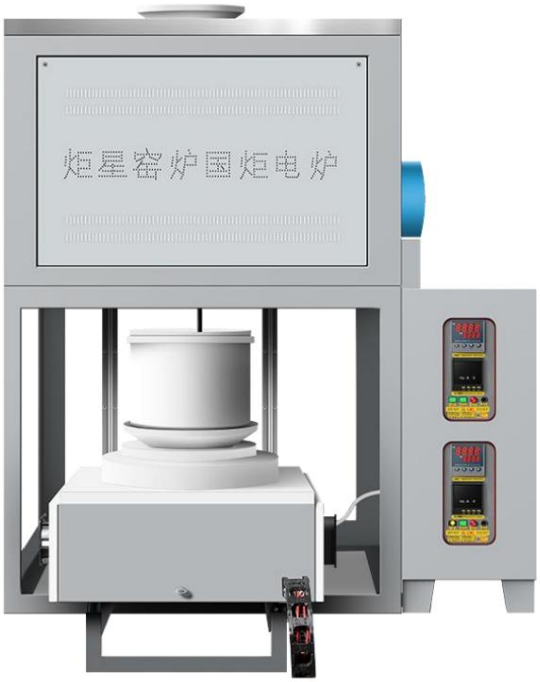
GWDL-R Melting Furnace Product Introduction and Technical Data



Luoyang Juxing Kiln Co., Ltd.

(National High-tech Enterprise, Specialized and Innovative Enterprise)

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GWDL-R Melting Furnace Product Introduction and Technical Data

one, **Product Name: Fusing Furnace / Glass Melting Furnace**

Binder melting furnace/glaze melting furnace

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two, **Model: GWDL-R**

Specifications: 1200, 1400, 1600, 1700, 1800 degrees

three, **Product Introduction**

The GWDL-R series high-temperature furnace, as shown in the figure, integrates the control system and the furnace chamber. The furnace lining is made of vacuum-formed high-purity alumina lightweight material.

And thus.

It uses high-temperature electric heating elements for heating; it is specifically designed for laboratories in universities and research institutes, as well as industrial and mining enterprises, for heating ceramics, metallurgy, electronics, and other materials.

Glass, chemicals, machinery, refractory materials, new material development, special materials, building materials, metals, non-metals and other chemical materials

Specialized equipment developed for sintering, melting, analysis, and production.

The control panel is equipped with an intelligent temperature regulator, a power switch, a main heating start/stop button, a voltage and ammeter, and a computer connection.

The system features an air inlet and an observation port/air intake for easy monitoring of its operational status. This product utilizes reliable integrated circuitry and operates in a favorable environment.

Anti-interference capability; furnace shell temperature ÿ45ÿ at maximum temperature greatly improves the working environment; microcomputer program control; programmable curves; full...

Automatic heating/cooling, with adjustable temperature control parameters and program during operation, offering flexibility, convenience, and ease of use.

Four, **Technical parameters**

Maximum operating temperature: 1200°C, 1400°C, 1600°C, 1700°C; Long-term operating temperature: 1150°C, 1350°C,					1800 degrees (Note)	
1550°C, 1680°C.					1780 degrees	
Temperature control range	100-1200 Spend	100-1400 Spend	100-1600 Spend	100-1700 Spend	100-1800 degrees	
Temperature control accuracy	±1 degree ±1 degree	±1 degree ±1 degree			±1 degree	
Temperature sensing element	k	S	B	B	B	
Heating element material: silicon carbide rod , silicon carbide rod, silicon molybdenum rod				Model 1800 silicon molybdenum rod	Type 1850 silicon molybdenum rod	
crucible material	99% quartz ceramic material, mullite material, or 99% alumina material					3 types of materials Optional
Heating element installation location: around the crucible						10-17L Use around and Two sets at the bottom Heating system
heating rate	Maximum heating rate: 40 degrees Celsius per minute (non-linear)					
Furnace body structure and materials	The electric furnace body adopts an advanced air-cooled double-layer carbon steel furnace body structure, and the effective air-cooled guide baffles make the furnace shell as a whole The cold air is circulated and finally cooled before being discharged from the furnace, thus preventing the conductive plates of the heating element from overheating. Oxidation; ensures a good working environment.					
For crucible installation, 1-5L crucibles are inserted from the top of the furnace; 10-17L crucibles are equipped with a lifting mechanism that allows them to be raised and lowered from the bottom into the high-temperature chamber.						
Refractory insulation materials	The furnace lining is made of high-purity alumina lightweight material that is resistant to molten glass corrosion, and it has high operating temperature and low heat storage capacity.					

