

Clean and dust-free lifting oven

GWDL-YS



Metal casing illustration



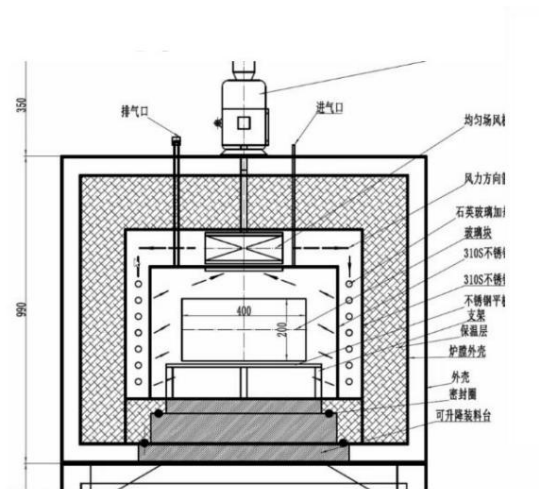
Double-layer inner liner illustration



Sealing method diagram



Lifting method diagram



Heating mode principle diagram



Schematic diagram of resistance wire sheathed in quartz glass tube

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高新技术企业/专精特新企业
专业的高温加热制造工厂 (-60°C~2600°C)

中国热处理行业协会理事单位
ISO9001:质量管理体系认证
欧盟CE产品认证



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The GWDL-YS series high-temperature furnace, as shown in the figure, integrates the control system and the furnace chamber.

It uses high-temperature electric heating elements for heating; it is a special equipment developed for laboratories of universities, research institutes and industrial and mining enterprises for sintering, melting, analysis and production of ceramics, metallurgy, electronics, glass, chemicals, machinery, refractory materials, new material development, special materials, building materials, metals, non-metals and other compound materials.

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It allows for flexible and convenient modification of temperature control parameters and programs, and is easy to operate.

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	<p>The equipment utilizes a circulating fan to draw air from the working chamber into the air duct. After passing through heating elements, the heated air is evenly blown into the working chamber through the side air ducts to exchange heat with the workpieces. The air then returns to the top of the chamber and is drawn into the top air duct, creating a forced convection circulation. This repeated cycle raises the temperature of the working chamber. This equipment design and hot air circulation principle ensure uniform temperature throughout the oven, eliminating low-temperature dead zones and blind spots. The equipment employs an easily interchangeable heating and circulating fan structure, and uses interlocking control between the fan and heating elements to ensure the safety of the product baking process.</p>
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Shell material and structure	Made of 2.0mm thick Q235 cold-rolled steel plate by bending and welding, the electric furnace body adopts a double-layer carbon steel furnace body structure with air cooling. The effective air cooling guide baffles enable the overall cold air circulation in the furnace shell, which finally cools the conductive sheet of the heating element and then discharges it from the furnace body, avoiding high-temperature oxidation of the conductive sheet of the heating element and ensuring a good working environment.
Surface treatment	The overall color of the equipment casing is RAL7035 (to be specified after contract signing) . The furnace body is machined using CNC machine tools and undergoes polishing, grinding, pickling, phosphating, epoxy powder electrostatic spraying, and high-temperature baking. The two-tone design gives it a novel and attractive appearance, and it possesses advantages such as oxidation resistance, acid and alkali resistance, corrosion resistance, high-temperature resistance, and easy cleaning. It
Inner liner material	is made of double-layered stainless steel, with all six sides of the inner liner made of 3mm thick 304 stainless steel plate, keeping the inner liner clean and dust-free, rust-proof, and easy to clean. The inner liner is reinforced with stainless steel square tubing around its perimeter.
Box frame	All materials used are 100mm angle steel and square tubing.
thermal insulation materials	The insulation uses a three-layer composite structure: aluminum silicate fiberboard, alumina fiberboard, and alumina (polycrystalline) fiberboard, with a total thickness of 150mm.
Sealing material	The sealing strip is made of high-temperature resistant ceramic rope, which can withstand high temperatures and will not deform. High-temperature sealing strips are set around the insulation board. There are 3-4 layers of tapered steps for soft sealing between the charging platform and the furnace opening. Elastic high-temperature sealing strips are arranged on the steps, which can effectively absorb the expansion of the refractory material at the furnace opening and the charging platform.
Improvement methods	The furnace body adopts an upper-cover structure, consisting of two main parts: a chassis and a box body. 1. Chassis: This is the bottom support frame of the oven, fixed to the ground, used to support the workpieces and the furnace contents. 2. Box body: This includes five sides: front, back, left, right, and top. It is an integral design, installed on the chassis, and can be raised and lowered vertically as a whole.
Lifting device	The lifting device is driven by two servo motors (Xinshida) and adopts an electric dual-screw synchronous lifting structure. The lifting position is detected in real time by an electronic ruler and integrated into the control system, achieving precise display and monitoring of displacement distance. The lifting mechanism of the charging platform is located at the rear of the furnace body to avoid the influence of the high-temperature environment on the transmission system, thus ensuring higher operational accuracy and reliability. The screw lifting has an adjustable speed function, allowing for flexible setting of the lifting speed according to process requirements, ensuring stable and safe operation. (Lifting height can be set.)
chassis configuration	The oven features a stainless steel base frame, with four 100mm feet welded to the bottom for easy forklift movement. The bottom of the insulation layer is 900mm above the ground (including feet and casters), and the bottom of the frame is approximately 150mm above the ground to accommodate cable trays and necessary process piping.

