice dishes, etc. and this preserves the product's original shape, colour, taste, aroma and nutrients, and at the same time make them easy to store (no need for a cold chain) and serve.

You can roughly estimate sublimated water amount by determining 90-95% of product weight intended as a typical batch. For example, if the product weight is 100 kilograms wet, you will need to condense capacity of 90-95 kg or liters to process the batch.

#### Description of the Operation

Generally, the Freeze Drying, or Lyophilization cycle is divided in three phases:

An initial IQF freezing process, carried out in such a way that:

- The product exhibits the desired crystalline structure.
- The product is frozen below its eutectic temperature.

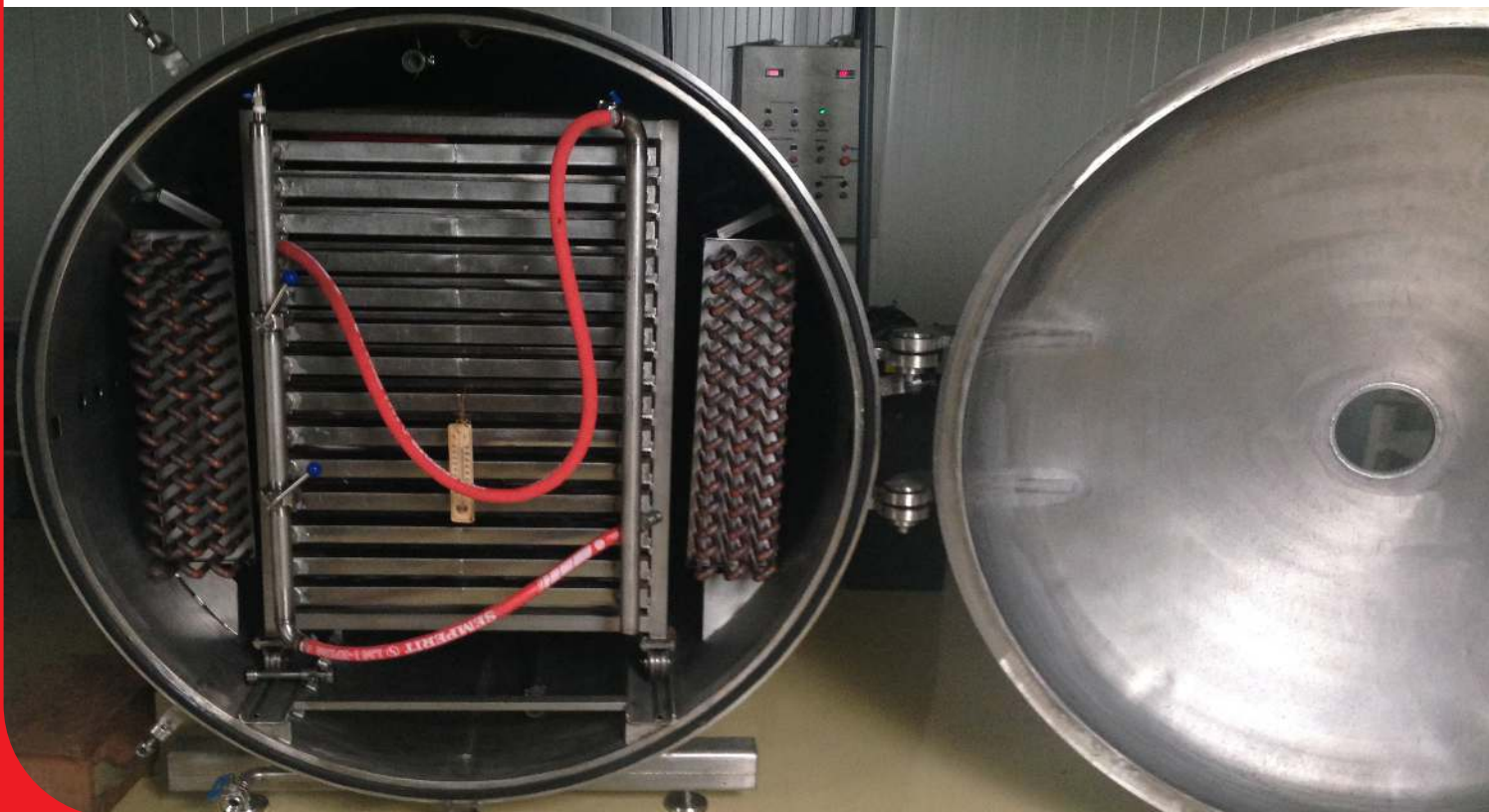
A primary drying (sublimation) phase during which:

- The partial pressure of the vapor surrounding the product must be lower than the pressure of the vapor from the ice, at the same temperature.
- The energy supplied in the form of heat must remain lower than the product's eutectic temperature (the highest allowable product temperature during the conditions of sublimation.)

