



KINTEK SOLUTION

## Graphitization Furnace Catalog

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# KINTEK SOLUTION

## COMPANY PROFILE

### >>> About Us

#### Company Profile

Kintek Solution Ltd 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, vacuum creating, refrigerating, as well as pharmaceutical and petroleum extracting equipment.

#### Products & Services

Kintek Solution Ltd is headquartered in Zhengzhou, the capital city of Henan Province, China, and its core business includes the manufacture, distribution and sale of all types of scientific research equipment and laboratory consumables. The wide range of products and services covers the following main areas:

- **Sample Preparation Equipment:** We provide high-performance sample preparation equipment such as tablet presses, ball mills, vibrating sieves and tablet punching machines, which are capable of meeting a wide range of sample preparation needs and ensuring high quality experimental data and research results.
- **Thermal Equipment:** Our thermal equipment includes tube furnaces, sintering furnaces, vacuum furnaces, atmosphere furnaces, graphite furnaces, dental furnaces, rotary furnaces, and high-temperature furnaces (e.g., MPCVD, CVD, PECVD, electric rotary kilns). These facilities excel in high-temperature processing and materials synthesis, meeting a wide range of needs from basic research to industrial production.
- **Biochemical equipment:** We offer a wide range of biochemical laboratory equipment, including rotary evaporators, vacuum pumps, cold trap chillers,

heating circulators, reactors, short-range distillation equipment, sterilization equipment, and homogenizers. These equipments are widely used in the fields of chemical reaction, biological processing and pharmaceutical manufacturing.

- **Laboratory Consumables:** We supply a wide range of laboratory consumables such as fine ceramic products, electrochemical consumables, PTFE material products, high purity materials, battery materials, chemical vapor deposition materials, optical materials, thin film deposition components and glass materials. These consumables provide the necessary support for laboratories to ensure the smooth running of experimental processes.

## Technological Advantages

Kintek Solution Ltd has significant technological strengths in the field of scientific research equipment and technical solutions, which enable us to stand out in a competitive marketplace and support our customers with cutting-edge technology. The following are our key technological strengths:

### Advanced R&D capabilities

- **Technological Innovation:** Our R&D team is committed to exploring and developing the latest technologies to keep our equipment at the forefront of the industry through continuous technological innovation.
- **Customized solutions:** Based on the specific needs of our customers, we are able to develop and provide customized equipment to meet specific research requirements and application scenarios.
- **Cooperative R&D:** We cooperate with leading research institutes and higher education institutions around the world to carry out R&D projects on cutting-edge technologies to ensure that our technologies are always at the forefront of the industry.

### High-performance equipment

- **Precision design:** Our equipment adopts advanced design concepts to ensure high precision, reliability and performance to meet the stringent requirements of scientific research and industrial applications.
- **Advanced materials:** We use high-quality materials and components to improve the durability and stability of our equipment, extend its service life and reduce maintenance costs.

## Strict quality control

- Standardized production: All equipment is manufactured in accordance with international quality standards, and each production step is strictly controlled to ensure product consistency and reliability.
- Comprehensive testing: Comprehensive performance testing and quality inspection are carried out before the equipment is delivered to ensure that it meets the customer's technical specifications and operational requirements.

## Comprehensive technical support

- Technical Service: Provide comprehensive technical support and after-sales service, including equipment installation, commissioning, training and maintenance, to ensure that customers can use our products efficiently.
- Rapid Response: We have established a rapid response mechanism, which can promptly solve the problems encountered by customers in the process of use and reduce equipment downtime.

## Innovative technology integration

- System Integration: We integrate advanced control systems and automation technologies into our equipment to improve operational efficiency and data accuracy, and streamline operational processes.

Through these technological advantages, Kintek Solution Ltd is able to continue to provide our customers with innovative, efficient and reliable scientific research equipment and solutions to promote the continuous progress of scientific research and industrial applications.

## Market position and customers

Kintek Solution Ltd is positioned in the market as a leading global provider of high-tech research equipment and solutions, specializing in biochemical reactions, new materials research, heat treatment, vacuum manufacturing, refrigeration, as well as pharmaceuticals and oil extraction. We are committed to brand leadership in research equipment by providing innovative technology and high quality equipment to meet the needs of research organizations and industrial companies in complex research and production processes.

## **Core Market Positioning:**

- **Specialization:** We focus on high technology and scientific research, providing advanced equipment and solutions for specialized research institutes, laboratories and industrial applications.
- **High-end customers:** Our main customers include world-renowned universities, research institutes and various industrial enterprises, which usually have high requirements for equipment performance and technology.
- **Technological Innovation:** We are committed to technological innovation and customized solutions to ensure that our customers receive cutting-edge technical support to meet the ever-changing needs and challenges in the market.

