LF-ZK4518 Industrial Microwave small laboratory Vacuum Sintering Furnace

Technical specification

- **Voltage**: 220V±10V 50Hz three-phase
- **Rating power**: 13KW
- **Microwave output power**: 0.01 ~ 4.2KW variable
- **Microwave output frequency**: 2.45GHz±25MHz
- **Max working temperature**: 1650°C
- **Rated working temperature**: 1550°C
- **Sintering space**: D150 x 120mm (diameter x length)
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heating Rate</td>
<td>≥40°C/min</td>
</tr>
<tr>
<td>Temperature control</td>
<td>Infrared Thermometer</td>
</tr>
<tr>
<td>Temperature range</td>
<td>300°C-1800°C</td>
</tr>
<tr>
<td>Temperature accuracy</td>
<td>±0.5%</td>
</tr>
<tr>
<td>Control system:</td>
<td></td>
</tr>
<tr>
<td>- Three Model</td>
<td>manual/auto/constant temperature</td>
</tr>
<tr>
<td>- 40 segment parameters setting</td>
<td></td>
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<tr>
<td>- PLC, Touch Screen with data storage function</td>
<td></td>
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<tr>
<td>- Display of real-time curve</td>
<td></td>
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<tr>
<td>- Dynamic Data Screensavers</td>
<td></td>
</tr>
<tr>
<td>Static ultimate vacuum</td>
<td>≤10^{-3}Pa</td>
</tr>
<tr>
<td>Vacuum System</td>
<td></td>
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<tr>
<td>- Vacuum pumps, two-way pipeline atmosphere control, could fill oxygenated gas, inert gas, reducing gas and others</td>
<td></td>
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<tr>
<td>Speed of sintering platform</td>
<td>4-6rpm</td>
</tr>
<tr>
<td>Mute oil free compressor</td>
<td>0.4 ~ 0.7MPa</td>
</tr>
<tr>
<td>Microwave leakage</td>
<td>&lt; 0.1mW/cm²</td>
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<tr>
<td>Alarm System</td>
<td>Over-temperature alarm,</td>
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<tr>
<td>Over current alarm</td>
<td></td>
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<tr>
<td>Water flow alarm</td>
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</tbody>
</table>
Precision Water Chiller  water flow 2m3/h

rated cooling capacity: 5.2KW

Furnace door protection  Close the door switch

Overall Dimension  2200mm×2300mm×2100mm (L×W×H)

Covers  5m2

LF-ZK4518 Industrial Microwave small laboratory Vacuum Sintering Furnace product overview:

LF-ZK4518 Industrial Microwave small laboratory Vacuum Sintering Furnace is a new generation of experiment, research and development, production of LF-ZK4518 Industrial Microwave small laboratory Vacuum 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 cannot 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-ZK4518 Industrial Microwave small laboratory Vacuum 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-ZK4518 Industrial Microwave small laboratory Vacuum 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-ZK4518 Industrial Microwave small laboratory Vacuum 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 3 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**
- **A Microwave**
- **Frequency**: 300 MHz - 300 GHz
- **Wavelength**: 100 cm - 1 mm

The common frequencies that can be used for microwave heating device:
- 915 MHz & 2450 MHz

2. Comparison of Heating Mechanism in Conventional and Microwave Furnace

- **Conventional Heating Element**
  - Energy transfer
  - External heating source
  - Heat flow: outside to inside
  - Material independent
  - Energy losses

- **Microwave Heating**
  - Energy conversion
  - Internal heating
  - Inside to outside
  - Material dependent
  - Highly efficient

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

- **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 the microwave technology can be used for?

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

Industrial microwave oven The characteristics of microwave powder application and industrial microwave oven Heating principle:
langfeng microwave More industrial Microwave equipment

LF-ZKG1512 Industrial Microwave Vacuum Tube Furnace
LF-ZG1512 70mm Industrial Microwave Tube Furnace
LF-ZG1516 quartz tube furnace and Industrial Microwave High Temperature Tube Furnace
LF-HH3012 Industrial Microwave Ashing Furnace
LF-HH1512 Industrial Microwave Ashing Furnace and system ashing oven
LF-MF3012 laboratory Industrial Microwave Muffle Furnace and price
LF-MF1512 Industrial Microwave Muffle Furnace
LF-HMF1516 muffle oven programmable Industrial Microwave High Temperature Muffle Furnace
LF-MF3016 Industrial Microwave High Temperature Muffle Furnace
LF-PH9020 Industrial Microwave Tube exfoliated Furnace for graphite and graphene synthesis devices
LF-PH9010 Graphite and Graphene Industrial Microwave Expansion Furnace
LF-QS4516 dental zirconia Industrial Microwave Atmosphere Sintering Furnace of ceramics
LF-QS1516 zirconia sintering oven Industrial Microwave Atmosphere Sintering Furnace
LF-QS6016 Industrial Microwave Atmosphere Sintering Furnace is microwave smelting processing of ceramic materials and dental sintering furnace
LF-QS1512 Industrial Microwave Atmosphere Sintering Furnace is ceramic microwave oven and sintering furnaces for zirconia sintering furnace dental
LF-APK5100 Industrial Microwave Atmosphere Pusher Kiln
LF-PK5100 large Industrial Microwave Pusher Kiln and Microwave kilns for sale
LF-RJ3010 Industrial Microwave Pyrolysis Furnace and reactor
LFWG6S Industrial Microwave waste water treatment Chemicals Sewage Treatment Equipment and wastewater treatment systems
LFWG20L Industrial Microwave municipal water treatment systems equipment and industrial water treatment systems
LFWG2S Industrial Microwave water purification equipment industrial wastewater treatment systems and sewage treatment companies
LF-ZK6016 Industrial Microwave high Vacuum Furnace manufacturers
LF-ZK4516 high temperature vacuum furnaces Industrial Microwave Vacuum Furnace
LF-ZK4518 Industrial Microwave small laboratory Vacuum Sintering Furnace
langfeng microwave Production Environment and langfeng microwave R & D environment

langfeng microwave Technical strength

langfeng microwave patents and honor
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.
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