KINTEK FURNACE

Vacuum Furnace Catalog

Contact us for more catalogs of High Temperature Furnaces, etc.

KINTEK FURNACE

COMPANY PROFILE

>>> About Us

Kintek Furnace is a technology-driven innovator specializing in precision high-temperature laboratory equipment, including muffle furnaces, tube furnaces, vacuum furnaces, atmosphere-controlled systems, and advanced CVD/PECVD solutions. Designed for materials science, chemical research, and thermal processing applications, our robust, energy-efficient systems prioritize precision, safety, and repeatability in extreme heat environments, empowering researchers and industrial labs to achieve groundbreaking results.

Vacuum Induction Melting Furnace And Arc Melting Furnace

Item Number: KT-VI

Introduction

Explore KINTEK's Vacuum Induction Melting Furnace for high-purity metal processing up to 2000℃. Customizable solutions for aerospace, alloys, and more. Contact us today!

Learn More

Crucible effective volume	4L
Crucible effective capacity (Steel)	20kgs
Max temperature	2000 ℃
Max melting vacuum	• 7×10-3Pa • Vacuum time: open diffusion pump when preheating is complete, then up to 7×10-3Pa in 30 minutes.
Rated power	60KW
Rated voltage	375V
Power frequency	50HZ
Rated frequency	1500~2500HZ
Heat element	Induction copper coil
Vacuum system	• 70L/s Double stage Rotary vane mechanical pump • Dia.300mm diffusion pump, Max. pumping speed: 5000L/s • Dia.300mm diffusion pump clod trap, effective cooling cycle for pump oil • Dia.300mm diffusion pump flapper valve + Dia.80mm former pump flapper valve • Stainless pipe + stainless bellows

Model	Capacity	Temperature	Vacuum	Rated power
KT-VI5	5kg	1700 ℃	6x10-3Pa	40Kw
KT-VI10	10kg			40Kw
KT-VI25	25kg			75Kw
KT-VI50	50kg			100Kw
KT-VI100	100kg			160Kw
KT-VI200	200kg			200Kw
KT-VI500	500kg			500Kw
Semi-continuously melting production can be customized				

Vacuum Heat Treat Sintering Furnace With Pressure For Vacuum Sintering

Item Number: KT-VPS

Introduction

KINTEK's Vacuum Pressure Sintering Furnace offers 2100℃ precision for ceramics, metals, and composites. Customizable, high-performance, and contamination-free. Get a quote now!

Learn More

Maximum temperature	2100℃
Pressure range	10-800T
Heating method	Graphite
Vacuum degree	6×10-3Pa
Effective workspace	Customizable

600T Vacuum Induction Hot Press Vacuum Heat Treat And Sintering Furnace

Item Number: KT-VH

Introduction

600T Vacuum Induction Hot Press Furnace for precise sintering. Advanced 600T pressure, 2200°C heating, vacuum/atmosphere control. Ideal for research & production.

Learn More

Maximum pressure	600T
Mold outer diameter	∅680mm
Mold material	Graphite
Large sample size	∅500mm
Cold vacuum degree	10Pa
Furnace body form	One for two
Heating method	Induction
Pressure method	Four-column mechanical pressurization

Vacuum Heat Treat Sintering Furnace Molybdenum Wire Vacuum Sintering Furnace

Item Number: KT-VMW

Introduction

KINTEK's Vacuum Molybdenum Wire Sintering Furnace excels in high-temperature, high-vacuum processes for sintering, annealing, and material research. Achieve precise 1700°C heating with uniform results. Custom solutions available.

Learn More

Maximum Temperature	1700℃ (Nominal 1600℃)
Working Area Size (Examples)	Φ60×80 mm, Φ160×160 mm, Φ200×200 mm, Φ300×400 mm, Φ400×500 mm (Customizable)
Cold Ultimate Vacuum Degree	10^{-3} Pa or 10^{-4}Pa
Pressure Rise Rate	≤3Pa/h
Power Supply	Three-phase 380 V 50 Hz (Customizable)
Furnace Temperature Uniformity	±5 ℃ (under vacuum)
Loading and Unloading Methods	Upper, side, or bottom loading options
Protective Gas Options	Automatic charging and discharging for Argon, Nitrogen, Hydrogen.
Control Method	PLC with LCD touch screen interface

Small Vacuum Heat Treat And Tungsten Wire Sintering Furnace

Item Number: KT-VTW

Introduction

Compact vacuum tungsten wire sintering furnace for labs. Precise, mobile design with superior vacuum integrity. Ideal for advanced material research. Contact us!