A secondary drying aimed at eliminating the final traces of water which remain due to absorption, and where:

- The partial pressure of the vapor rising from the product will be at its lowest levels.

At the completion of the process, the treated product will have retained its form, volume and original structure, as well as all its physical, chemical and biological properties. It can then be stored (provided packaging is effective to the reduction of moisture migration) for an almost indefinite period of time. As the product is porous, it can be re-dissolved by the simple addition of a proper solvent.





## MACHINE EXECUTION

### Material

- Standard drying chamber shape is horizontal cylinder, all entirely made in stainless steel (Chamber, doors, hinges, shelf modules, trays etc...).

### Chamber

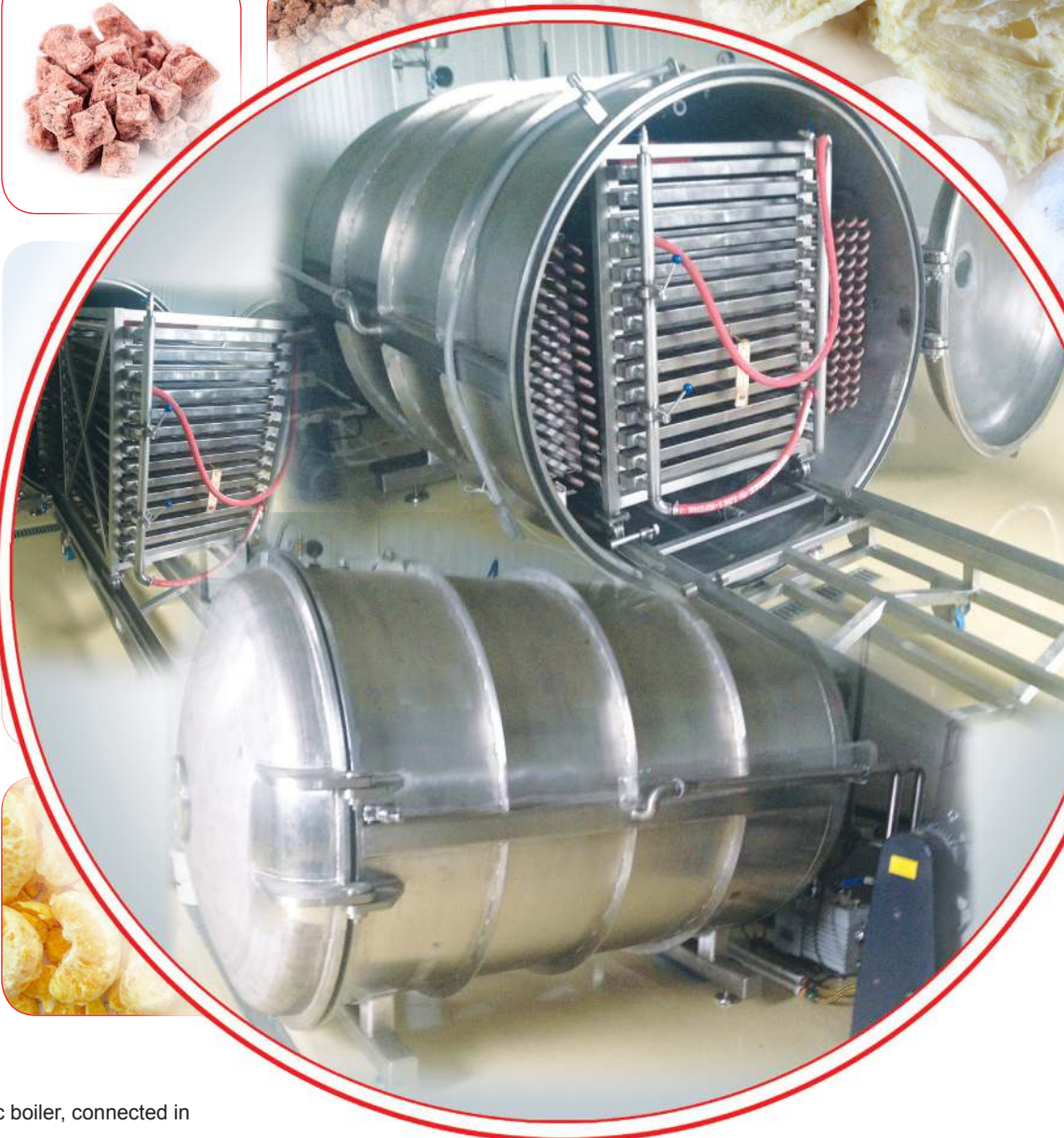
- Shelf modules and vapour condenser are contained inside chamber.
- Viewing ports are provided in the doors, allowing observation of both the vapour condenser and product trays during the drying cycle.

