



Food Processing Machinery



- ▶ Freezing
- ▶ Cooling
- ▶ Pasteurization

The Art of Freezing

EASY Freeze SPYRO

Continuous Deep Freezing Spiral Freezer

EASY Freeze SPYRO

Continuous Deep Freezing Spiral Tunnel



Advantages of EASY Freeze SPYRO Construction / Design Criteria

- ✓ Belts gear motors are positioned outside the insulated cabin (no lubrication inside the freezer) avoiding any risk of contamination due to possible oil leakages;
- ✓ The unit doesn't have any mezzanine floor or intermediary platform, thus avoiding dirtiness accumulation (presence of any mezzanine floor or intermediary platform are making more difficult the cleaning operations) – the absolutely highest hygienic standards satisfied;
- ✓ 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);
- ✓ Freezer design is made according to max. thermal load and max. surface occupied on the belt by the different products foreseen;
- ✓ Special design of the evaporator with decreasing spacing, as well as with possible "symmetrical" large fins spacing on the air entrance, enables extremely long working time without defrosting;
- ✓ Inclination of evaporator, enabling good air distribution over the entire surface, increasing heat exchange efficiency;
- ✓ Possibility to have bidirectional air flow in the evaporators with the possibility to improve the evaporator "efficiency", having longer running cycle, without any extra accessories and/or devices;
- ✓ Low maintenance cost and low spare parts cost due to utilization of high quality commercial components;



EASY Freeze is entirely made of stainless steel, including all parts of structure construction, machinery, as well as bearings with housings, using materials produced by the most famous world manufacturers (Thysen, Avesta, etc..)



- ✓ 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 supplied in case of preference;
- ✓ Central Drum drive supported by roller bearings;
- ✓ Stainless steel flexible belt (plastic belt for special application such as sticky or tender products with low water content products);
- ✓ Spiral structures made of stainless steel;

- ✓ Low pressure fans for higher air speed;
- ✓ 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;
- ✓ PLC and touch-screen supervision system (option)

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Advantages Of EASY Freeze SPYRO Air Flow – Working Principle

The **EASY Freeze SPYRO** freezer is basically composed by a spiral conveyor and a freezing system which provides a well distributed air-flow.

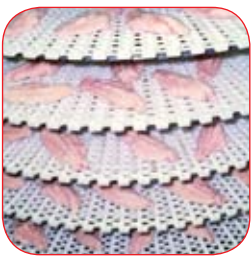
In order to obtain a quick freezing process **EASY Freeze SPYRO** is designed for high speed circulation (4 -10 m/sec) of cold air in contact with the product, on the whole length of the spiral conveyor.

High speed 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 with the coldest air; the product is therefore immediately "crusted" and snow formation diminished;
- ✓ Maximum energy efficiency of freezing process

Furthermore:

- ✓ Cold air is going directly from evaporator to the product, not passing over fan motors, providing this way the coldest air and the most uniform air distribution (otherwise there are 2 °C of temp. loses);
- ✓ 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.



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Freezers and fruit & vegetable processing equipment and machines production

PIGO Food Processing Systems manufactures equipment for processing fruit and vegetables.

We provide complete processing solutions, all concerning fruit and vegetable processing

Production program covers following fields:

EASY Freeze & EASY Freeze SPYRO
stainless steel fluidized bed & spiral freezers
COOLING / PASTEURIZATION spiral solution
EASY Cook Vacuum cooking plants
DEAERATION PLANTS, as preparation for freezing, for fruit cubes production

Complete fruit & vegetable processing

More details about
our production at:
www.pigo.biz
info@pigo.biz

Head office:

PIGO srl
Via Pontaron 30,
36030 Caldogno (VI), Italia
Tel: +39 0 444 90 57 09
Fax: +39 0 444 90 97 78

