

## **High Temperature Frit Furnace**







# Furnace and heating process equipment widely using at

Institutions of higher learning scientific research institutions experimental laboratory

## industrial and mining enterprises

The equipment designed for pyrolysis, melting, analysis and production ceramics, metallurgy, electronics, machinery, chemical, glass, refractories, for develop new material, special materials, construction materials, the equipment is suitable for institutions of higher learning and laboratory of scientific research institute and industrial and mining enterprises.

## www.gwdl.net

Made In China





China Made

Guoju with 200 employees have been developing and producing industrial furnaces for many different applications for over 10 years. As a furnace manufacturer, Guoju offers the widest and deepest range of furnaces. Around 1000 satisfied customers in more than 34 Provinces offer proof of our commitment to excellent design, quality and cost efficiency. Short delivery times are ensured due to our complete inhouse production and our wide variety of standard furnaces.

#### Excellent Quality, High Reputation

product has the advantages of automatic control, fast heat, energy saving, simple operation, programmable microcomputer control, automatic temperature control, temperature control precision and high precision of constant temperature, the furnace shell temperature is close to indoor temperature etc., we got excellent feedback from our customers! After years of development the company has a maturity high temperature kiln production line, and also has a Middle or high scientific research team, it is a specializes in the research and production and marketing integrated private enterprise. Our company based on the principle of seeking truth from facts innovation first and user foremost, keep introduced advanced technology and modern management experience from domestic and international, and also made the rigorous process standard and strict quality control system and testing method.

#### Sales and Service Network - Close to you

All type furnace and kiln have the high level of automation, are of domestic leading position, sold to 20 provinces, cities, autonomous regions, special economic regions, state major university, state major laboratory, institute of Chinese academy of sciences, Chinese institutions of higher learning, which has been exported to North America, Russia, Philippines, Japan and other countries. Also have the high reputation in the same industry.

#### Customer Service and Spare Parts

The staff of our company's customer service department will be eager to answer all the questions which you ask. Due to our complete inhouse production, we can dispatch most spare parts from stock over night or produce with short delivery time.



# 17L High Temperature Large Scale Lifting Frit Furnace (GWL-R)



#### GWL Series 1200℃-1800℃17L High Temperature Large Scale Lifting Frit Furnace

The equipment designed for pyrolysis, melting, analysis and production ceramics, metallurgy, electronics, machinery, chemical, glass, refractories, for develop new material, special materials, construction materials, the equipment is suitable for institutions of higher learning and laboratory of scientific research institute and industrial and mining enterprises.

The control panel equipped with the intelligent adjustment device, power control switch, main working/stop button, voltmeter, ammeter. Computer interface, Observe port / Air inlet port, for convenience to observe the furnace working status, the product using reliable integrated circuit, excellent working environment, anti-interference, the highest temperature of furnace shell temperature is less than 45 can greatly improve the working environment, micro computer program control, programmable setting temperature rise curve. Fully automatic temperature rise / cooling. Temperature control parameters and programs can be modified during operation, which is flexible, convenient and simple in operation.

Temperature Control Accuracy: ± 1°C, Temperature Constant Accuracy: ±1°C. Fast Temperature rise rate, Maximum heating rate \$30°C/min. Furnace hearth materials made up by vacuum forming high purity alumina light materials(Will be changing due to the temperature required), High temperature for use, Less heat storage amount. Tolerance the extremely heating and cold. no crack, No dregs, Excellent thermal insulation performance (the energy saving effect is over 60% of the traditional furnace). Reasonable structure, Double layer furnace cover. Air cooling, Greatly shortening the experimental period.



Model	GWL-R				
Working Temperature	1200°C	1400°C	1600°C	1700°C	1800°C
Maximum Temperature	1250℃	1450°C	1650°C	1750°C	1820℃
Temperature Control Accuracy	±1℃				
Temperature Uniformity	±1°C				
Temperature Rise Rate	Temperature Rise Rate Can Be Modify (30°C/min   1°C/h) , Company Suggest: 1-20°C/min				
Furnace Hearth Cubage	17L				
Lift Method	Hydraulic/Screw Mandrel				
Heating Element	Top Furnace Hearth: Silicon Carbide Rod; Bottom Furnace Hearth: Silicon Carbide Rod				
	(1400°C above using the silicon molybdenum rod)				
Placing Crucible Method	Bottom placing crucible				
Material Passes in and out	Top side to pass in; Bottom side pass out				
Crucible Material	High purity zirconium quartz (99.9%)				
Cooling Structure	Double Layer Furnace Shell, With Air Cooling.				
Standard Accessories	Heating Elements, Specification Certificate, Heat Insulation Brick, Crucible Pliers, High Temperature				
	Gloves.				