## **Market Customer Groups:**

- **Research Institutes and Universities:** including the world's leading research institutes and institutions of higher learning, who require high-performance research equipment and technical support for basic research, applied research and technology development.
- **Industrial companies:** covering a wide range of industries such as pharmaceuticals, oil extraction, new materials manufacturing and electronic materials production, these companies rely on reliable equipment and solutions to ensure product quality and productivity during production.
- **Laboratories and test centers:** organizations that provide laboratory services and quality testing, requiring accurate laboratory equipment and instruments for sample analysis and testing.
- **Technology Development Companies:** Companies that specialize in the development and application of new technologies and have a high demand for innovative equipment and technical solutions to support their R&D projects and technology validation.

Through clear market positioning and customer groups, we are committed to promoting scientific and technological progress, supporting the innovation and development of our global customers, and continuing to provide high-quality products and services to the market.

## **Team Introduction**

The team at Kintek Solution Ltd is at the heart of the company's success. In order to realize our vision and maintain our leadership position in the field of high-tech research equipment, we are committed to building an exceptional team with the following attributes:

### **1. Professionalism**

- **Technical Expertise:** Our team consists of technical experts and engineers in the field with deep expertise and technical backgrounds to meet complex technical challenges and innovation needs.
- **Industry experience:** We bring together professionals with extensive experience in the fields of research equipment, material science and engineering technology to ensure a precise grasp of market needs and technological trends.

### **2. Innovative Spirit**

- **R&D-driven:** The team encourages innovative thinking and technological exploration, supports employees to participate in R&D projects on cutting-edge technologies, and continuously pushes forward the technological advancement of products and solutions.
- **Flexible Adaptation:** In the face of changing market environment, we have the ability to adapt quickly and flexibly to meet the changing needs of our customers.

### **3. Collaboration and Communication**

- **Cross-sectoral collaboration:** The team maintains close collaboration between various departments, including R&D, production, sales and customer service, to ensure the smooth progress of projects and timely response to customer needs.
- **Efficient Communication:** Emphasize internal communication and information sharing, through efficient communication mechanisms and tools to ensure that all team members are consistent with the project goals and progress.

### **4. Customer Orientation**

- **Customer Service:** Team members are customer-focused and committed to providing quality service and support to ensure that our customers have the best experience in using our products and solutions.

- Customized solutions: the ability to deeply understand the specific needs of customers and provide customized solutions to meet the special requirements of different customers.

## **5. Professional Training and Development**

- Continuous Learning: We provide continuous training and learning opportunities for our team members to ensure that they are always up-to-date with the latest technology and industry knowledge.
- Career Development: We value the career development and growth of our employees, provide clear career paths and promotion opportunities, and motivate our employees to realize their personal goals and career aspirations within the company.

## **6. Corporate Culture**

- Integrity and Responsibility: The team upholds integrity and responsibility, treats work and customers with honesty and fairness, and builds trust and long-term cooperative relationships.
- Unity and Collaboration: Focusing on the spirit of teamwork, the team emphasizes mutual support and joint efforts to achieve the company's goals and promote the overall success of the team.

By building such a highly qualified, innovation-driven and customer-oriented team, we ensure that Kintek Solution Ltd continues to lead in the field of scientific research equipment and provide excellent products and services to our customers worldwide.

At KINTEK, technology fuels our corporate spirit. This dynamic energy awaits you upon joining our team. Expect a distinctive cultural environment where our global business focus opens doors to diverse customs and traditions worldwide. Here, challenging roles promise to propel your career to new heights.

Our exceptional corporate culture sparks innovation, fosters care, and drives continuous progress among individuals and teams. Our team embodies youthfulness, positivity, enthusiasm, and a bold attitude toward challenges. Passionate about our business, our employees ardently contribute to the company's growth.

We seek individuals brave enough to embrace challenges, harbor grand ambitions, and thirst for knowledge. If you're driven by dreams and passion, and aspire to start your

entrepreneurial journey, KINTEK is the platform to actualize your career plans. We don't just offer opportunities; we pave the way for your future.

Join us at KINTEK, where innovation meets opportunity. Let's create a future that's as promising as your aspirations.

## **Future Plans**

Kintek Solution Ltd's future plans are aimed at further strengthening our leadership position in the research equipment sector and driving the company forward in terms of technological innovation, market expansion and customer service. The following are our key future directions:

### **1. Technology Innovation and R&D**

- Cutting-edge technology development: Continue to invest resources in the research and development of cutting-edge technologies, such as artificial intelligence, the Internet of Things and nanotechnology, in order to promote equipment intelligence and automation.
- New Product Lines: Expand existing product lines and develop equipment to meet emerging market needs, especially in the areas of biochemistry, biomedicine and high-performance materials.
- Cooperative R&D: Strengthen cooperation with international research institutes and institutions of higher learning to carry out joint R&D projects to ensure that the technology remains at the global leading level.

