



KINTEK SOLUTION

Graphite Vacuum Furnace Catalog

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KINTEK SOLUTION

COMPANY PROFILE

>>> About Us

KinTek Group Limited is one technology orientated organization, team members are devoted to probing the most efficient and reliable technology and innovations in the scientific researching equipment, fields like biochemical reacting, new materials researching, heat treatment, vaccum creating, refrigerating, as while as pharmaceutical and petroleum extracting equipment.



2200 °C Graphite Vacuum Furnace

Item Number: KT-VG



Introduction

Discover the power of the KT-VG Graphite Vacuum Furnace - with a maximum working temperature of 2200°C, it's perfect for vacuum sintering of various materials. Learn more now.

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Furnace model	KT-VG		
Max. temperature	2200 °C		
Constant work temperature	2100 °C		
Chamber insulation material	Graphite felt		
Heating element	Graphite resistant rod		
Heating rate	0-10°C/min		
Temperature sensor	T/R thermocouple and infrared thermometer		
Temperature controller	Touch screen PID controller with PLC		
Temperature control accuracy	±1°C		
Electric power supply	AC110-440V,50/60HZ		
Standard Chamber Sizes Stocks			
Chamber size (mm)	Effective volume (L)	Chamber size (mm)	Effective volume (L)
200x200x300	12	400x400x600	96
300x300x400	36	500x500x700	150
Customer design sizes and volume is accepted			

Large Vertical Graphitization Furnace

Item Number: GF-08



Introduction

A large vertical high-temperature graphitization furnace is a type of industrial furnace used for the graphitization of carbon materials, such as carbon fiber and carbon black. It is a high-temperature furnace that can reach temperatures of up to 3100°C.

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Product model specifications	GF-08-Φ80X140	GF-08-Φ90X160	GF-08-Φ100X200	GF-08-Φ120X200
Volume(L)	703	1000	1500	2260
Rated temperature(C)	2800	2800	2600	2600
Limit temperature(C)	3100	3100	2800	2800
Effective heating area (mm)	Φ800×1400	Φ900×1600	Φ1000×2000	Φ1200×2000
Power(KW)	500	600	800	1200
Frequency(HZ)	1000	1000	1000	1000
Discharging method	Upper discharge/lower discharge			
Temperature control method	Japan Shima Electric Thermostat			
heating method	Induction heating			
Vacuum system	Rotary vane vacuum pump (for high vacuum requirements, Roots vacuum pump and oil diffusion pump are required)			
sintering atmosphere	N ² Ar and other gases			
Rated power supply voltage (V)	380			
Rated heating voltage (V)	750			
Vacuum limit (Pa)	100 (vacuum cold state)			

Vertical High Temperature Graphitization Furnace

Item Number: GF-05



Introduction

Vertical high temperature graphitization furnace for carbonization and graphitization of carbon materials up to 3100°C. Suitable for shaped graphitization of carbon fiber filaments and other materials sintered in a carbon environment. Applications in metallurgy, electronics, and aerospace for producing high-quality graphite products like electrodes and crucibles.

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Product model specifications	GF-05-Φ40×100	GF-05-Φ50×100	GF-05-Φ60×100	GF-05-Φ70×140	GF-05-Φ90×160	GF-05-Φ100×200
Volume(L)	125	196	282	550	1000	1500
Rated temperature(C)	2800	2800	2800	2800	2800	2600
Limit temperature(C)	3100	3100	3100	3100	300	2800
Effective heating area (mm)	Φ400×1000	Φ500×1000	Φ600×1000	Φ700×1400	Φ900×1600	Φ1000×2000
Power(KW)	150	200	300	500	600	800
Frequency(HZ)	1500	1000	1000	1000	1000	1000
Temperature control method	Japan Shima Electric Thermostat					
heating method	Induction heating					
Vacuum system	Rotary vane vacuum pump (for high vacuum requirements, Roots vacuum pump and oil diffusion pump are required)					
sintering atmosphere	N ² Ar and other gases					
Rated power supply voltage (V)	380					
Rated heating voltage (V)	750					
Vacuum limit (Pa)	100 (vacuum cold state)					

Ultra-High Temperature Graphitization Furnace

Item Number: GF-09



Introduction

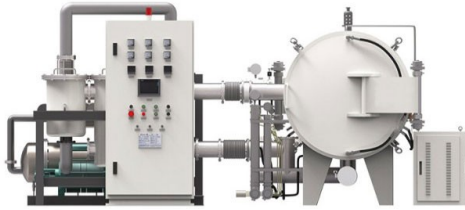
The ultra-high temperature graphitization furnace utilizes medium frequency induction heating in a vacuum or inert gas environment. The induction coil generates an alternating magnetic field, inducing eddy currents in the graphite crucible, which heats up and radiates heat to the workpiece, bringing it to the desired temperature. This furnace is primarily used for graphitization and sintering of carbon materials, carbon fiber materials, and other composite materials.