#### Open Model: Bottom Open;

- 1. Temperature accuracy: ±1℃; Constant temperature: ±1℃(Base on Heating zone size) 。
- Simplicity for operation, programmable automatic modify, automatic temperature rise, automatic temperature retaining, automatic cooling, unattended operation;
- 3. High Speed Temperature rise rate. (temperature rise rate  $1^{\circ}$ C/h to  $30^{\circ}$ C/min can be modify);
- 4. Energy- Saving (furnace hearth made up by import fiber material, excellent thermostability, Tolerance the extreme heat and cold)
- 5. Double layer loop protection. (over temperature protection, over pressure protection, over current protection, thermocouple protection, Power supply protection and so on)
- 6. Furnace surface after spraying plastics it will resistance acid and alkali and also having corrosion-proof, the furnace wall temperature approaching the indoor temperature.
- 7. Furnace hearth materials: 1200℃: High Purity Alumina Fiber Board; 1400℃: High purity alumina (Contain zirconium) fiberboard; 1600℃: Import High Purity Alumina Fiber Board; 1700℃-1800℃: High Purity alumina polymer fiber board.

Furnace Hearth Dimension and Crucible Can Be Customized, More Details Please Contact Us



### **High temperature All-in-one Type Melting Furnace**

(GWL-RN)





#### GWL Series 1200°C-1800°C High temperature All-in-one Type Melting Furnace

The equipment designed for pyrolysis, melting, analysis and production ceramics, metallurgy, electronics, machinery, chemical, glass, refractories, for develop new material, special materials, construction materials, the equipment is suitable for institutions of higher learning and laboratory of scientific research institute and industrial and mining enterprises.

The control panel equipped with the intelligent adjustment device, power control switch, main working/stop button, voltmeter, ammeter. Computer interface, Observe port / Air inlet port, for convenience to observe the furnace working status, the product using reliable integrated circuit, excellent working environment, anti-interference, the highest temperature of furnace shell temperature is less than 45 can greatly improve the working environment, micro computer program control, programmable setting temperature rise curve. Fully automatic temperature rise / cooling. Temperature control parameters and programs can be modified during operation, which is flexible, convenient and simple in operation.

Temperature Control Accuracy: ± 1°C, Temperature Constant Accuracy: ±1°C. Fast Temperature rise rate, Maximum heating rate ≤30°C/min. Furnace hearth materials made up by vacuum forming high purity alumina light materials(Will be changing due to the temperature required), High temperature for use, Less heat storage amount. Tolerance the extremely heating and cold√no crack, No dregs, Excellent thermal insulation performance (the energy saving effect is over 60% of the traditional furnace). Reasonable structure, Double layer furnace cover. Air cooling, Greatly shortening the experimental period.



Model		GWL-RN					
Working Temperature	1200°C	1400°C	1600℃	1700℃	1800℃		
Maximum Temperature	1250°C	1450°C	1650℃	1750°C	1820℃		
Temperature Control Accuracy		±1°C					
Temperature Uniformity		±1°C					
Temperature Rise Rate	Tem	Temperature Rise Rate Can Be Modify (30°C/min   1°C/h), Company Suggest: 1-20°C/min					
Crucible Cubage		1.6L/3L/5L/10L/17L					
Heating Element	Silicon Ca	Silicon Carbide Rod		Silicon molybdenum rod			
Placing Crucible Method		Top side to placing crucible and remove					
Material Passes in and out	Top side to passes in and Bottom side pass out.						
Crucible Material	High purity zirconium quartz (99.9%)						
Cooling Structure		Double Layer Furnace Shell, With Air Cooling.					
Standard Accessories	Heating Elements, Specification Certificate, Heat Insulation Brick, Crucible Pliers, High Temperature Gloves.						

Can be adding material under high temperature environment, The High temperature solution can be timely outflow.