	It is resistant to rapid heating and cooling, does not crack, does not shed slag, and has good thermal insulation properties.
Furnace shell temperature	The outer casing temperature is less than 45 degrees Celsius.
Security Protection	It adopts an integrated modular control unit, ensuring accurate control precision, and features dual-loop control and dual-loop protection. It features overshoot, overshoot, undershoot, thermocouple interruption, phase loss, overvoltage, overcurrent, overtemperature, current feedback, and soft start. Protection
Safe temperature control	measures are provided. Closed-loop technology with thyristor module triggering control is employed, using phase-shift triggering control or zero-crossing triggering. Output voltage... The current or power is continuously adjustable, exhibiting constant voltage, constant current, or constant power characteristics; the current loop is the inner loop, and the electrical... The pressure ring is an outer ring that limits the output current of the voltage regulator to within the rated current when a sudden load is applied or the load current exceeds the current limit value. Within the constant current range, ensure the normal operation of the output and voltage regulator; simultaneously, the voltage loop also participates in the regulation, ensuring the voltage regulator... The output current is limited within the rated current range, maintaining the output current while having sufficient adjustment margin. And maintain a constant voltage; thereby protecting the heating element from excessive current and voltage surges, achieving safety. It relies on the control effect and accuracy. It adopts an
Temperature profile setting	intelligent temperature controller, equipped with multiple adjustment methods such as standard PID, artificial intelligence adjustment APID, or MPT. It features self-tuning and self-learning capabilities, excellent control characteristics with no overshoot and no undershoot, and is equipped with 30-segment programmable control. It features temperature control with arbitrary slope, and includes jump (cycle), run, pause, and stop functions. It supports programmable/operable commands and allows modification of the program at any time during its controlled operation; it employs curve-based... The AI-powered adjustment algorithm for fitting functions can achieve smooth and even curve control effects;
Number of segments in the heating curve	The 50-segment programmable control function allows input settings: 50 segments for one curve, 28 segments per curve for two curves, and so on for three curves. The system supports 15 curve segments per curve, or 9 curve segments per curve for five curves; multiple curves can be input simultaneously and can be recalled at will. The two
The panel buttons	buttons are: Main Power Button/Knob and Heating Chamber On Button/Knob.
come with a crucible tong and a pair of high-temperature gloves.	

five,	**Warranty coverage and period**
The electric furnace comes with a one-year free warranty, but the ceramic crucible and heating element are not covered by the warranty.	
six,	Packing list
One electric furnace, one crucible tong, one pair of high-temperature gloves, two heating elements, one instruction manual, one certificate of conformity, and one acceptance report (factory inspection report). One copy of the notice and one copy of the sales delivery note.	
seven,	Notes
1. To avoid affecting the lifespan of the electric furnace, it is recommended that the maximum heating and cooling rates be 1-15ÿ/min. (Rapid heating at high temperatures will shorten the lifespan of the heating element.) (Life will be shortened)	
2. This melting furnace does not use a vacuum sealing structure, so flammable and explosive gases must not be introduced.	
3. After a period of use, minor cracks may appear in the furnace chamber of this fused metal furnace. This is normal and will not affect its use. It can be easily repaired by oxidation. Repairing aluminum coating	
4. It is not recommended to introduce corrosive gases. If you need to introduce highly corrosive gases such as sulfur (S) or sodium (Na), please inform us in advance so that we can perform special treatment on the furnace. reason	
5. High-temperature solution must not leak onto the furnace bottom. To prevent this, a pad or alumina powder can be used for isolation.	
6. The instrument should be placed in a well-ventilated, dry place. VIII. Shipping Information	
1. The electric furnace is packaged in three layers: first wrapped in foam paper, then wrapped in plastic film, and finally packed in a wooden crate.	
2. Free domestic door-to-door delivery (free delivery within city limits)	
3. We will be responsible for any damage that occurs during the transportation of the electric furnace.	
4. Logistics methods: Transportation by road, rail, ship (for export trade), and air (for export trade). For shorter distances, our company will arrange dedicated transportation. (Packaging consists of wooden pallets and cardboard boxes)	

