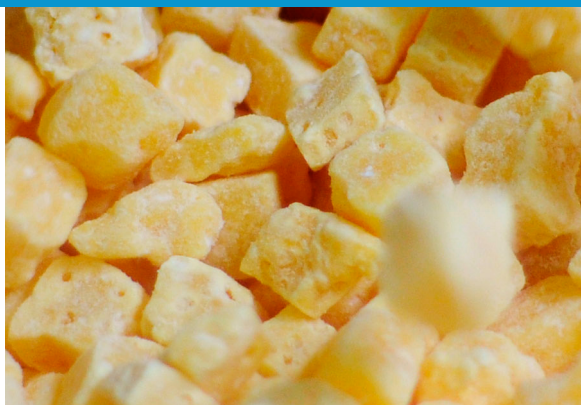


## CryoRoll™ by DOHMEYER

In partnership with Dohmeyer, leading global manufacturer of cryogenic refrigeration systems for the food processing, pharmaceutical, aeronautic, plastics and steel industries, TOMCO<sub>2</sub> Systems offers a complete line of innovative Cryogenic Food Freezers and Chilling Solutions. Each freezer system is custom-designed to its customer's specific requirements

The Cryo Roll™ is a continuous, rotating tumbler freezer designed for the individual quick freezing (IQF) of thinly sliced, diced, or cut food products such as diced ham, sliced salami, diced/sliced chicken products, pizza toppings, shredded cheese, diced cheese, sliced/diced vegetables, cut fruits and whole berries.



# The Process

The freezing process inside a rotating drum where the product and the liquid cryogenic gas is injected. This can be nitrogen (sprayed as liquid) or carbon dioxide (sprayed as snowflakes). This creates a controlled, bacteriostatic atmosphere and any loss of aroma, loss of flavor and loss of weight of food is avoided. The protective atmosphere inside the drum protects the product from oxidation. The gases nitrogen and carbon dioxide behave neutrally towards foods.

The Dohmeyer CryoRoll™ allows achieving very low temperatures, down to -70°F (with LCO<sub>2</sub>) and down to -160°F and lower (with LIN), so that a high temperature difference can be created between product and drum temperature. Thus, the thermal exchange with the product is very fast.

## Features & Benefits

Each Dohmeyer CryoRoll™ is equipped with a standard, operator friendly, HMI touch screen and Siemens PLC software with recipe storage capabilities to ensure a consistent freezing result every time. The freezer's production capacity based on the freezing time of the product, can be established by simply adjusting the drums speed of rotation and the slope of the drum, in conjunction with the operating temperature. As an option, product guides can be added in order to further optimize the freezing time.

Any Dohmeyer CryoRoll™ can be tailor made. Inclination, rotating speed, baffles, etc., can all be adapted to the specific needs of the customer. CryoRoll freezers are compact and often take up less space than other types of IQF freezing systems.



Picture : CryoRoll 23x4' – with options



# General Specifications

- Standard, operator friendly, HMI control with recipe storage capabilities
- Achieves very low temperatures, down to -70°F (with LCO2) and down to -160°F and lower (with LIN)
- Production capacities from 250 up to 2610 kg/h
- Compact design takes up less space than other IQF freezing systems
- No loss of food flavor, aroma, or weight

Model	Internal Drum Diameter (mm)	Usable Drum Length (mm)	Refrigeration Power (kw)	Production Capacity (kg/h)
DOH-CR-3000 x 26"	660	3000	19	250
DOH-CR-4000 x 26"	660	4000	26	340
DOH-CR-5000 x 26"	660	5000	32	420
DOH-CR-6000 x 26"	660	6000	39	510
DOH-CR-4000 x 42"	1070	4000	52	680
DOH-CR-5000 x 42"	1070	5000	65	860
DOH-CR-6000 x 42"	1070	6000	78	1030
DOH-CR-7000 x 42"	1070	7000	91	1200
DOH-CR-6000 x 58"	1470	6000	149	1960
DOH-CR-8000 x 58"	1470	8000	199	2610



# Technical Specifications

## **FRAME:**

Stainless beam frame  
Adjustable heights of the legs Ca 2"+ and -

## **DRUM:**

Isolation thickness: 5'' (150mm)  
Inside : Stainless steel  
Outside : Stainless steel  
Material HD-PUR  
Euroclass: E fire rating

## **WELDING:**

Inside: Fully TIG welded to obtain complete watertight construction  
Outside : TIG welded

## **IN FEED BELT:**

Material: Stainless steel frame with flat top PE belt  
Gearbox: 3 feet /sec fixed speed  
Belt: Low viscosity FDA approved belt 12" wide

## **CRYOGENIC COLD TRANSFER:**

Gas: Liquid LIN  
Spraybar: Over part of the length of drum

## **PRODUCT OUTLET:**

Unique high outlet to ensure more efficient use of the gas.  
It is possible to put conveyor belt or obtain under the outlet of the CryoRoll. The funnel is removable.

## **CLEANING:**

The front and the end of the CryoRoll can be opened for easy cleaning. The inside of the drum is a confined space and no-one should enter to clean. The inner construction is a smooth surface of stainless steel, and CIP cleaning can reach each and every point.

## **OPTIONS:**

Input contactless thermometer PU151 to -40°F, output 4-20mA+ Jumo controller  
Output contactless thermometer PU151 to -40°F, output 4-20mA + Jumo controller  
Automatic inclination 0 >1 foot