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Power supply capacity	60KVA
Power supply	4000~8000Hz (automatic tracking)
Temperature	3000°C
Temperature control accuracy	±2°C
Temperature measurement method	1100°C~3000°C
Effective working area size	Φ200×200 mm (diameter×height)
Cold ultimate vacuum degree	133Pa
Pressure rise	3.0 Pa/h
Protective atmosphere	Argon Nitrogen
Inflation pressure	≤ 0.03MPa
Material in and out method	Top loading and discharging
Heating conditions	Atmosphere sintering (inert gas)

Horizontal High Temperature Graphitization Furnace

Item Number: GF-01



Introduction

Horizontal Graphitization Furnace: This type of furnace is designed with the heating elements placed horizontally, allowing for uniform heating of the sample. It's well-suited for graphitizing large or bulky samples that require precise temperature control and uniformity.

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Product model specifications	GF-01-40×40×120	GF-01-50×50×140	GF-01-55×55×160
Volume(L)	192	350	484
Rated temperature(°C)	2800	2800	2800
Limit temperature(°C)	3100	3100	3100
Effective heating area (mm)	400×400×1200	500×500×1400	550×550×1600
Power(KW)	200	350	450
Frequency(HZ)	1500	1000	1000
Temperature control method	Adopt Japanese Shima Electric thermostat		
Heating method	Induction heating		
Vacuum system	Rotary vane vacuum pump (for high vacuum requirements, Roots vacuum pump and oil diffusion pump are required)		
Sintering atmosphere	N ₂ , Ar and other gases		
Rated power supply voltage (V)	380		
Rated heating voltage (V)	750		
Vacuum limit (Pa)	100 (vacuum cold state)		

Continuous Graphitization Furnace

Item Number: GF-07



Introduction

High-temperature graphitization furnace is a professional equipment for graphitization treatment of carbon materials. It is a key equipment for the production of high-quality graphite products. It has high temperature, high efficiency and uniform heating. It is suitable for various high-temperature treatments and graphitization treatments. It is widely used in metallurgy, electronics, aerospace, etc. industry.

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Product model specifications	GF-07-10×20×50	GF-07-10×40×100	G7-06-10×60×200
Rated temperature(C)	2500	2500	2500
Effective heating area (mm)	100×200×500	100×400×1000	100×600×2000
Power(KW)	80	150	300
Frequency(HZ)	2500	2500	1000
heating method	Induction heating		
Import and export cooling	Cooling zones of 500-1000mm are set up at the entrance and exit respectively.		
Import and export gas protection	Set up 500-1000mm gas sealing areas at the inlet and outlet respectively		
Temperature measurement method	1000-3200C infrared optical temperature measurement		
Insulation part	Hard carbon felt+soft carbon felt		
gas flow	2-6m/h		
Oxygen content detection	Using Shaanxi Fein oxygen content analyzer, real-time detection of oxygen content and dew point real-time analyzer		

Negative Material Graphitization Furnace

Item Number: GF-04



Introduction

Graphitization furnace for battery production has uniform temperature and low energy consumption. Graphitization furnace for negative electrode materials: an efficient graphitization solution for battery production and advanced functions to enhance battery performance.

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Product model specifications	GF-04-Φ40×100	GF-04-Φ50×100	GF-04-Φ60×100	GF-04-Φ70×140	GF-04-Φ90×160	GF-04-100×200
Volume(L)	125	196	282	550	1000	1500
Rated temperature(C)	2800	2800	2800	2800	2800	2600
Limit temperature(C)	3100	3100	3100	3100	300	2800
Effective heating area (mm)	Φ400×1000	Φ500×1000	Φ600×1000	Φ700×1400	Φ900×1600	Φ1000×2000
Power(KW)	150	250	350	550	700	1000
Frequency(HZ)	1500	1000	1000	1000	1000	1000
Temperature control method	Japan Shima Electric Thermostat					
Heating method	Induction heating					
Vacuum system	Rotary vane vacuum pump (for high vacuum requirements, Roots vacuum pump and oil diffusion pump are required)					
Sintering atmosphere	N ² Ar and other gases					
Rated power supply voltage (V)	380					
Rated heating voltage (V)	750					
Vacuum limit (Pa)	100 (vacuum cold state)					

Bottom Discharge Graphitization Furnace For Carbon Materials

Item Number: GF-06



Introduction

Bottom-out graphitization furnace for carbon materials, ultra-high temperature furnace up to 3100°C, suitable for graphitization and sintering of carbon rods and carbon blocks. Vertical design, bottom discharging, convenient feeding and discharging, high temperature uniformity, low energy consumption, good stability, hydraulic lifting system, convenient loading and unloading.

