FREEZE DRYING

Lyophilisation / Sublimation Drying

PiGo®

FOOD PROCESSING MACHINERY

MADE IN ITALY

MONEY SAVING PROCESS

thanks to

FASTER DRYING WITH LESS ENERGY

Our proprietary freeze drying method reduces drying time by up to 15-20% while consuming less energy.

LOW TEMPERATURE AND LOW HUMIDITY TECHNOLOGY APPLIED

Uniquely designed features allow low temperature operation cycles which are crucially important for preserving the natural integrity of your product.
Particulary important for drying delicated products like leaves, flowers, cannabis / hemp.

FOOD SAFETY FRIENDLY

Great care and determination was put into designing a system that makes accessing and cleaning every component very easy, ensuring that bacteria or residue will not get entrapped on any equipment or food surfaces. Only design with fully accessible and cleanable machine interior.

OPERATOR FRIENDLY

All steps in the drying process are designed to facilitate simple, fast and efficient operation and maintenance, eliminating the possible human error that can occur during the curing and drying process.

THE FUTURE OF FREEZE DRYING

PIGO srl designs and fabricates advanced technology sophisticated industrial freeze dryers – lyophilizers, product line which includes a broad range of standard and custom units.

All units are constructed following maximum hygienic standards and providing perfect sanitation with possibility to have empty tank to walk in, after each cycle! Sanitation system includes also possibility of sterilisation by steam.

PIGO systems are concepted to create a “High Tech” freeze-dryer which contains dozens of small innovations and a few large improvements for a more dependable system.

UNIQUE PIGO DESIGN

tfew main features distinguishing EASY Freeze DRYER

SPACE SAVING AND COMPACT EXECUTION with maximum efficiency.

DOUBLE WALLED INSIDE CONDENSER (PIGO DESIGN AND EXECUTION), providing the most efficient ice capture and shorter freeze drying process.

UNIQUE MULTUPLE VACUUM SYSTEM, providing more efficient sublimation and uniform ice building on condenser units.

LOW VOLUME HEATING FLUID SYSTEM, providing very short start-up time and quick process start, as well as more efficient vapours transfer from the product to the evaporator ice catcher.

SHALLOW PRODUCT PLATES and **INCREASED SURFACE** of the product plates are facilitating drying process and shortening drying time.

PLC interfaced with user friendly touchscreen control panel. 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.

STAINLESS STEEL EXECUTION – entire unit is executed in stainless steel (including heating system and ice catching system).

HIGHEST RELIABILITY of all components and complete system.

FREEZE DRYING PROCESS

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

At the completion of the process, the treated product will have retained its form, volume and original structure, as well as all its organoleptic, physical, chemical and biological properties. Once properly packed, it can then be stored for an almost indefinite period of time.

BASIC **TECHNICAL** CHARACTERISTICS

EASY Freeze Drying model	EFD 350	EFD 700	EFD 1000	EFD 1400
Tray Area (m2):	47 m^2	84 m^2	126 m^2	168 m^2
Expected loading of product (up to kg):	280-350 kg	600-700 kg	900-1000 kg	1200-1400 kg
Vapour Condenser Capacity (24h):	450 kg	1200 kg	1800 kg	2400 kg
Batch/cycle average duration (approx. h):	10-20 h	10-20 h	10-20 h	10-20 h
Chamber measures (mm):	1700*5000 mm	2300*5250 mm	2300*7400 mm	2300*9250 mm
System lowest preasure:	<13 Pa	<13 Pa	<13 Pa	<13 Pa
Standard condenser temperature:	-40° C (-50°C)	-40° C (-50°C)	-40° C (-50°C)	-40° C (-50°C)
Shelves temperature:	+25 to +85°C	+25 to +85°C	+25 to +85°C	+25 to +85°C
Heating energy required:	45 kW	85 kW	125 kW	170 kW
Refrigeration capacity (max):	50 kW	90 kW	140 kW	180 kW
Total installed el. Power (w/o heating):	75 kW	110 kW	160 kW	200 kW
Refrigerating media:	forced glycol / water circulation			
Heating system:	Freon / Ammonia / CO_2			
Total unit weight:	8000 kg	14000 kg	16900 kg	20400 kg
Refrigeration unit weight:	1900 kg	3000 kg	3300 kg	4400 kg

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

PIGO provides complete, turn-key processing solutions:

- Freeze Drying - EFD
- Fluidized Bed IQF Freezers - EASY Freeze
- Spiral Freezers / Coolers / Pasteurizers
- Adiabatic Multistage Belt Dryers - PG 135
- Tunnel Dryers - PG 128
- Pitting Systems
- Complete Fruit & Vegetable Processing Solutions
- Milk Processing Lines

PIGO srl

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