### Modular Shelf Heating Plates

- Plates are fabricated from stainless steel or optionally Aluminium. Number of modules/plates depends of the model size.
- Each shelf module is removable from the chamber for maintenance or cleaning, and is done by rolling onto a trolley, enabling only one person manipulation.

### Trays

- Two sets of trays are provided as standard.



## Heating System

- Electronically controlled electric boiler, connected in series with the heating plates.
- Heating fluid is glycol based and is circulated by a pump, allowing heated or cooled fluid to be circulated through the plates on demand of the electronic load controller.

## Vacuum System

- Heavy duty vacuum pump mounted near housing of the freeze dryer.

## Refrigeration

- Each unit is equipped with complete refrigeration plant of corresponding size, including also refrigeration condensing unit is purpose-built with capacity control to allow economical use of refrigerant. Includes condenser unit.

## Vapour Condenser

- Execution in stainless steel tube available, depending of refrigerant.
- Defrosting ice after a product cycle is by water or optional hot gas defrosting.

## Low Temperature Option

- A lower temperature option can be quoted if required, giving  $-55^{\circ}\text{C}$  vapour condenser temperature, and  $-35^{\circ}\text{C}/+70^{\circ}\text{C}$  shelf freezing/heating.

## Control System

- MITSUBISHI/OMRON/SIEMENS/ABB PLC interfaced with touchscreen control panel. Screen includes graphic overview of freeze drying system. Automated system will ramp/reduce energy to govern sublimation pressure to pre-set parameters.
- recipe programming capacity built-in, and software for data retrieval and analysis.

*All machinery parts (chambers, shelves, door closing systems, stoppering system, condensers and all interconnections) are manufactured and controlled in-house.*

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Please note our dryers are a batch style system and the capacity is demonstrated as an on site test by drying the model designation in kg's of ice in a BATCH DRYING PERIOD (usually 14-16 h) i.e. EFD500 = 500kg of ice, EFD 1000 = 1000kg of ice. The model designation is the capacity of the ice condenser and this is the maximum this trap will carry. Actual loadings of product will depend on the bulk density of the product. If considered for 24 h, captured ice quantity is higher..

#### Basic technical data for few most common units:

EASY Freeze Drying model	EFD 100	EFD 200	EFD 500	EFD 1000	EFD 1500	EFD 2000
Evaporated water capacity (batch/24h)	100	200	500	1000	1500	2000
Chamber measures (mm)	1600x2000	1800x2800	2000x4500	2400x5800	2400x8200	2400x11000
Area of the heat shelf (m <sup>2</sup> )	17	33	85	170	255	340
Number of the heat shelf	14x2	17x2	21x2	26x2	26x2	26x2
Tray Area (m <sup>2</sup> )	15,5	30	75	150	230	300
Tray size (mm)	800x400x20	1000x450x20	1250x500x20	1250x600x20	1250x600x20	780x510x20
Number of trays	64	68	126	208	280	416
System lowest pressure	0,1 mmHg – 13,3 Pa	0,1 mmHg – 13,3 Pa	0,1 mmHg – 13,3 Pa	0,1 mmHg – 13,3 Pa	0,1 mmHg – 13,3 Pa	0,1 mmHg – 13,3 Pa
Standard condenser temperature (°C)	-40	-40	-40	-40	-40	-40
Shelves temperature (°C)	-25 to +70	-25 to +70	-25 to +70	-25 to +70	-25 to +70	-25 to +70
Refrigeration capacity (kW)	14	23	37	52	74	98
Installed el. power (kW)	35	55	115	160	235	298
Weight (kg)	2200	3500	7000	9500	12800	16600

*Your future is our future, and we are addressing it today with product-based design and high-technology applied.*



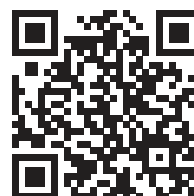
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Food Processing  
Machinery



Freezing  
Cooling



The Art of Freezing  
**EASY Freeze SPYRO**

Continuous Deep Freezing Spiral Freezer

# EASY Freeze SPYRO

## Continuous Deep Freezing Spiral Freezer



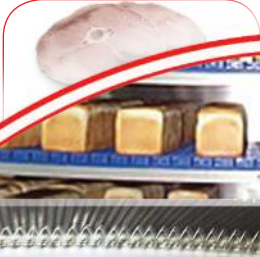
### Advantages of EASY Freeze SPYRO - Construction / Design Criteria:

- All gear are positioned outside the insulated cabin (no any lubrication inside the freezer) avoiding any risks of contaminations due to some oil leakages
- The unit has no mezzanine floor or intermediary platform, avoiding any dirtiness accumulation (presence of any mezzanine floor or intermediary platform makes cleaning operations more difficult) – the absolutely highest hygienic standards are satisfied
- Freezer design is made according to max. thermal load and max. surface occupied on the belt by the different products foreseen
- Longer working cycle due to evaporator design with decreasing spacing, as well as with possible “symmetrical” large fins spacing design, on the air entrance, and over sizing of evaporators
- Evaporator has a slightly-angled vertical positioning (not parallel to the wall) to facilitate uniform air distribution over all surface
- Possibility to have bi-directional air flow in the evaporators with the possibility to improve the evaporator “efficiency”, having longer running cycle, without any extra accessories and/or devices increasing heat exchange efficiency
- Flexibility: EASY Freeze SPYRO can be designed with different air flow types according to product characteristics; standard ventilation is the VOT “horizontal tangential type”. Vertical counter-current 3D can be studied in case of preference
- Low maintenance cost and enhanced durability due to the utilization of carefully selected high quality commercial components
- The absolutely highest mechanical reliability of spiral belt conveyor
- Reduced belt wear and elongation thanks to low tension drive system (the belt is pulled by means of dynamic friction on the total length)





**EASY Freeze SPYRO** is considered as the freezer with the most superior sanitation, entirely made of stainless steel, including all parts of structure construction and machinery.



#### Other Design Features:

- Stainless steel flexible belt, or plastic belt for special application such as sticky or tender products with low water content products
- Spiral structures (and absolutely all components) made entirely of stainless steel
- Fully automatic washing system (option) with loose water
- C.I.P. "Cleaning in Place" optional system with the possibility to use basic – acid - detergent and disinfectant solutions, or cleaning only with water
- Low pressure fans to higher air speed
- PLC and touch-screen supervision system and internal video surveillance (option)
- Insulated cabin foresees large aisles (approx 5/600 mm) for easy access and maintenance to all internal parts of the freezer (Obviously aisles can be reduced if space available in the factory is limited)

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## How the EASY Freeze Spyro works...

In order to obtain a quick freezing process EASY Freeze SPYRO is designed for high speed circulation (4 -10 m/sec) of cold air in contact with the product, on the whole length (height) of the spiral conveyor, by which is provided absolutely quickest crust freezing and minimum weight loss, with utmost energy saving work..

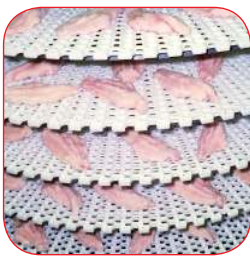
### High sped of air increases substantially:

- the very good thermal exchange on the surface of the product
- the speed of cold penetration
- the quality of the freezing process, and long running time with very low frost forming
- very low weight loss, which is two times less then with vertical air flow!
- hitting the incoming product all the time with the coldest air; the product is therefore immediatly "crusted" and snow formation diminished
- cold air is going directly from evaporator to the product not passing over fan motors, providing on this way the coldest air and the most uniform air distribution (otherwise there are 2°C of temp. losses)

### Other Technical Advantages of EASY Freeze SPYRO:

- Drum is without lateral openings to improve the air guidance and to minimize the possibility to accumulate dirtiness
- the lateral aprons to guide the airflow on the opposite side of the evaporators are on easy access design like door openable or sliding, but in any case easy access is granted all around
- possibility to have bi-directional air flow and speed on the product, just adjusting the by-pass and the fans
- snow reduction: the temperature increase of cold air passing through the product is very low; air cannot therefore increase substantially its humidity content

**Less Humidity built-up = Less frost**



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Food Processing  
Machinery



Freezing  
Drying  
Cooling  
Proofing  
Pasteurization



The Art of Freezing  
**EASY Freeze SPYRO**

Continuous Deep Freezing Spiral Freezer

# EASY Freeze SPYRO

## Continuous Deep Freezing Spiral Freezer



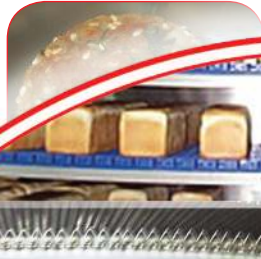
### Advantages of EASY Freeze SPYRO - Construction / Design Criteria:

