LF-PR1000-1 Industrial Microwave Pyrolysis Furnace and reactor

LF-PR1000-1 Industrial Microwave Pyrolysis Furnace and reactor is a volumetric heating of the electromagnetic field caused by the dielectric loss, the overall microwave energy to penetrate organic matter, quickly spread to the reactant functional groups in electromagnetic field, the original molecular motion becomes chaotic state ordered dither, molecular kinetic energy into heat, to achieve rapid and uniform heating purposes, therefore, also known as the microwave heating without temperature gradient "volumetric heating", which as a unique heating method for pyrolysis of organic matter, has obvious advantages.
Microwave digestion oven features:

1, high heating efficiency, material heating up rapidly;

2, with choice and flexibility, no lag effect;

3, can be precisely controlled operating parameters of pyrolysis, easy to operate;

4, in the microwave range of penetration, the particle size of the reactants is not critical, without repeated grinding process, saving a lot of human and material resources.

Uses: Suitable for fuel wood, forestry wastes, crop residues, aquatic plants and other biomass Pyrolysis fuel or chemical raw materials, can also be used for the pyrolysis of coal, oil shale, oil sludge and municipal solid waste and other solid materials for colleges and universities, research institutes to carry out a pilot scale microwave pyrolysis research and production of the ideal equipment.

LF-PR1000-1 Industrial Microwave Pyrolysis Furnace and reactor Technical specification

Voltage 380V±10V 50Hz three-phase

Rating power 10KW

Microwave output power 0.01 ~ 2.8KW variable

Microwave output frequency 2.45GHz

Max working temperature 1200℃

Rated working temperature 1100℃

Sintering space D50 x 350mm (diameter x length)
Temperature control: Thermocouple & Infrared Thermometer

Temperature range: 0°C-1300°C & 300°C-1300°C

Temperature accuracy: ±0.5%

Control system:

- 40 segment parameters setting
- PLC, Touch Screen with data storage function,
- Display of real-time curve
- Dynamic Data Screensavers
- Online alarm

Microwave leakage control: Portable microwave leak detector

Microwave leakage: < 1mW/cm²

Material Feed and Out: Continuous, automatic access to materials

Atmosphere system: Sealed, protective atmosphere

Main part Dimension: 1300mm × 900mm × 2300mm (L × W × H)

Covers: 2m²
LF-PR1000-1 Industrial Microwave Pyrolysis Furnace and reactor product overview:

LF-PR1000-1 Industrial Microwave Pyrolysis Furnace and reactor is a new generation of experiment, research and development, production of LF-PR1000-1 Industrial Microwave Pyrolysis Furnace and reactor, with intelligence, box, energy saving, the integration of the various features, is the use of advanced microwave heating the material directly mode, quickly heating the material quickly reaches a high temperature at the same time, good uniformity, there will be some traditional heating and sintering can not reach, such as uniform, fine grain size, high sintering density, reaction more fully.

2. Be applicable to the vacuum and various atmosphere under the condition of synthesis, such as roasting, heat treatment and sintering process research etc.

3. Fast heating, greatly improve the efficiency of the experiment, adopting vacuum way displacement gas, can greatly save the time of gas replacement.

LF-PR1000-1 Industrial Microwave Pyrolysis Furnace and reactor application area:

This product is mainly used for microwave ashing, microwave pyrolysis, microwave synthesis, microwave sintering, microwave puffing. Its main applications are as follows:

1. Cement building materials industry: this kind of industry need to muffle furnace for hot working and heat treatment of small workpiece.

2. Pharmaceutical industry: used for drug inspection, medical sample pretreatment, etc.

3. Analysis of the chemical industry: as in the field of water quality analysis, environmental analysis sample processing. Also can be used for oil and its analysis.
4. Coal analysis: for the determination of moisture, ash, volatile, ash melting point analysis, ash composition analysis, elemental analysis. It can also be used as a general ashing furnace.

5. Oxide: metal oxides, molecular sieve catalyst.


7. Atmosphere experiment: high-temperature pyrolysis, powder metallurgy, ceramic metallization, phosphor, battery materials, nano materials, graphite expand, graphene puffing.

