Infrared Drying Oven

LaboSys®
Technology Benefiting Humanity www.labosys.in

Labosys® Infrared (IR) dryers Oven use infrared radiation to heat materials, which causes the molecules inside the material to vibrate and release heat energy.
This process dries the material by removing water more evenly than traditional heat conduction drying.
Here are some key aspects of how infrared dryers work:

Infrared radiation
IR radiation is a type of thermal radiation that falls between 0.78 and 1000 µm on the electromagnetic spectrum. It's invisible to the human eye.

Heating
The infrared radiation penetrates the material and is converted into heat energy. The heat is produced at the surface of the material.

Evaporation
The internal heat of the material causes the water to evaporate and move into the cooler surrounding air.

Drying
The difference in temperature between the evaporated water and the surrounding air creates a partial pressure gradient that drives the moisture out of the material.

Components
Infrared dryers typically include an infrared emission source, a reflector, a fan, and a control system. The emission source can be a lamp tube or heating element. The reflector concentrates the infrared energy onto the material.

Infrared drying ovens can be designed to meet specific requirements for part size, production rate, and thermal characteristics.

Infrared drying ovens are used for a variety of applications, including:

Drying paints and coatings: Infrared drying ovens are designed to dry paints and coatings, and can remove solvents and other by-products from the drying process.

Drying electrical components: Infrared drying ovens can be used to dry electrical components.

Drying wooden pallets: Infrared drying ovens can be used to dry wooden pallets.

Drying rubber molds: Infrared drying ovens can be used to dry rubber molds and cure them.

Drying plastic materials: Infrared drying ovens can be used to dry plastic materials.

Drying automotive parts: Infrared drying ovens can be used to dry automotive parts.

Producing nanomaterial-based biosensors and diagnostic devices: Infrared drying ovens are used for procedures such as surface functionalization, biomolecule immobilization, and thermal annealing.

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Specification:

Model	volume(L)	Exterior Size (W×D×H)c	Chamber Size (W×D×H)cm	Package Size (W×D×H)cm	Power Rating (W	Net/Gross (kg)	Temp. Range (℃	Power Supply
LIO-300	43	64×50×60	35×35×35	75×57×84	1400	36 / 56	RT +5～300	220V,50Hz
LIO-400	81	73×53×69	45×40×45	86×60×90	2000	51 / 81		
LIO-500	138	78×69×80	50×50×55	96×70×100	2800	76 /111		
LIO-600	252	88×73×95	60×60×70	106×80×110	4000	111/151		

Products Description

Labosys® Series Far Infrared Fast Drying Oven

Fratures:

★Equipped with far-infrared heating radiator and temperature control.

★Microprocessor controller(with temperature correction and timing function).

★ Large LCD screen display.

★ High quality stainless steel chamber, removable shelf, easy-to-clean.

★Equipped with multiple sets of heaters.

★ Adopt temperature selection switch which can select the grade according to the heating speed and operating temperature.

★ Convenient operation for air inlet, reasonable air duct structure, good temperature uniformity.

★ Silicon sealing ring for reliable sealing.

★ With inner glass door for easy observation.

★ Equipped with leakage protection.

★ Equipped with spare temperature control which ensures the product work normally even the main temp.control failed.

★ Optional printer or RS485 interface which can print or connect computer for remote control and alarm.

★ Anti-hot handle

Technical Parameters:

1.Temp. Range:RT+5℃-300℃

2.Temp. Fluctuation:±1℃.

3.Temp.Resolution：0.1℃

4.Temp. Uniformity:≦Max. Temp.±3.5℃%

Options:

1. Multi-segment programmable control
2. Built-in Printer
3. RS485 interface

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Infrared Drying Oven / LCD Display Laboratory Drying Oven

How an Infrared Oven Helps in Saving Energy

Ovens that support infrared technology combine optimal reflection and convection for radiation. Most oven manufacturers makeuse of the nano reflectors that are composed of quartz glass materials. Both the reflow process and the tempering glass help in saving energy.

How does an infrared oven work?

Depending on your process and product specification, you may adjust the size of the Infrared Oven.

It enables you to avail an energy-efficient heating process due to the numerical simulation taking place while it gets designed. While the oven only takes about ten minutes to attain a temperature of 300°C, it even takes up to ten minutes to cool down. While operating continuously ata holding temperature of 300°C, you will experience great energy efficiency requiring just about 3-30 KW of holding power.

The product that you keep inside the oven may get rapid changes regardless of whether you conduct continuous or batch operation. There are a few common advantages of using the oven like that of ensuring high purity for products of sensitive nature. For most quick processes, it yields substantial thermal shock resistance. Besides ensuring high mechanical stability.

Infrared Oven Manufacturer:

even needs to ensure flexible dimensions and best optical properties.

Infrared Oven, Infrared Oven Suppliers, Infrared Oven Manufacturers in India

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