Learn More

9Mpa Air Pressure Vacuum Heat Treat And Sintering Furnace

Item Number: KT-APS

Introduction

Achieve superior ceramic densification with KINTEK's advanced air pressure sintering furnace. High-pressure up to 9MPa, precise 2200℃ control.

Learn More

Air pressure sintering furnace	Vertical structure
The working area	Φ100×90mm, Φ200×220mm, etc.
The bottom-lift type	Φ300×400mm, etc.
The horizontal type	250×250×400mm, 375×375×475mm, etc.
Cold vacuum degree	10^{-3}Pa, 10Pa, etc
Maximum pressure	1.2MPa, 2MPa, 6MPa, 9MPa
Temperature	2000℃-2200℃

Vacuum Heat Treat Sintering And Brazing Furnace

Item Number: KT-BF

Introduction

KINTEK Vacuum Brazing Furnaces deliver precision, clean joints with superior temperature control. Customizable for diverse metals, ideal for aerospace, medical, and thermal applications. Get a quote!

Learn More

Rated power	100 Kw
Rated temperature	700 ℃
Power supply	380 V, 50 Hz
Working area size	Φ820×1700□
Cold ultimate vacuum	6.67×10-3Pa
Pressure rise rate	2pa/h
Temperature control accuracy	±1℃

Vacuum Heat Treat Furnace With Ceramic Fiber Liner

Item Number: KT-VF

Introduction

KINTEK's Vacuum Furnace with Ceramic Fiber Lining offers precise high-temperature processing up to 1700°C, ensuring uniform heat distribution and energy efficiency. Ideal for labs and production.

Learn More

Furnace model	KT-VF12 / KT-VF17
Max. temperature	1200°C / 1700°C
Constant work temperature	1100°C / 1600°C
Chamber material	Ceramic polycrystalline fiber
Heating element	Cr2Al2Mo2 wire coil / Molybdenum Disilicide (MoSi2)
Heating rate	0-20°C/min (Adjustable)
Temperature sensor	Built-in K-type / B-type thermocouple
Temperature controller	Touch screen PID controller with PLC
Temperature control accuracy	±1°C
Temperature uniformity	±5°C
Electric power supply	AC110-440V, 50/60HZ (Customizable)

Standard Chamber Sizes Available (Customization Welcomed)			
Chamber size (mm) (D x W x H)	Effective volume (L)	Chamber size (mm) (D x W x H)	Effective volume (L)
100x100x100	1	400x400x500	80
150x150x200	4.5	500x500x600	125
200x200x300	12	600x600x700	253
300x300x400	36	800x800x800	512
Custom-designed sizes and volumes are accepted to meet your specific research needs.			

Molybdenum Vacuum Heat Treat Furnace

Item Number: KT-VM

Introduction

High-performance molybdenum vacuum furnace for precise 1400°C heat treatment. Ideal for sintering, brazing, and crystal growth. Durable, efficient, and customizable.

Learn More

Furnace model	KT-VM
Max. temperature	1400 ℃
Constant work temperature	1300 ℃
Chamber insulation material	molybdenum heat shield
Heating element	Molybdenum Strip
Heating rate	0-10℃/min
Temperature sensor	Build in S type thermal couple
Temperature controller	Touch screen PID controller with PLC
Temperature control accuracy	±1℃
Temperature uniformity	±5℃
Electric power supply	AC110-440V,50/60HZ

Standard Chamber Sizes Stocks

Chamber size (mm)	Effective volume (L)	Chamber size (mm)	Effective volume (L)
150x150x200	4.5	400x400x500	80
200x200x300	12	500x500x600	125
300x300x400	36	600x600x700	253

Custom design sizes and volume are accepted. Inquire about your custom requirements.

Furnace Chamber	• Regularly inspect the chamber’s interior surface for brightness. • Ensure dryness and cleanliness inside the chamber to prevent oxidation and product contamination. • Avoid rapid heating rates that may cause thermal expansion deformation of the insulation screen. • Verify the leak rate and ultimate vacuum before initiating heating. • Maintain a vacuum in the chamber when not in use, and perform chamber baking if volatiles are present. • Implement a slower heating rate during high-temperature stages.
Molybdenum Strips Heater	• Handle with care; do not drop objects onto the molybdenum strips when removing products, as it may cause breakage. • Prevent low-melting point iron-containing products from volatilizing onto the molybdenum strips, as it can lead to strip melting and breakage over time. • Securely hold the product with both hands or appropriate tools when taking it out. • Strictly control the impurity content in the product.