- 1. Temperature accuracy:  $\pm 1^{\circ}$ C; Constant temperature:  $\pm 1^{\circ}$ C(Base on Heating zone size) .
- 2. Simplicity for operation ,programable, PID automatic modify, automatic temperature rise, automatic temperature retaining , automatic cooling, unattended operation;
- 3. High Speed Temperature rise rate. (temperature rise rate  $1^{\circ}$ C/h to  $30^{\circ}$ C/min can be modify);
- 4. Energy- Saving(furnace hearth made up by import fiber material, excellent thermostability, Tolerance the extreme heat and cold)
- 5. Double layer loop protection. (over temperature protection, over pressure protection, over current protection, thermocouple protection, Power supply protection and so on)
- 6. Furnace surface after spraying plastics it will resistance acid and alkali and also having corrosion-proof, the furnace wall temperature approaching the indoor temperature.
- 7. Furnace hearth materials: 1200°C: High Purity Alumina Fiber Board; 1400°C: High purity alumina (Contain zirconium) fiberboard; 1600°C: Import High Purity Alumina Fiber Board; 1700°C-1800°C: High Purity alumina polymer fiber board.
- 8. Crucible Cubage below 5L need to equip with an extension plug.

Furnace Hearth Dimension And Crucible Can Be Customized, More Details Please Contact Us



# High Temperature Split Type Frit Furnace (GWL-R)





#### GWL Series 1200°C-1800°C High Temperature Split Type Frit Furnace

The equipment designed for pyrolysis, melting, analysis and production ceramics, metallurgy, electronics, machinery, chemical, glass, refractories, for develop new material, special materials, construction materials, the equipment is suitable for institutions of higher learning and laboratory of scientific research institute and industrial and mining enterprises.

The control panel equipped with the intelligent adjustment device, power control switch, main working/stop button, voltmeter, ammeter, Computer interface, Observe port / Air inlet port, for convenience to observe the furnace working status, the product using reliable integrated circuit, excellent working environment, anti-interference, the highest temperature of furnace shell temperature is less than 45 can greatly improve the working environment, micro computer program control, programmable setting temperature rise curve, Fully automatic temperature rise / cooling, Temperature control parameters and programs can be modified during operation, which is flexible, convenient and simple in operation.

Temperature Control Accuracy: ± 1°C, Temperature Constant Accuracy: ±1°C. Fast Temperature rise rate, Maximum heating rate \$30°C/min. Furnace hearth materials made up by vacuum forming high purity alumina light materials(Will be changing due to the temperature required), High temperature for use, Less heat storage amount. Tolerance the extremely heating and cold. no crack, No dregs, Excellent thermal insulation performance (the energy saving effect is over 60% of the traditional furnace). Reasonable structure, Double layer furnace cover. Air cooling, Greatly shortening the experimental period.



Model		GWL-R				
Working Temperature	1200℃	1400°C	1600℃	1700°C	1800°C	
Maximum Temperature	1250℃	1450°C	1650℃	1750℃	1820°C	
Temperature Control Accuracy		±1°C				
Temperature Uniformity		±1°C				
Temperature Rise Rate	Temperature Rise Rate Can Be Modify(30°C/min   1°C/h),					
	Company Suggest: 1-20°C/min					
Crucible Cubage		1.6L/3L/5L/10L/17L				
Heating Element	Silicon Ca	arbide Rod	Silicon molybdenum rod			
Placing Crucible Method		Top side to placing crucible and remove				
Material Passes in and out		Top side to passes in and Bottom side pass out.				
Crucible Material		High purity zirconium quartz (99.9%)				
Cooling Structure		Double Layer Furnace Shell, With Air Cooling.				
Standard Accessories	Heating Elements, Specification Certificate, Heat Insulation Brick, Crucible Pliers, High					
		Temperature Gloves.				

Can be adding material under high temperature environment, The High temperature solution can be timely outflow.

- 1. Temperature accuracy:  $\pm 1^{\circ}C$ ; Constant temperature:  $\pm 1^{\circ}C$  (Base on Heating zone size ) .
- 2. Simplicity for operation ,programable, PID automatic modify, automatic temperature rise, automatic temperature retaining , automatic cooling, unattended operation;
- 3. High Speed Temperature rise rate. (temperature rise rate 1℃/h to 30℃/min can be modify);
- 4. Energy- Saving(furnace hearth made up by import fiber material, excellent thermostability, Tolerance the extreme heat and cold)
- 5. Double layer loop protection. (over temperature protection, over pressure protection, over current protection, thermocouple protection, Power supply protection and so on)
- 6. Furnace surface after spraying plastics it will resistance acid and alkali and also having corrosion-proof, the furnace wall temperature approaching the indoor temperature.
- 7. Furnace hearth materials: 1200°C: High Purity Alumina Fiber Board; 1400°C: High purity alumina (Contain zirconium) fiberboard; 1600°C: Import High Purity Alumina Fiber Board; 1700°C-1800°C: High Purity alumina polymer fiber board.
- 8. Crucible Cubage below 5L need to equip with an extension plug.

