This laboratory microwave oven is suitable for a variety of synthesis, reduction, nitriding, roasting, calcination, sintering, heat treatment under atmosphere of inert gas and reduction.

All microwave lab experiments need lab microwave oven. The application of lab furnaces are below:

1. Cement building materials industry: this kind of industry need to muffle furnace for hot working and heat treatment of small work piece, microwave sintering of ceramics.
2. Pharmaceutical industry: used for drug inspection, medical sample pretreatment, microwave sintering of ceramics, 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.

8. Microwave smelting,

Technical specification

Voltage 220V±10V 50Hz three-phase
Rating power 11KW
Microwave output power 0.01 ~ 5.6KW variable
Microwave output frequency 2.45GHz
Max working temperature 1600℃
Rated working temperature 1550℃
Sintering space  
D180 x 150mm (diameter x length)

Temperature control  
Infrared Thermometer

Temperature range  
300°C-1800°C

Temperature accuracy  
±0.5%

Control system:

- Three Model: manual/auto/constant temperature,
- 40 segment parameters setting
- PLC, Touch Screen with data storage function,
- Display of real-time curve
- Dynamic Data Screensavers

Static ultimate vacuum  
≤10Pa

Vacuum System

- Vacuum pumps, two-way pipeline atmosphere control, could fill oxygenated gas, inert gas, reducing gas and others;

Speed of sintering platform  
4-6rpm

Microwave leakage  
< 0.1mW/cm²

Alarm System  
Over-temperature alarm,

Over current alarm

Water flow alarm
Precision Water Chiller  water flow 2m3/h
rated cooling capacity: 5.2KW
Furnace door protection  Close the door switch
Overall Dimension  2100mm×1100mm×1800mm (L×W×H)
Covers  2m2

LF-AM1600-2 Industrial Microwave Atmosphere Sintering Furnace is microwave smelting processing of ceramic materials and dental sintering furnace product overview:

LF-AM1600-2 Industrial Microwave Atmosphere Sintering Furnace is microwave smelting processing of ceramic materials and dental sintering furnace is a new generation of experiment, research and development, production of LF-AM1600-2 Industrial Microwave Atmosphere Sintering Furnace is microwave smelting processing of ceramic materials and dental sintering furnace, 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-AM1600-2 Industrial Microwave Atmosphere Sintering Furnace is microwave smelting processing of ceramic materials and dental sintering furnace 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-AM1600-2 Industrial Microwave Atmosphere Sintering Furnace is microwave smelting processing of ceramic materials and dental sintering furnace.
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-AM1600-2 Industrial Microwave Atmosphere Sintering Furnace is microwave smelting processing of ceramic materials and dental sintering furnace after sales service:

Delivery time: 45 working days

Mode of transportation: according to customer requirement
After sales service:

1. Microwave oven warranty for 1 year 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
- Characteristics of microwave heating devices
- Common frequencies used for microwave heating devices

2. Comparison of Heating Mechanism in Conventional and Microwave Furnace
- Conventional Heating: Energy transfer, external heating source, heat flow outside to inside, material independent, energy losses.
- Microwave Heating: Energy conversion, internal heating, heat flow inside to outside, material dependent, highly efficient.

3. Dielectric properties of materials: Different materials with different interactions with microwaves
- Conductor: Reflective, metals reflect microwave energy and do not heat.
- Insulator: Transparent, numerous materials are transparent to microwave energy and will not heat but can be good insulators.
- Dielectric: Absorptive, these materials absorb microwave energy and are heated.

4. What is microwave technology used for?
- Microwave heating
- Microwave puffs
- Microwave crystallization
- Microwave catalysis
- Microwave drying
- Microwave sintering
- Microwave calcination
- Microwave pyrolysis
- Microwave roasting

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LF-TU1200-1</td>
<td>70mm Industrial Microwave Tube Furnace</td>
</tr>
<tr>
<td>LF-TU-1600-1</td>
<td>quartz tube furnace and Microwave High Temperature Tube Furnace</td>
</tr>
<tr>
<td>LF-AS 1200-1</td>
<td>Microwave Ashing Furnace</td>
</tr>
<tr>
<td>LF-AS1200</td>
<td>Microwave Ashing Furnace and system ashing oven</td>
</tr>
<tr>
<td>LF-MU-1200-1</td>
<td>laboratory Microwave Muffle Furnace and price</td>
</tr>
<tr>
<td>LF-MU-1200-2</td>
<td>Microwave Muffle Furnace</td>
</tr>
<tr>
<td>LF-MU1600-1</td>
<td>muffle oven programmable Microwave High Temperature Muffle Furnace</td>
</tr>
<tr>
<td>LF-MU1600-2</td>
<td>Microwave High Temperature Muffle Furnace</td>
</tr>
<tr>
<td>LF-EX1000-1</td>
<td>Graphite and Graphene Microwave Expansion Furnace (1kg per day)</td>
</tr>
<tr>
<td>LF-EX1000-2</td>
<td>Graphite and Graphene Industrial Microwave Expansion Furnace (10-20kgs per day)</td>
</tr>
<tr>
<td>LF-AM1600-1</td>
<td>Microwave Atmosphere Sintering Furnace of ceramics</td>
</tr>
<tr>
<td>LF-AM1600-2</td>
<td>Microwave High Temperature Atmosphere Sintering Furnace</td>
</tr>
<tr>
<td>LF-APK5100</td>
<td>Industrial Microwave Atmosphere Pusher Kiln</td>
</tr>
<tr>
<td>LF-PR100-1</td>
<td>Laboratory Microwave Pyrolysis Furnace and reactor</td>
</tr>
<tr>
<td>LF-PR100-2</td>
<td>Industrial Microwave Pyrolysis Furnace and reactor</td>
</tr>
<tr>
<td>LF-VA1600-1</td>
<td>Laboratory Microwave high Vacuum Furnace manufacturers</td>
</tr>
<tr>
<td>LF-VA1600-2</td>
<td>high temperature vacuum furnaces Industrial Microwave Vacuum Furnace</td>
</tr>
</tbody>
</table>
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
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