### **2. Market Expansion**

- Global Market Expansion: Further expand the global market, especially in emerging markets and developing regions, establish more sales and service networks, and enhance the brand's international influence.
- Industry application: Explore and expand the application fields in other industries, such as new energy, environmental protection technology and intelligent manufacturing, to open up new business growth points.

### **3. Customer Service Enhancement**

- Enhancement of customer support: Establish a more complete customer support system, provide 24/7 technical support and maintenance services, and ensure



the efficient experience of customers in the use of equipment.

- Customized services: Provide more customized services and solutions according to customers' individual needs to enhance customer satisfaction and loyalty.

#### **4. Sustainable Development**

- Environmentally friendly technology: Develop and adopt environmentally friendly materials and processes to reduce the environmental impact during the production and use of equipment and promote sustainable development.
- Energy saving and consumption reduction: Optimize the energy efficiency of equipment, reduce energy consumption, improve resource utilization efficiency, and support the development of green technology.

#### **5. Internal optimization**

- Intelligent management: Implement intelligent management systems and data analysis tools to improve productivity and management and reduce operating costs.
- Employee Training: Enhance employee training and skills upgrading to build a high-quality team to meet changing market demands and technological challenges.

#### **6. Innovation ecosystem**

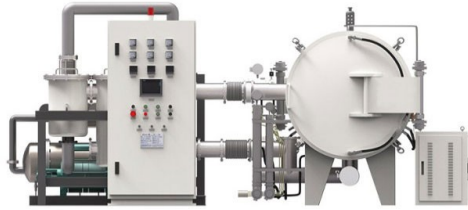
- Establishment of innovation platform: Create innovation platforms and laboratories to support employees and partners in technological innovation and product development.
- Industry Chain Cooperation: Deepen cooperation with the upstream and downstream of the industry chain, integrate resources, and promote the development and implementation of industry technical standards and market norms.

Through these future plans, Kintek Solution Ltd will continue to lead the forefront of science and technology, provide customers with more advanced and reliable products and services, and at the same time, promote the sustainable development of the enterprise and the progress of the industry.



# 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.

[Learn More](#)

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 <sub>2</sub> , Ar and other gases		
Rated power supply voltage (V)	380		
Rated heating voltage (V)	750		
Vacuum limit (Pa)	100 (vacuum cold state)		

# Igbt Experimental Graphitization Furnace

Item Number: GF-02



## Introduction

IGBT experimental graphitization furnace, a tailored solution for universities and research institutions, with high heating efficiency, user-friendliness, and precise temperature control.

[Learn More](#)

Product model specifications	GF-02-Φ10×15	GF-02-Φ20×30	GF-02-Φ30×40
Volume(L)	1.1	10	28
Limit temperature(C)	3100	3100	3100
Effective heating area (mm)	Φ100×150	Φ200×300	Φ300×400
Power(KW)	30	50	80
Frequency(HZ)	4000	2500	2500
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	N2, Ar		
Rated power supply voltage (V)	380		
Rated heating voltage (V)	According to the design determination, configure the transformer		
Vacuum limit (Pa)	100 (vacuum cold state)		

# High Thermal Conductivity Film Graphitization Furnace

Item Number: GF-03



## Introduction

The high thermal conductivity film graphitization furnace has uniform temperature, low energy consumption and can operate continuously.

[Learn More](#)

Product model specifications	GF-03-Φ40×100	GF-03-Φ50×100	GF-03-Φ60×100	GF-03-Φ90×160
Volume(L)	125	196	282	1000
Rated temperature(C)	2800	2800	2800	2800
Limit temperature(C)	3100	3100	3100	3100
Effective heating area (mm)	Φ400×1000	Φ500×1000	Φ600×1000	Φ900×1000
Power(KW)	150	200	30	600
Frequency(HZ)	1500	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 <sup>2</sup> Ar and other gases			
Rated power supply voltage (V)	380			
Rated heating voltage (V)	750			
Vacuum limit (Pa)	100 (vacuum cold state)			

# 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.

[Learn More](#)

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 <sup>2</sup> 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.

[Learn More](#)

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 <sup>2</sup> 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.

[Learn More](#)

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 <sup>2</sup> 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.

[Learn More](#)

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		

# 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.

[Learn More](#)

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 <sup>2</sup> 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.

[Learn More](#)

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)



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