Characteristics of LF-PR1000-1 Industrial Microwave Pyrolysis Furnace and reactor:

1. Heating speed, temperature uniformity, no thermal inertia;

2. Using special industrial microwave source, to ensure the continuous and stable operation of device for a long time, microwave output power stepless adjustable, can realize accurate control process curve;

3. Equipped with embedded microcomputer control system, real-time temperature, power display and store records at any time, heating process curve of dynamic process monitoring and can adjust the process parameters, has manual and automatic, constant temperature three operating modes, and can switch freely;

4. A variety of specifications, models of crucibles and special insulation for selection of non-polluting materials;

5. Infrared temperature measurement can be configured with a thermocouple temperature measurement, observation absorbing properties of material changes and temperature uniformity;

6. Set the viewing window, can see material heating status or reaction changes;
7. Equipped with vacuum unit and multiplexer atmosphere control line, into and out of the gas channel individually designed to meet the requirements of different processes of the atmosphere;

8. Machinable processing various microwave properties of different materials, excellent versatility.

9. Safe and reliable microwave shielding design, multiple anti-leak protection.

LF-PR1000-1 Industrial Microwave Pyrolysis Furnace and reactor after sales service:

Delivery time: 45 working days

Mode of transportation: according to customer requirement

After sales service:

1. Microwave oven warranty for 1 years from the date of the acceptance of formal, microwave magnetron: 1 year, except consumable goods (sagger, heat insulation barrels), life-long maintenance.

2. During the warranty period if product appear failure, we should be answer within 24 hours after the buyer inform related issues, providing services such as consulting, repair and replacement parts for free. And record on the failure related issues. If cannot be ruled out the fault within 72 hours, will provide free technical personnel door-to-door service, the expenses shall be borne by us arising out of it.

3. During the warranty period, all kinds of equipment failure shall promptly provide free maintenance consulting services to non-human damage of all kinds of parts, supplier shall promptly replaced free of charge.
4. Equipment demand side appears difficult to resolve the fault after the warranty period, our company to ensure the long-term provision of technical services, and provide related accessories.

5. Once the contract is concluded, that is, into an endless after-sales service. Before the equipment acceptance, we will provide related equipment technical data (product specification, certification, electrical specification, infrared thermometer operation instruction, packing list, etc.), free on-site installation and debugging, technical training, until the buyer completely control.

6. After Microwave acceptance, our company will be based on customer needs to do research, professional solutions of microwave equipment related technical consulting, microwave technology development support etc. After the warranty expires, we still provide the technical support, product technology upgrade, spare parts supply, product regular tour service. Make sure that our products, in good condition for a long time.
Industrial microwave FAQ

1. What is microwave?

- **Electromagnetic Spectrum**
- **Microwave**
- **Frequency**: 300 MHz~300 GHz
- **Wavelength**: 100 cm~1 mm

2. Comparison of Heating Mechanism in Conventional and Microwave Furnace

- **Conventional Heating**
  - External heating source
  - Heat flow: outside to inside
  - Material: independent
  - Energy loss: high

- **Microwave Heating**
  - Internal heating
  - Heat flow: inside to outside
  - Material: independent
  - Energy loss: highly efficient

3. Dielectric properties of materials; Different materials with different interactions with microwaves; Conductor, Insulator, Dielectric;

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4. What the microwave technology can be used for?

- Microwave puffing
- Microwave crystallization
- Microwave catalysis
- Microwave calcination
- Microwave roasting
- Microwave drying
- Microwave sintering
- Microwave pyrolysis

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**industrial microwave oven** The characteristics of microwave powder application and industrial microwave oven heating principle:
Langfeng microwave More industrial Microwave equipment

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langfeng microwave Factory

langfeng microwave Equipment
langfeng microwave Production Environment and langfeng microwave R & D environment

langfeng microwave Technical strength

langfeng microwave patents and honor
Industrial microwave oven application

If you want to focus more of our products information, please visit our website: http://www.industrialmicrowavefurnace.com
Also can contact us directly, we are not only a manufacturer of microwave thermal equipment, but also your technology innovation cooperation partner, we expect to provide you more valuable, more quality services.

Contact information:
Changsha Langfeng Microwave Technology Co., Ltd. 24 hours on line Mobile
Vera Gu: +86-15974242234
Tel: +86-731-84874716 Fax: +86-731-86868583
E-mail: info@industrialmicrowavefurnace.com vera@industrialmicrowavefurnace.com; gu.microwave@gmail.com;

Our Goal: Top-Level Microwave Equipment Company