Nine,	**Optional additional features list**	

Name and Function Description: Standard temperature		Function code
controller with 50 temperature rise curves; imported instruments (B) are optional. Touchscreen with Chinese menu, storage of multiple	Choose one of the two options: A or B.	
temperature rise process curves, storage of historical curves and data reports (7-inch).		C
Internet of Things (IoT) mouth	The RS485 communication interface for the electric furnace allows reading and writing real-time data such as furnace start-up, pause, stop, temperature rise curve, and allowable time.	D
Computer control Software and hardware	The electric furnace can be started, paused, stopped, and its temperature rise curve set, read, and parameters can be set via computer control. High reliability, easy to control, including measured values, setpoints, output values, time intervals, interval numbers, temperature rise curves, and power percentages. The curve comparison function allows users to store temperature rise curves, modify setpoints and commonly used parameters, and record historical curves and reports via computer. Recording time intervals can be filtered (1s-1h) and can be stored long-term. It uses Siemens PLC control	E
PLC	(can read and write electric furnace start, pause, stop, heating curve, time, temperature curve, gas...). (Atmosphere, flow rate, switch quantity, power supply, wattage) Open ports for series and parallel data transfer with upstream and downstream equipment; Float flowmeter +	F
air intake	manual valve; Flowmeter quantity, maximum production capacity, and gas medium are selectable.	K
	Digital mass flow meter; flow meter quantity, maximum production capacity, selectable gas medium, exhaust port, manual opening; DN30	M
exhaust port		T
	The electric inlet and outlet are electrically operated and automatically open or close at point N based on the temperature rise curve.	P
Intake and exhaust automatic	The electric exhaust and inlet can be linked to the temperature rise curve segment selection and can automatically open and close at any temperature range. This is achieved using a PLC. Automatically turns on and off during the heating process (provided the touchscreen function is selected).	Y
vacuum atmosphere	The charging chamber, high-temperature furnace, and discharge chamber are all equipped with vacuum-sealed shells to prevent oxidation and can be used in the same atmosphere.	R
High-temperature stirring instrument	Speed regulation is achieved using a frequency converter and a speed reducer; the stirring rod is made of high-temperature ceramic.	Z
Independent control cabinet	The control system is separated from the furnace body, requiring the addition of an independent control cabinet (1600x600x400) and an increased control cable length (within 5 meters).	Q

ten, Model Specifications

1200-degree electric furnace

name	Specifications and Models	crucible material (Standard configuration)	External dimensions (mm)	crucible volume L (liter)	Power (kW)	Weight (kg)
Box type electric furnace	GWDL-1200R-A-1.6L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	1.6L	6	180
	GWDL-1200R-A-3L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	3L	10	220
	GWDL-1200R-A-5L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	5L	12	240
	GWDL-1200R2-A-10L	High-purity molten stone British ceramics	L=1825, W=1825, H=2100	10L	15	300
	GWDL-1200R2-A-17L	High-purity molten stone British ceramics	L=1825, W=1825, H=2100	17L	18	450

	GWDL-1200R2-A-50L	High-purity molten stone British ceramics	custom made	50L	45	700
	GWDL-1200R2-A-70L	High-purity molten stone British ceramics	custom made	70L	60	900
Note:	1. All models listed above are in stock. Custom furnace dimensions for special models can be made to order (delivery time 7-10 days)! Custom size order form available. The price increases by 20% for 3-5 units, by 10% for 6 units or more, and does not increase for more than 6 units.					
	2. Dimensions are in millimeters (mm). The dimensions shown are for reference only; the actual dimensions shall prevail.					

	1400-degree electric furnace					
name	Specifications and Models	crucible material (Standard configuration)	External dimensions (mm)	crucible volume L (liter)	Power (kW)	Weight (kg)
Box type electric furnace	GWDL-1400R-A-1.6L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	1.6L	8	200
	GWDL-1400R-A-3L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	3L	10	240
	GWDL-1400R-A-5L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	5L	12	260
	GWDL-1400R2-A-10L	High-purity molten stone British ceramics	L=1825, W=1825, H=2100	10L	18	330
	GWDL-1400R2-A-17L	High-purity molten stone British ceramics	L=1825, W=1825, H=2100	17L	twenty four	470
	GWDL-1400R2-A-50L	High-purity molten stone British ceramics	custom made	50L	55	750
	GWDL-1400R2-A-70L	High-purity molten stone British ceramics	custom made	70L	75	950
Note:	1. All models listed above are in stock. Custom furnace dimensions for special models can be made to order (delivery time 7-10 days)! Custom size order form available. The price increases by 20% for 3-5 units, by 10% for 6 units or more, and does not increase for more than 6 units.					
	2. Dimensions are in millimeters (mm). The dimensions shown are for reference only; the actual dimensions shall prevail.					

	1600-degree electric furnace					
name	Specifications and Models	crucible material (Standard configuration)	External dimensions (mm)	crucible volume L (liter)	Power (kW)	Weight (kg)

Box type electric furnace	GWDL-1600R-A-1.6L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	1.6L	8	200
	GWDL-1600R-A-3L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	3L	10	240
	GWDL-1600R-A-5L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	5L	12	260
	GWDL-1600R2-A-10L	High-purity molten stone British ceramics	L=1825, W=1825, H=2100	10L	18	330
	GWDL-1600R2-A-17L	High-purity molten stone British ceramics	L=1825, W=1825, H=2100	17L	twenty four	470
	GWDL-1600R2-A-50L	High-purity molten stone British ceramics	custom made	50L	55	750
	GWDL-1600R2-A-70L	High-purity molten stone British ceramics	custom made	70L	75	950
Note:	1. All models listed above are in stock. Custom furnace dimensions for special models can be made to order (delivery time 7-10 days)! Custom size order form available. The price increases by 20% for 3-5 units, by 10% for 6 units or more, and does not increase for more than 6 units.					
	2. Dimensions are in millimeters (mm). The dimensions shown are for reference only; the actual dimensions shall prevail.					

