



Microwave high temperature Muffle Furnace basic information introduction

Introduction

This microwave high temperature Muffle furnace is a typical microwave test station with such advantages, such as rapid heating speed, high efficiency, and can make machined material in well consistency. It could provide a variety of work environment in the process of sintering, such as air, vacuum, protective gas, weak deoxidation atmosphere..etc. It mainly used in the process of sintering for below materials: magnetic materials, electronic ceramics, structural ceramics, metal compounds, nitrides and other materials, especially for new materials' developing, equipment, and trial producing.

Requirements on working environment

- 1, Ventilated, clean, no dust, no explosive places
- 2, Ambient temperature : 0~40°C
- 3, Relative Humidity: 5~85%
- 4, Working place request: 800*800 (mm)

Main Feature

- 1, provide 3 operation model: manual, auto and constant temperature which can be free switched;
- 2, Touch screen with operating system, could set and save multiple curves, auto save running record;
- 3, Rapid heating speed, greatly improving the efficiency
- 4, Multi original special crucible can be chosen, material placed in the crucible will not be polluted
- 5, Could handle different coupling degree material with microwave, which will lead the popularization of microwave high temperature technique;
- 6, Set anti-corrosion exhaust way to exhaust gas produced in the heating process quickly;
- 7, Using step less adjustable, high stability and long life time industry level microwave source, measure sample temperature directly;
- 8, Real time temperature chart display can dynamic monitor the heating process.
- 9, Secure and reliable microwave shielding chamber design, multi leakage-proof protection

Application

This kind of machine is mainly used in compounding and sintering of below material and trial production.

- 1, Carbide, Nitride, Oxide: SiC、 VC、 Si₃N₄、 AlN、 VN、 CrN、 ZnO、 MgO、 MnO₂、 ZrO₂ 、 V₂O₅、 TiO₂, etc;
- 2, Metal oxide carbon-thermal reduction, metal sulfides' desulfurization;
- 3, Lithium-ion battery material: Lithium cobalt oxide, lithium management oxide, NCM, LiFePO₄;
- 4, Molecular sieve catalyst material coating: TS-1、 HTS-1, ZSM-5, etc
- 5, Daily-used ceramics, arts and crafts ceramic;
- 6, Fluorescent powder : LED, three primary colors, long after glowing phosphor powder, etc;
- 7, electronic ceramics, magnetic materials, powder metallurgy, carbide, ceramic structure sintering;
- 8, Ashing and incineration of chemical analysis sample;

Microwave high temperature Muffle Furnace technical data:

Voltage	220±10V 50/60Hz
Rating power	5KW
Microwave output power	0.2~1.40kW variable
Microwave output frequency	2.45GHz±25MHz
Max working temperature	1600℃
CW working temperature	1550℃
Temperature control	IR pyrometer
Temperature range	300℃~1800℃
Temperature accuracy	±0.5%
Atmosphere system	Air
Max sintering space	120×120×40(L×W×H)
Circulating cooling water flow	≥0.8 M3/hour

Microwave high temperature Muffle Furnace technical data:

Circulating cooling water pressure	0.08Mpa~0.2Mpa
Circulating cooling water inlet temperature	5℃~35℃
Circulating cooling water total hardness	<60mg/L(could use tap water)
Control system	40 segment parameters setting, 10 inch touch screen with storage function, three optional model,manual/auto/constant temperature,display of real-time curve
Microwave leakage	<2mW/cm ²
System outside Dimension	700×680×680 (L×W×H)

Device list HY-SM1500:

Main furnace body	1set Machine assembly
Cabinet	1set Machine assembly
Cooling system	1set Water cooling
Electricity system	1set Connect with whole machine
Insulation system	1set 1700℃preservation module
Microwave source	3 sets 1.5KW
IR pyrometer	1set Shanxi Ruiguang
Sagger	4sets Spare 3 sets
Microwave leak detection instrument	1set HT-M2
Teflon window	2 pcs 49.2×92.4×4mm
Shielding chamber	1 set Metal elastic shielding cycle
USB	1 set embedded
Vacuum system	1 set Chengdu Nanguang 2XZ~4B

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