Furnace Hearth Dimension And Crucible Can Be Customized, More Details Please Contact Us



# High Temperature Glass Melting Furnace (With Agitation System) (GWL-R)





#### GWL Series 1200°C-1800°C High Temperature Glass Melting Furnace(With Agitation System)

The equipment designed for pyrolysis, melting, analysis and production ceramics, metallurgy, electronics, machinery, chemical, glass, refractories, for develop new material, special materials, construction materials, the equipment is suitable for institutions of higher learning and laboratory of scientific research institute and industrial and mining enterprises.

The control panel equipped with the intelligent adjustment device, power control switch, main working/stop button, voltmeter, ammeter, Computer interface, Observe port / Air inlet port, for convenience to observe the furnace working status, the product using reliable integrated circuit, excellent working environment, anti-interference, the highest temperature of furnace shell temperature is less than 45 can greatly improve the working environment, micro computer program control, programmable setting temperature rise curve, Fully automatic temperature rise / cooling, Temperature control parameters and programs can be modified during operation, which is flexible, convenient and simple in operation.

Temperature Control Accuracy:  $\pm$  1°C, Temperature Constant Accuracy:  $\pm$ 1°C. Fast Temperature rise rate, Maximum heating rate  $\leq$ 30°C/min. Furnace hearth materials made up by vacuum forming high purity alumina light materials(Will be changing due to the temperature required), High temperature for use, Less heat storage amount. Tolerance the extremely heating and cold. no crack, No dregs, Excellent thermal insulation performance (the energy saving effect is over 60% of the traditional furnace). Reasonable structure, Double layer furnace cover. Air cooling, Greatly shortening the experimental period.



Model		GWL-RJ				
Working Temperature	1200°C	1400°C	1600°C	1700℃	1800°C	
Maximum Temperature	1250°C	1450°C	1650°C	1750℃	1820℃	
Temperature Control Accuracy		±1°C				
Temperature Uniformity		±1°C				
Temperature Rise Rate	Тет	Temperature Rise Rate Can Be Modify(30°C/min   1°C/h), Company Suggest: 1-20°C/min				
Crucible Cubage		1.6L/3L/5L/10L/17L				
Heating Element	Silicon Car	Silicon Carbide Rod		Silicon molybdenum rod		
Agitation Speed	Digital freq	Digital frequency converter regulation device: 50-2800r/min(Can be modify)				
Agitation Rod		Silicon Carbide Rod/ corundum Rod				
Agitation Bracket		Rise& Fall& Horizontal rotation.				
Placing Crucible Method		Top side to placing crucible and remove				
Material Passes in and out		Top side to passes in and Bottom side pass out.				
Crucible Material		High purity zirconium quartz (99.9%)				
Cooling Structure		Double Layer Furnace Shell, With Air Cooling.				
Chandard Assessation	Heating Element	Heating Elements, Specification Certificate, Heat Insulation Brick, Crucible Pliers, High				
Standard Accessories		Temperature Gloves.				

Can be adding material under high temperature environment, The High temperature solution can be timely outflow.

- 2. Simplicity for operation ,programable, PID automatic modify, automatic temperature rise, automatic temperature retaining , automatic cooling, unattended operation;
- 3. High Speed Temperature rise rate. (temperature rise rate  $1^{\circ}$ C/h to  $30^{\circ}$ C/min can be modify);
- 4. Energy- Saving(furnace hearth made up by import fiber material, excellent thermostability, Tolerance the extreme heat and cold)
- 5. Double layer loop protection. (over temperature protection, over pressure protection, over current protection, thermocouple protection, Power supply protection and so on)
- 6. Furnace surface after spraying plastics it will resistance acid and alkali and also having corrosion-proof, the furnace wall temperature approaching the indoor temperature.
- 7. Furnace hearth materials: 1200°C: High Purity Alumina Fiber Board; 1400°C: High purity alumina (Contain zirconium) fiberboard; 1600°C: Import High Purity Alumina Fiber Board; 1700°C-1800°C: High Purity alumina polymer fiber board.
- 8. Crucible Cubage below 5L need to equip with an extension plug.

Furnace Hearth Dimension And Crucible Can Be Customized, More Details Please Contact Us