- All gear are positioned outside the insulated cabin (no any lubrication inside the freezer) avoiding any risks of contaminations due to some oil leakages
- The unit has no mezzanine floor or intermediary platform, avoiding any dirtiness accumulation (presence of any mezzanine floor or intermediary platform makes cleaning operations more difficult) – the absolutely highest hygienic standards are satisfied
- Freezer design is made according to max. thermal load and max. surface occupied on the belt by the different products foreseen
- Longer working cycle due to evaporator design with decreasing spacing, as well as with possible “symmetrical” large fins spacing design, on the air entrance, and over sizing of evaporators
- Evaporator has a slightly-angled vertical positioning (not parallel to the wall) to facilitate uniform air distribution over all surface
- Possibility to have bi-directional air flow in the evaporators with the possibility to improve the evaporator “efficiency”, having longer running cycle, without any extra accessories and/or devices increasing heat exchange efficiency
- Flexibility: EASY Freeze SPYRO can be designed with different air flow types according to product characteristics; standard ventilation is the VOT “horizontal tangential type”. Vertical counter-current 3D can be studied in case of preference
- Low maintenance cost and enhanced durability due to the utilization of carefully selected high quality commercial components
- The absolutely highest mechanical reliability of spiral belt conveyor
- Reduced belt wear and elongation thanks to low tension drive system (the belt is pulled by means of dynamic friction on the total length)





**EASY Freeze SPYRO** is considered as the freezer with the most superior sanitation, entirely made of stainless steel, including all parts of structure construction and machinery.



#### Other Design Features:

- Stainless steel flexible belt, or plastic belt for special application such as sticky or tender products with low water content products
- Spiral structures (and absolutely all components) made entirely of stainless steel
- Fully automatic washing system (option) with loose water
- C.I.P. "Cleaning in Place" optional system with the possibility to use basic – acid - detergent and disinfectant solutions, or cleaning only with water
- Low pressure fans to higher air speed
- PLC and touch-screen supervision system and internal video surveillance (option)
- Insulated cabin foresees large aisles (approx 5/600 mm) for easy access and maintenance to all internal parts of the freezer (Obviously aisles can be reduced if space available in the factory is limited)

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### How the EASY Freeze Spyro works...

In order to obtain a quick freezing process EASY Freeze SPYRO is designed for high speed circulation (4 -10 m/sec) of cold air in contact with the product, on the whole length (height) of the spiral conveyor, by which is provided absolutely quickest crust freezing and minimum weight loss, with utmost energy saving work..

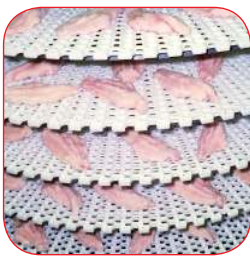
#### High sped of air increases substantially:

- the very good thermal exchange on the surface of the product
- the speed of cold penetration
- the quality of the freezing process, and long running time with very low frost forming
- very low weight loss, which is two times less then with vertical air flow!
- hitting the incoming product all the time with the coldest air; the product is therefore immediatly "crusted" and snow formation diminished
- cold air is going directly from evaporator to the product not passing over fan motors, providing on this way the coldest air and the most uniform air distribution (otherwise there are 2°C of temp. losses)

#### Other Technical Advantages of EASY Freeze SPYRO:

- Drum is without lateral openings to improve the air guidance and to minimize the possibility to accumulate dirtiness
- the lateral aprons to guide the airflow on the opposite side of the evaporators are on easy access design like door openable or sliding, but in any case easy access is granted all around
- possibility to have bi-directional air flow and speed on the product, just adjusting the by-pass and the fans
- snow reduction: the temperature increase of cold air passing through the product is very low; air cannot therefore increase substantially its humidity content