	1700-degree electric furnace					
name	Specifications and Models	crucible material (Standard configuration)	External dimensions (mm)	crucible volume L (liter)	Power (kW)	Weight (kg)
Box type electric furnace	GWDL-1700R-A-1.6L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	1.6L	10	200
	GWDL-1700R-A-3L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	3L	12	240
	GWDL-1700R-A-5L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	5L	15	260
	GWDL-1700R2-A-10L	High-purity molten stone British ceramics	L=1825, W=1825, H=2100	10L	30	330
	GWDL-1700R2-A-17L	High-purity molten stone British ceramics	L=1825, W=1825, H=2100	17L	45	470

	GWDL-1700R2-A-50L	High-purity molten stone British ceramics	custom made	50L	55	750
	GWDL-1700R2-A-70L	High-purity molten stone British ceramics	custom made	70L	75	950
Note:	1. All models listed above are in stock. Custom furnace dimensions for special models can be made to order (delivery time 7-10 days)! Custom size order form available. The price increases by 20% for 3-5 units, by 10% for 6 units or more, and does not increase for more than 6 units.					
	2. Dimensions are in millimeters (mm). The dimensions shown are for reference only; the actual dimensions shall prevail.					

	1800-degree electric furnace					
name	Specifications and Models	crucible material (Standard configuration)	External dimensions (mm)	crucible volume L (liter)	Power (kW)	Weight (kg)
Box type electric furnace	GWDL-1800R-A-1.6L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	1.6L	12	300
	GWDL-1800R-A-3L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	3L	15	340
	GWDL-1800R-A-5L	High-purity molten stone British ceramics	L=1120, W=800, H=1370	5L	18	360
	GWDL-1800R2-A-10L	High-purity molten stone British ceramics	L=1825, W=1825, H=2100	10L	36	430
	GWDL-1800R2-A-17L	High-purity molten stone British ceramics	L=1825, W=1825, H=2100	17L	50	570
	GWDL-1800R2-A-50L	High-purity molten stone British ceramics	custom made	50L	65	850
	GWDL-1800R2-A-70L	High-purity molten stone British ceramics	custom made	70L	85	1150
Note:	1. All models listed above are in stock. Custom furnace dimensions for special models can be made to order (delivery time 7-10 days)! Custom size order form available. The price increases by 20% for 3-5 units, by 10% for 6 units or more, and does not increase for more than 6 units.					
	2. Dimensions are in millimeters (mm). The dimensions shown are for reference only; the actual dimensions shall prevail.					

Juxing Kiln Main Component								
Serial Number	Item Name		Configuration List (Classified by Temperature: 1200°C, 1400°C, 1600°C, 1700°C, 1800°C) • Juxing				factory	Remark
1	Double-layer outer casing • High-temperature		●	●	●			
2	electric heating element electric heater	alloy	Silicon carbide rods and silicon molybdenum rods		Type 1800 silicon molybdenum rod	Kiln Type 1850 Silicon Molybdenum Rods	Juxing Kiln	
3	Electrical control section	resistance wire	858P	858P	858P	858P Xiamen Yudian		
4		K	S	B	B	B. Dazheng/Guangming		
5		temperature controller	●	●	●			
6		858P • Thermocouple voltmeter • Ammeter •	●	●	●	● Zhengtai • Zhengtai		
7		SCR power regulator •	●	●	●	• Juxing Kiln • Zhengtai/		
8		Contactor • Circuit	●	●	●	Delixi • Zhengtai/Delixi •		
9		breaker • Pushbutton	●	●	●	Zhengtai/Delixi • Zhengtai/		
10		• Buzzer • Fast-	●	●	●	Delixi Mingrong • Juxing		
11		acting transformer •	●	●	●	Kiln		
12		Glass-	●	●	●	●	●	
13		resistant alumina	●	●	●			
14	Refractory and heat-insulating furnace		1260	1500	1700	1800	1850 Juxing Kiln	
15			●	●	●	●	• Juxing Kiln	
16		Crucible quartz ceramic quartz ceramic quartz ceramic quartz ceramic quartz ceramic Juxing kiln						