

Cryogen

Cryogenic blast freezers for unique speed and quality




moduline

Cryogen

With the Chill range of Blast-Chillers, Moduline has completed a major step in its workflow chain that was missing before. Thanks to an innovative company vocation, Moduline wanted to go further, presenting Cryogen, the excellence of chilling. Thanks to the use of nitrogen in the process of food refrigeration, it is possible to complete the freezing very quickly and maintain the nutritional properties of the foods. With Cryogen, Moduline joined nitrogen properties to the ability to create innovative and technologically advanced equipment, thus obtaining exceptional performance and superior quality. Nitrogen: colourless, odourless, non-flammable, chemically very stable and non-toxic, can reach temperatures of -196°C in a short time, thus favouring a cryogenic freezing that preserves the foods longer. In this way, Cryogen, through the injection of nitrogen into the refrigeration cavity, manages to overcome the exceptional performances of Chill, ensuring the best rates and productivity and, coming even at temperatures of -40°C at food core. Cryogen is also more environmentally friendly than chillers using standard techniques of refrigeration with ammonia or HFCs, since nitrogen is a natural component of our atmosphere and therefore does not pollute nor damage the environment. The range of Cryogen consists of only two models, one suited to commercial catering and the other to catering and banqueting systems as well as small food production. Thanks to the large and flexible production capacity of the two models available, we can cover the needs of overextended ranges of the traditional chillers.



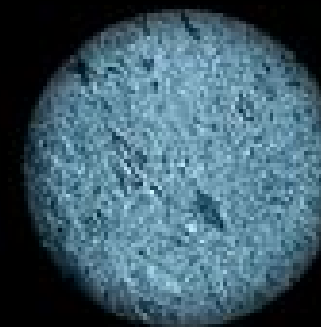
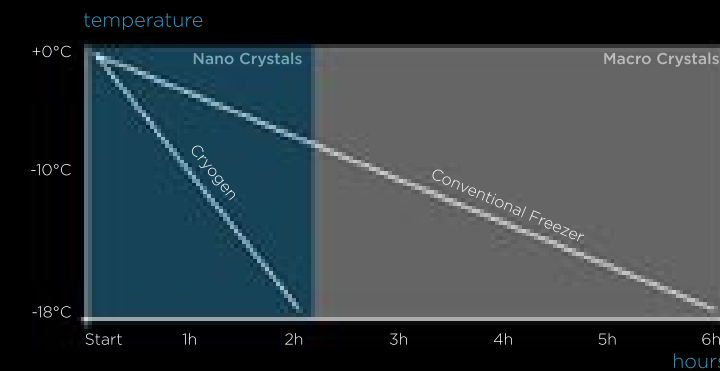
The Science of Innovation

The innovation factor represented by Cryogen is not limited only to the use of revolutionary technologies never developed before, but it is also the result of scientific research aiming at improving the performance in a kitchen and guaranteeing more flexibility, speed and savings.

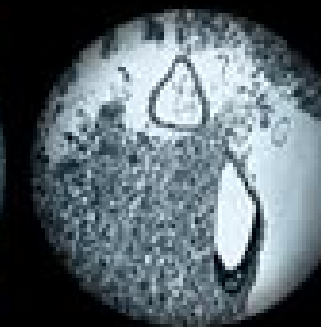
Cryogen to protect Safety

Cryogen, with its fast freezing action at exceptionally low temperatures, determines the quality of the final result. As a matter of fact, low temperatures reduce the speed of reactions of enzymatic and chemical degradation and, most important, they have a micro biostatic action.

Together with the decrease in temperatures, the microbial metabolism you find in food is reduced until disappearing when reaching -18°C .



Nitrogen Process
Nano Crystals



Conventional Process
Macro Crystals

Crystallisation

It begins with the creation of the first ice crystals, that is after going beyond the Cryoscopic Point. This is a very particular point for any type of food (it usually goes from 0.5°C and -4°C) and depends on the Hygroscopic level of food.

Cryogen, to protect Quality

The fast freezing process is a fundamental factor to guarantee safe food and to preserve its nutritional values.

The higher the speed, the smaller the final dimension of microcrystals.

This happens when the liquids of food go through the process of Crystallisation and Growth.

The smaller the dimensions of ice crystals is, the lower the possibility of breaking the cellular membranes will be, reducing the loss of nutritional values.

Growth

Crystal behaviour is very important, since water, unlike the majority of other compounds, **INCREASES** its volume when going from liquid to solid state.





Functional Features



Chilling mode with different degrees of intensity.



Freezing mode with different degrees of intensity.



Automatic chilling programs divided into 6 categories of products, the perfect starting point for your food and recipe conservation and storage.



Manual chilling/freezing setting and recipe registration, offer the traditional convenience to the Chef service.



Section for favourite programs, daily life and experience always at your fingertips.



Recipes always customizable and easy-to-browse with the user's images integration.



Electronic and automatic control system of the temperature and the percentage of nitrogen in the cavity to get maximum homogeneity.



The chilling programs can be divided into 10 different phases, allowing a high precision in processing the foods.



Installed power is very low.



The calibrated nitrogen injection system minimizes gas consumption.



Self-diagnosis system of the proper operation of all the electrical components.



Automatic telemetric registration system of equipment operation.



Automatic stop of the fan motors when the door is opened.



USB port: software, HACCP data and recipes always at your fingertips and keeping up with the work evolution. (Optional)



PLUS

DEFROST

Defrost function, with door open.

PadLock

Key lock system with password ensures the chef maximum protection of the data or the undesired interruption of the cooking program.



Memory expansion with built-in SD card slot.

Mode Status LED/stand-by key



7" capacitive multitouch display easy-to-browse:

- temperature control from +50°C to -90°C
- time control
- nitrogen percentage control
- chilling mode with different degrees of intensity
- freezing mode with different degrees of intensity
- automatic cooling/freezing programs divided into 6 categories
- ability to manage up to 10 cycles of chilling/freezing for each program
- chilling/freezing with probe
- core-probe heating function for freezing programs
- defrost function with door open



Electronic control system

controls nitrogen injection into the cell by means of cryogenic valves and integrates a nitrogen overpressure control input system

Condensate evacuation and nitrogen gas vent

prevents the formation of ice in the cavity and its overpressure

Electronic control

extremely intuitive and easy to use even by less experienced staff

Door handle

ergonomic and fully built-in with snap-shut door handle



Periodic and automatic rotation reversal of the fan motors

allow the perfect temperature uniformity in the cavity

Electronic cavity temperature probe

Core probe

the heated core-probe, with conical tip makes the extraction from the product always easy even in case of freezing

Tight-sealed cavity

the rounded corners and the integrated drainage system make cleaning easier and safer

Cavity and door insulation

highly insulating materials ensure lower cold dispersion



AZF/AZFC SERIES



AZF056T

AZFC40T

Trays capacity	5 (GN 1/1 or 600x400)	1 trolley 40 (GN 1/1 or 600x400)
Tray rails pitch	65 mm	–
Operating temperature	from -90°C to +50°C	from -90°C to +50°C
Electric power	300 W	1900 W
Electric supply	230 Vac 50 Hz	400 Vac 3N 50 Hz
Dimensions	800x770x630 mm	1570x1305x2320 mm

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