**Less Humidity built-up = Less frost**



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Food Processing Machinery

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EASY Freeze

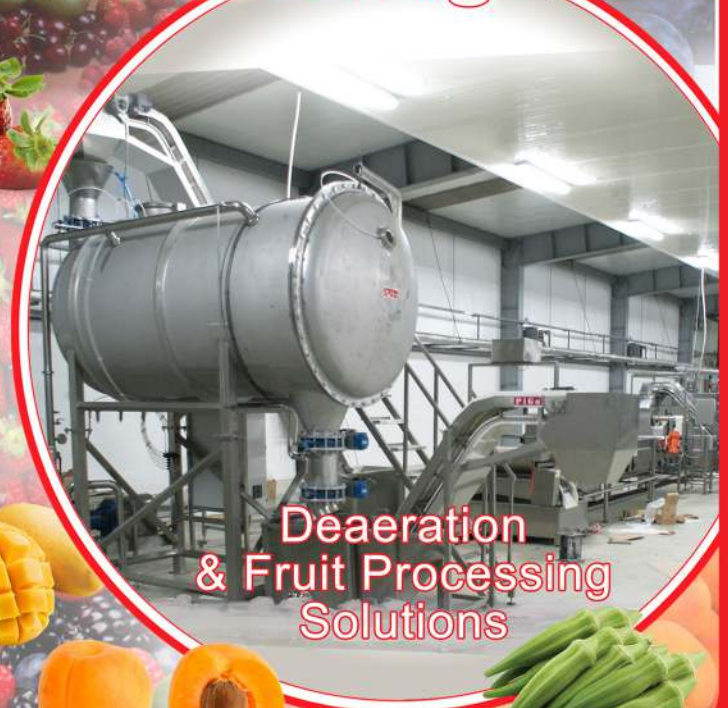


EASY Freeze SPYRO

## The Art of Freezing & Processing



Complete solutions  
for Fruit & Vegetable  
Processing



Deaeration  
& Fruit Processing  
Solutions



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# PiGo® Food Processing Systems



Dear Partners,

With present we would like to introduce our company, PiGo sri, one of the world's leading freezing equipment manufacturers and fruit & vegetable processing equipment suppliers with an extensive experience in both freezing and fruit & vegetable processing. Together with our partners, we have installed our machines, both spiral and fluidised bed freezers, throughout the world. Our systems have been supplied to companies in Europe, Africa, Australia, USA and Asia by our company and our partners in the industry. PiGo sri is specialized in building freezers:

EASY Freeze, freezer with fluidised bed, the most suitable for IOF freezing variety of fruits, vegetables and numerous sea, meat and cheese products. EASY Freeze SPYRO, spiral freezer, the most suitable solution for freezing doughy products, meat and fish, pizza, etc ...

Our Freezers are built in modular sizes and all components are made entirely of stainless steel, capable to provide perfect IOF product even when dealing with delicate products like cooked rice, raspberries, etc ...

All units are completely assembled and tested in our factories prior to shipping to our clients. Units are reassembled upon arrival to clients' premises by our professional team.

EASY Freeze and EASY Freeze SPYRO are the result of many years of experience, research and development.





*You don't need to be the biggest to do things better;  
You only need the will to do it. And to know how.*

We can proudly say that our machines achieve excellence, both from operating characteristics and energy efficiency point of view. Furthermore, they are user friendly, feature that together with the above gives many advantages and privileges to our buyers.

Besides **EASY Freeze** and **EASY Freeze SPYRO**, one of our main machines is automatic pitting machine **PG 103**. Thanks to special distribution system, providing almost 100% filled up plates (with fruit), and extremely large size of plates, **PG 103** pitting machine has at least 50-100% higher capacity than any other pitting machine on the market, achieving this capacity with the optimal tact of 60 cycles per min.

Experience of all our clients confirms work with 0,00% of remained stones when adequate quality and preparation of the fruit (clean, calibrated product with adequate ripeness) is provided.

To get a better idea of what we do, please visit our website [www.pigo.it](http://www.pigo.it) or simply send an e-mail to [info@pigo.it](mailto:info@pigo.it). We will be very glad to send our detailed offer to you, together with our DVD containing several videos of our machines in work.

Short video clips of our machines in operation are available on [www.youtube.com](http://www.youtube.com), look for **PIGOsrl**.

In case you are interested in our products (all concerning fruit and vegetable processing), please feel free to contact us, it will be our pleasure to assist you.

We are looking forward to hearing from you and are available for any further information you might need.

Sincerely  
PIGO srl





*Our philosophy is simple: Give the best to those who expects only the best.  
Giving You the most convenient energy saving and user friendly processing solutions, tailored for your needs.*



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More details about  
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## Food Processing Machinery



## Pitting Machines

### PG103

### The Art of Pitting

### PG103

High Capacity Pitting Machine

### PG104

Small Capacity Pitting Machine

# PG 103

## Pitting Machine



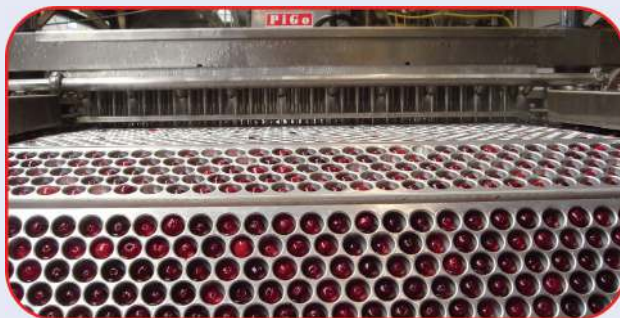
### Pitting Efficiency Redefined:

**Reports from our customers verify an industry-leading pitting efficiency of 0.01%-0.02% (1:5000-1:10000) remaining pits after the pitting process!**

Several unique and proprietary characteristics of the PG103 contribute to our industry leading pitting efficiency, including:

> **ADJUSTMENT-FREE OPERATION WITH NO DOWNTIME.** System steadily performs without need of continuous adjustments and supervision.

