

# Hybrid Microwave Drying Ovens



Drying process is the removal of moisture from an article (material, part or a product). Depending on the properties of the article to be dried, the drying process involves various steps with appropriate machinery. Traditionally, a well known simple method of drying an article is by exposing it to solar radiation, referred to as Sun Drying. Due to the obvious limitations of this traditional method, various alternate drying methods were developed over a period of time to achieve drying independent of weather conditions. The heating equipment based on diesel oil and gas fired ovens, electrical heating ovens and several other variants of the above said means of heating, have dominated industrial drying methods. They have been in existence for a long time and are well proven for drying any article.

The microwave drying is the latest technique and provides an alternate method of drying with multiple benefits. The accelerated drying rate achieved in this method for quick drying, proves that microwave drying technique is well suited to industrial applications. Substantial work has been done on this technique demonstrating the many advantages of microwave drying both at lab-scale and at industrial production levels beyond any doubt around the world. Typical drying applications include drying of Raw Materials, Carbon Blocks, Ceramic Products, Fruits & Vegetables, Food Grains, Wood and many others. One of the greatest advantages of Microwave Drying compared to other methods is the rapid rate of drying with energy savings. A Combination of Microwave Heating with any of the other methods gives flexibility to the process of drying in some cases.

Enerzi offers a wide range of Hybrid Microwave Drying Ovens for a variety of applications;

## Salient Features

- ▶ Throughput ranging from 100 to 5000 kg/hour (1 to 100 Tons/ Day)
- ▶ Typical Cross Section of 200 to 1500 mm (W) and 150 to 600 mm (H)
- ▶ Typical Length of the system ranges between 2 to 15 meters
- ▶ Exhaust air circulation of 100 to 5000 cfm
- ▶ Controlled process temperature from RT to 120 deg. C
- ▶ Product temperature monitoring through sensors
- ▶ Installed Microwave power of 10 kW to 500 kW
- ▶ Step-less power control using Microcontroller Module
- ▶ Digital display of Power and Temperature
- ▶ Conveying system with speed controls from 2 to 100 mm/sec
- ▶ Highly integrated Interlocks
- ▶ Industrial PLC with user friendly controls

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