Pirani Gauge and Ionisation Gauge	• Adhere to safety regulations for electrical equipment when operating and maintaining pirani gauges. • Avoid forcibly disassembling the gauge tubes while the furnace is under vacuum. • Do not pressurize the gauge (above 0.05Pa); if necessary, turn off the gauge power. • Refrain from introducing corrosive gas atmospheres. • Calibrate the vacuum gauge with dry air or nitrogen, as other atmospheres may cause measurement deviations. • Avoid turning on the ionization gauge under atmospheric pressure, as it may result in damage. • Clean the seals and contact surfaces with acetone or alcohol when disassembling, and apply vacuum grease before reassembling. • Perform zero point and full-scale calibration for the first use or after a period of use to match the vacuum and pirani gauges.
Mechanical Pump	• Ensure the pump temperature does not exceed 45 degrees to prevent non-wear of the pump cavity and detrimental effects on the vacuum. • Monitor the oil color in the oil window regularly. • Check for oil splashing from the exhaust when starting the vacuum pump, and inspect the oil level. • Measure the pump temperature before and during operation, and monitor the cooling water temperature. • Change the oil every three months (model: HFV-100). • If the oil level is high, open the drain valve to lower it to the standard level.
Roots Pump	• Maintain cleanliness inside the pump cavity. • Monitor the quality of pump oil. • Ensure proper pump rotation. • Avoid placing products with high moisture or large particles in the furnace chamber. • Promptly replace the diffusion pump oil if it becomes discolored or emulsified. • Immediately contact the manufacturer if any abnormal conditions occur with the pump.
Diffusion Pump	• Check if the diffuser oil in the oil window requires replacement. • Monitor the pumping speed after starting. • Ensure adequate cooling water supply to the pump. • Replace the diffusion pump oil with the appropriate model (HFV-3). • Verify that the heater temperature, oil level, and pump core installation are normal. • Maintain the pump surface temperature between 10-35 degrees Celsius and humidity below 65%.
Water Cooler	• Thoroughly read the manual before operating the water cooler. • Pay attention to the rotation directions of the inlet and outlet water pumps. • Confirm that the furnace water inlet pressure is displayed correctly after starting. • Establish an effective heat dissipation system. • Regularly check the water quality inside the water tank. • Clean the heat dissipation system every 3-5 months. • Avoid overloading the set temperature; for example, if the set temperature is 20 degrees, it should not go below 21 degrees. Adjust the set point above 21 degrees. • Ensure proper ventilation for the cooler’s placement. • Occasionally open the side cover and clean the inside water tank with diluted hydrochloric acid.

2200 °C Graphite Vacuum Heat Treat Furnace

Item Number: KT-VG

Introduction

2200℃ Graphite Vacuum Furnace for high-temperature sintering. Precise PID control, 6*10⁻³Pa vacuum, durable graphite heating. Ideal for research & production.

Learn More

Furnace model		KT-VG	
Max. temperature		2200 ℃	
Constant work temperature		2100 ℃	
Chamber insulation material		Graphite felt	
Heating element		Graphite resistant rod	
Heating rate		0-10℃/min	
Temperature sensor		T/R thermocouple and infrared thermometer	
Temperature controller		Touch screen PID controller with PLC	
Temperature control accuracy		±1℃	
Max. Vacuum Level		$6*10^{-3}$Pa (No-load, cold state)	
Vacuum Pressure Rise Rate		0.67Pa/h	
Electric power supply		AC110-440V,50/60HZ (Customizable)	
Standard Chamber Sizes (Customizable)			
Chamber size (mm) (WxDxH or Dia.xH)	Effective volume (L)	Chamber size (mm) (WxDxH or Dia.xH)	Effective volume (L)
200x200x300	12	400x400x600	96
300x300x400	36	500x500x700	150
KINTEK welcomes custom design requirements for chamber size and volume.			

2200 °C Tungsten Vacuum Heat Treat And Sintering Furnace

Item Number: KT-VT

Introduction

2200°C Tungsten Vacuum Furnace for high-temperature materials processing. Precise control, superior vacuum, customizable solutions. Ideal for research & industrial applications.

Learn More

Furnace model	KT-VT
Max. temperature	2200 ℃
Constant work temperature	2100 ℃
Chamber insulation material	Tungsten heat shield
Heating element	Tungsten coil/mesh
Heating rate	0-10℃/min
Temperature sensor	T/R thermocouple and infrared thermometer
Temperature controller	Touch screen PID controller with PLC
Temperature control accuracy	±1℃
Electric power supply	AC110-440V,50/60HZ

Standard Chamber Sizes

Model	Chamber size	Temperature uniformity	Rated power
KT-VT1010	ф100x 100mm	±3℃	21Kw
KT-VT2030	Φ200x 300mm		68Kw
KT-VT3050	Φ300x 500mm		120Kw
KT-VT4060	Φ400x 600mm		160Kw

Customer design sizes and volume is accepted

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