> **DESIGNED FOR EASY CLEANING.** Open design and clean in place (CIP) features allow for fast and effective cleaning and sanitation of the unit.



> **HIGH FILL RATIO OF THE PLATES** (close to 100%). Special built-in fruit distribution system, mounted above the in-feed hopper provides a very even feeding of the machine. Consistent feeding ensures a high fill ratio of the plates and prevents the fruit from being crushed or damaged.

> **ONE SET WASHER LASTS LONGER THAN ONE SEASON.** Proprietary built-in mechanism for lifting-up and holding rubber washers ensures that the washers are in contact with the plates only during the pitting operation, when the plates are not moving. This feature minimizes wear on the rubber washers, so that one set of washers can last longer than one season, thus preventing downtime.

> **PNEUMATIC EJECTING SYSTEM.** Instead of a conventional mechanical ejecting system for leftover fruit adhering to the plates, the PG103 pitting machine is equipped with an on-board pneumatic ejecting system that blows off the leftover fruit, without any moving parts.

> **CUSTOM CONSTRUCTED CHAIN** for reliable performance and extremely long working life.



Our clients confirm that a **pitting efficiency of 0.00% remaining stones** is achievable when the fruit is properly cleaned, metered and calibrated and at optimal ripeness.



**UP TO 5 TIMES THE CAPACITY OF ANY COMPETITIVE SYSTEM.** A defining characteristic of the PG103 is the fruit distribution system. Though it has extra large plates, the machine's proprietary distribution system ensures that the plates are consistently filled to almost 100%. The pitting plates maintain full capacity even at optimal pitting cycle rates of 60 cycles per minute.



#### Technical characteristics:

Machine capacity can vary depending on fruit type, sort and product size. The capacities listed below are based on our recommended rate of **60 strokes per minute** (maximum is 70 strokes per minute), and standard plates which have **186 holes/plate for cherries** and **82 holes/plate for plums**.

Fruit	Hole size	Holes/plate	product pcs/h	product weight	kg/h fresh	kg/h pitted
Cherries	22/11 mm	225	810.000	cca 2,5 gr.	2.000	1.550
Cherries	25/13 mm	186	669.600	cca 4,5 gr.	2.850	2.450
Cherries	29/14 mm	138	496.800	cca 6,5 gr.	3.100	2.600
Cherries	32/15 mm	133	478.800	cca 9,0 gr.	4.100	3.400

\* hole diameter can be done as requested by client

#### Standard plate hole diameters for cherries are as follows:

hole Ø	Ø18,5/10mm	Ø22/11mm	Ø25/13mm	Ø29/14mm	Ø32/15mm
holes/plate	max 225	max 225	max 186	max 138	max 133

#### Standard plate hole diameters for plums are as follows:

hole Ø	Ø30/17mm	Ø32/19mm	Ø36/22mm	Ø38/24mm	Ø42/24mm
holes/plate	max 113	max 82	max 82	max 53	max 53

Installed power (per unit):      El. Power:      rpm:

Main drive (driven by inverter):      4,00 kW      1400

Brush drive:      0.37 kW      1400

Slitting device:      0.37 kW      1400

Distributor drive:      0.12 kW      1400

High pressure air blower (inverter):      5.50 kW      1400

Water consumption: 0,40 m³/h      Machine weight: 2.150 kg



All PiGo equipment and food processing lines are constructed entirely of stainless steel and manufactured to ISO and HACCP food processing industry standards. Painted surfaces are not used because they do not meet these standards.

**INDUSTRY LEADING PITTING EFFICIENCY:**

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## PG 104 A & PG 104 B

The PG104 pitter is the ideal choice for low volume pitting applications. Like the higher volume PG103, it can be fitted with different plates and knives to best suit processing requirements and fruit types. All machine parts are made of stainless steel and other non-corrosive materials that are approved for use in the food industry.

TECHNICAL CHARACTERISTICS	PG 104A cherries	PG 104A plums	PG 104B cherries	PG 104B plums
Capacity (kg/h)	200-250*	100-150**	550-500*	250-350**
Hole size (mm)	Ø25/Ø13	Ø44/Ø24	Ø25/Ø13	Ø44/Ø24
N. of strokes (1/min)	60	20/30	60	20/30
N. of fruits in plate	20	5	58	17
Installed power (kW)	0,55	0,55	0,55	0,55

\* given capacity is calculated based on 200 pieces of fruit in 1 kg.