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Product model specifications	GF-06-Φ40X100	GF-06-Φ50X100	GF-06-Φ60X100	GF-06-Φ70X140	GF-06-Φ90X160	GF-06-100X200
Volume(L)	125	196	282	550	1000	1500
Rated temperature(C)	2800	2800	2800	2800	2800	2600
Limit temperature(C)	3100	3100	3100	3100	300	2800
Effective heating area (mm)	Φ400×1000	Φ500×1000	Φ600×1000	Φ700×1400	Φ900×1600	Φ1000×2000
Power(KW)	150	200	300	500	600	800
Frequency(HZ)	1500	1000	1000	1000	1000	1000
Temperature control method	Japan Shima Electric Thermostat					
heating method	Induction heating					
Vacuum system	Rotary vane vacuum pump (for high vacuum requirements, Roots vacuum pump and oil diffusion pump are required)					
sintering atmosphere	N ² Ar and other gases					
Rated power supply voltage (V)	380					
Rated heating voltage (V)	750					
Vacuum limit (Pa)	100 (vacuum cold state)					

Vacuum Hot Press Furnace

Item Number: KT-VHP



Introduction

Discover the advantages of Vacuum Hot Press Furnace! Manufacture dense refractory metals & compounds, ceramics, and composites under high temp and pressure.

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Specification	<ul style="list-style-type: none"> The electric furnace is heated by a vertical furnace body (pressure ranges from 5-800T, and the pressurization method is divided into one-way and two-way). The feeding and discharging methods are divided into top and side. , electronic control system and other components.
Furnace shell	<ul style="list-style-type: none"> The furnace shell is a double-layer water-cooled structure, the inner layer is strictly polished stainless steel, the outer layer is stainless steel sandblasting matte treatment or carbon steel anti-rust treatment, water cooling is passed between the double layers, and the furnace shell does not exceed 60 °C. The furnace cover is lifted by a mechanical mechanism, manually rotated backwards to open (one-way pressure), and a locking device is installed on the furnace cover.
Stove side	<ul style="list-style-type: none"> The side of the furnace is equipped with an observation window, a thermocouple automatic entry and exit mechanism, an infrared thermometer and a water-cooled electrode (three-phase). The automatic entry and exit of the thermoelectric cell is electric, with high and low temperature automatic switching. In order to prevent accidents caused by abnormal furnace temperature, there is also an over-temperature protection thermocouple on the side of the furnace.
The heating element	<ul style="list-style-type: none"> The heating element is made of graphite tube (or molybdenum wire), which can be divided into single-phase and three-phase heating. The rational design of the heating element improves the uniformity of the furnace temperature.
The insulation layer	<ul style="list-style-type: none"> The insulation layer is made of graphite (or graphite paper), carbon felt, etc., which has good insulation performance, and the unique structural design reduces the vacuuming time. The insulation layer of the molybdenum wire hot pressing furnace is a metal reflective screen.
The vacuum system	<ul style="list-style-type: none"> The vacuum system consists of two-stage vacuum pumps, one oil diffusion pump and one mechanical pump to complete the high and low vacuum. The vacuum valve adopts the high-vacuum baffle valve designed and produced by our company, which can realize automatic switching and control of high and low vacuum with digital display vacuum gauge and PLC.
The main circuit of the electric control system	<ul style="list-style-type: none"> The main circuit of the electric control system is low-voltage and high-current input. The electric control cabinet is made with reference to the standard cabinet of Rittal. It is humanized design. There are graphic simulation screens and buttons on the control panel. The operation is intuitive and convenient. The temperature and pressure control are controlled by imported brand programs. Instrument, the cabinet is equipped with a PLC, and the sintering process is automatically completed near the preset program. The control system has sound and light alarm functions for abnormal phenomena such as water cut-off, over-temperature, over-current, and thermocouple automatic switching failure.
Working temperature	1500°C / 2200°C
Heating element	Molybdenum/Graphite
Working pressure	10-400T
Press distance	100-200mm
Vacuum pressure	6x10 ⁻³ Pa

Effective working area diameter range	90-600mm
Effective working area diameter range	120-600mm



Kintek Solution

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