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## **BELT DRYER FOR PRODUCT DRYING**

*Imtech DryGenic helps the food industry to produce better quality products in controlled temperature/humidity environment while minimizing utility usage and maximizing production rates.*

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### **YOUR PARTNER**

Imtech DryGenic dryers are designed for durability, sanitation and reliability and control temperature and humidity as required, delivering desired levels even with varying air inlet conditions.

### **DRYING OF PRODUCTS**

The current demand of high-quality dehydrated products with properties with similar levels as found in the initial fresh product. In addition, the drying process should have a low production cost and a low environmental impact. The Imtech DryGenic belt dryers are used to dry all kinds of product like; vegetables, fish, meat, and fruit products.

Besides the drying of food and agriculture products, the belt dryer can also be used for dehydration of various chemical and pharmaceutical products.

The dryer can be used for the drying of flaked, striped, noodle, cube and granule materials.

This Imtech DryGenic dryer has the characteristics of high efficiency and low energy.



*Belt dryer*

The design and the selection of the dryer is decided by the wet and the dry product flow characteristics, lump / crust formation tendency and the thermal sensitivity.

The dryer capacity and size and performance depends on the available heat transfer area and the operating conditions for the specific product. The combination of temperature cycles and drying times can be adjusted accordingly as to control the final product's physical properties.

The belt conveyor of the dryer that loads drying material is based on single or multiple layers stainless steel belt. Because the air flows through the belt, the heat exchange is completely and evenly, production efficiency is high and the product quality is very good.

### **GENERAL DESCRIPTIONS**

The raw material can be spread on the conveyer belt through suitable auxiliary mechanism such as distributor, vibrating belt, pulveriser or granulator.

The drying tunnel is divided into zones, each maintaining a different temperature.

Each zone unit is equipped with an air heating and circulation system and if necessary a damp exhaust system. When the conveyor passes it, hot air passes through raw material from up to low or from low to up. In this way it makes raw material dry uniformly.

Depending on product the tunnel can be equipped with a cooling section and vibration device in outlet to decrease the final product temperature and make it convenient to package in time.



*The inside of the drying tunnel*

The Imtech DryGenic belt dryers offer many operational benefits:

- Custom made dryer
- Optimum time/drying curves for each product
- Continuous drying system
- Suitable for granular, fibrous, preformed, extruded wet materials.
- High energy efficient
- Use the floor space effectively
- Uniform and gentle drying
- Modular system, flexible and easy to ship and install

Naturally the Imtech DryGenic belt dryers are corrosion-resistant. We use various materials such as stainless steel and aluminium, depending on the properties of the product to be processed.

Before designing an installation, the product is tested in a laboratory according to a range of parameters, in order to identify the optimum product treatment.

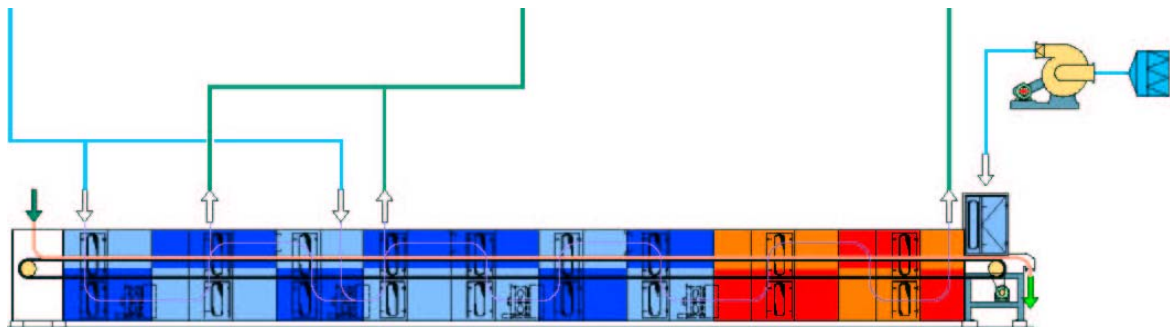
This means that a product-specific solution can always be provided. In our laboratory, we can simulate processes with varying parameters and thus determine the best possible product processing.

This is necessary for many processes to prevent damage to the product. Samples can be subjected to tests at temperatures from -30 up to 600°C. After carefully analysis of the results, each installation is custom designed and manufactured.

Our company can provide technical serves for consultation, equipment selection, research & design and engineering. Because each product has its own specific characteristics (size weight etc.), the installations are tailor-made to the situation.

### PRODUCTS TO BE DRIED

Vegetables, herbs, fruits, potatoes, roots, gelatine, granule feed, pet food, mushrooms, monosodium glutamate, charcoal, organic pigment, synthetic rubber, propylene fiber, medicine, medical material, small wooden products, plastic products, carboxyl-methyl-cellulose etc.



*Example of belt dryer with several zones*

## IMTECH DRYGENIC

Imtech DryGenic unites dehumidification expertise and customer-focused service to each application. For over 50 years Imtech DryGenic have manufactured dehumidification systems and is recognised globally for expertise, quality, service and providing innovative solutions for complex dehumidification processes.

The requirements in for instance the food, electronic and pharmaceutical industries are frequently adjusted.

To serve the changing needs of industrial, institutional and commercial users, new product lines are being continually developed.

The Imtech DryGenic systems come in variety of configurations depending upon air volumes, temperature range, available energy and any need for additional biocidal capacity.

The systems keep the air at a constant, precise humidity regardless of weather conditions or load variations.

### **DrySol, air drying with a liquid**

The Imtech DryGenic principle is simplicity itself. All the dehumidifying systems of Imtech DryGenic are based on the drying properties of a liquid hygroscopic solution, called DrySol. The amount of moisture, which DrySol will take out, is directly related to the concentration and temperature of the solution. DrySol is a non-toxic bactericidal solution, which, when sprayed into an air stream, effectively removes bacteria and specific viruses from the air.

### **ADVANTAGES IMTECH DRYGENIC SYSTEM**

- Microbiological decontamination of the air;
- elimination of “wet” coils and potential breeding site for micro-organisms including bacteria, moulds and viruses;
- highest energy efficiency of any desiccant dehumidifier;
- uses relatively cheap coolants, like well water, river and cooling tower water;
- dew-point humidity as low as -7 °C with 7 °C chilled water coolant;
- easily accessible, non-toxic desiccant has low replacement costs, is not poisoned by hydrocarbons and is not affected by normal plant environments;
- reduction of operation costs through lower cooling and lower regeneration heat requirements;
- temperature and humidity are automatically controlled throughout the year;
- multiple conditioners can be coupled with a single regenerator for system design flexibility, reduction of investment and installation costs;
- remote regenerator can save duct work space and installation costs;
- factory field service support for installation, start-up and training;
- also used in drying plants for sausage casings and applications in the meat industry.



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