\*\* given capacity is calculated based on average single fruit piece weight of 35 g



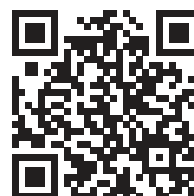
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**Food Processing  
Machinery**



**Fruit  
Pitting**

**The Art of Pitting**

**Stone Fruit Pitting  
Processing Lines**





PG 061 Sorter



PG 025 Conveyer belt



PG 138 Destalking machine



PG 001 Washing machine





PG 103 Pitting machine



PG 104 Pitting machine



PG 025 i Inspection belt



PG 033 Elevator



PG 250 Vertical pulper



PG 251 Horizontal pulper



# PG 062

## Calibrator



Used for sorting fruit or vegetable products according to their size, within a very wide calibration range. Products (fruits or vegetables) are treated in the most delicate way, avoiding any kind of product maltreatment while providing perfect calibration for each product particle during its way through the machine!

Precisely and adequately dimensioned in-feed hopper and special brush (for removing any surplus level of the product on the calibration rolls) guarantee that there is always only one level (or row) of the product on calibration rolls, which is the first condition for a perfect calibration.

Built-in system of free falling rolls permits and enables continuous and independent adjustment of sorting size in each calibration section separately and independently, in range of 10-38 mm, which "covers" majority of different fruits or vegetables.

Forced rotation of calibration rolls brings each single product particle into the perfect position for calibration, condition impossible to provide with any other sorting system or machine.

### TECHNICAL CHARACTERISTICS

CAPACITY:	Q= 3.000-10.000 kg/h Depending on the type and quality of the products
Range of calibration:	10-38 mm, or 40-80 mm
Number of calibrations:	Z= 2+1, 3+1 or 4+1
Installed el. power (3x380V/50Hz):	2,22 kW + (Z-1)x0,37kW
Standard working width:	B= 800 / 1000 / 1200 mm
Calibrator length (with 3 sections):	L= 3700 mm



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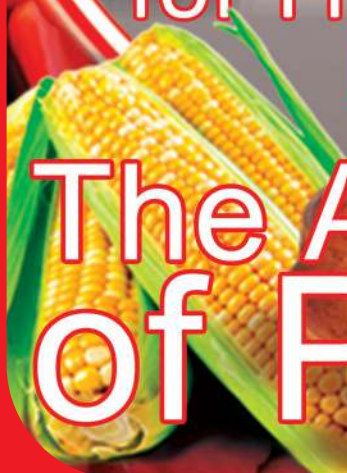


## Food Processing Machinery



## Complete solutions for Fruit & Vegetable Processing

# The Art of Processing



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# Processing Equipment For Virtually Any Processing Need



IQF & Spiral Freezing  
(EASY Freeze &  
EASY Freeze SPYRO)



Conveying & Elevating



Peeling  
(mechanical & steam peeling)



Washing  
(drum, air injection &  
brushing solutions)



Sorting & Calibrating



Blanching & Cooling  
(drum & belt solutions)



Pitting Machines  
(stone fruits processing lines)





# Offering Solutions for the Following Applications



## Green Pea Processing

In Feed Equipment, Pod Separator, Air Separator, Washing (Flotation & Rotation), Grading, Blanching, Cooling, Inspection, Dewatering, Freezing



## Green Bean Processing

In Feed Equipment, Air Separator, Stone Removal, Washing, Pod Separator, De-clustering, Green Bean Snipping, Cutting, Blanching, Dewatering, Freezing



## Root Vegetable Processing

In Feed Equipment, Soil Removal, Stone Removal, Washing, Peeling, Polishing, Cutting, Blanching, Cooling, Dewatering, Freezing



## French Fries Processing

In Feed Equipment, Soil & Stone Removal, Washing, Peeling, Sorting, Cutting, Blanching, Drying, Equilibrating, Frying, De-fatting, Freezing



## Artichokes Processing

Peeling, Grading, Cutting, Washing, Blanching, Cooling, Sorting, Dewatering, Freezing



## Leaf Vegetable Processing

In Feed Equipment, Insect Separating, Visual/Optical Sorting, Stone Separating, Washing, Blanching, Cooling, Dewatering, Forming, Freezing



## Fruit Processing

In Feed Equipment, De-stalking, Washing, Sorting, Inspecting, Grading, Pitting (Destoning), Pulping, Freezing, Packaging



## Ask About Our... Fresh-Cut Fruit Preservation Solutions



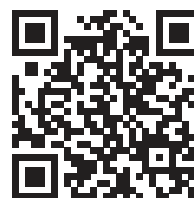
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