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Security Protection	It adopts an integrated modular control unit, which has accurate control precision, and is designed with dual-loop control and dual-loop protection, and has protection against overshoot, undershoot, phase loss, overvoltage, overcurrent, overtemperature, current feedback, and soft start.
Power off when door is opened	The furnace body is designed with a function to open the furnace door and disconnect the main heating circuit when the temperature is high during operation, which greatly protects against the risk of electric shock when handling materials at high temperatures.



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Safe temperature control	Employing closed-loop technology with thyristor module trigger control, phase-shift trigger control, or zero-crossing triggering, the output voltage, current, or power is continuously adjustable, exhibiting constant voltage, constant current, or constant power characteristics. The current loop is the inner loop, and the voltage loop is the outer loop. When a sudden load is applied or the load current exceeds the current limit, the output current of the voltage regulator is limited to the rated current range, ensuring normal operation of the output and the voltage regulator. Simultaneously, the voltage loop also participates in regulation, limiting the output current of the voltage regulator to the rated current range, maintaining constant output current and voltage with sufficient adjustment margin. This protects the heating elements from excessive current and voltage surges, achieving safe, reliable, and precise control.
Over-temperature alarm	When the actual detected temperature exceeds the over-temperature protection thermostat's set value, the heating power is automatically cut off, and an audible and visual alarm is activated, providing dual protection.
Temperature profile setting	Employing an intelligent temperature controller, it offers multiple adjustment modes including standard PID, AI-based APID, and MPT. It features self-tuning and self-learning capabilities, excellent control characteristics with no overshoot or undershoot, and 50-segment programmable control. It can achieve temperature rise and fall control with arbitrary slopes and provides programmable/operable commands such as jump (loop), run, pause, and stop, allowing modification of the program at any time during operation. Utilizing an AI-based adjustment algorithm with curve fitting capabilities, it achieves smooth and even curve control.
Number of segments in the heating curve	The program control function has 50 segments, which can be set as follows: 50 segments for one curve, 28 segments for two curves, 15 segments for three curves, and 9 segments for five curves; multiple curves can be input at the same time and can be called up at will when in use.
Observation window	The observation port is designed on the cabinet and is made of high-temperature resistant quartz glass (D100mm).
Panel buttons	The two buttons are: main power button/knob and heating chamber on button/knob.
Communication interface	The electric furnace is equipped with an RS485 communication interface, with a communication distance of up to 1000 meters. It can be centrally controlled via a touchscreen, including start-up, pause, stop, temperature curve setting, temperature curve reading, and parameter setting. It boasts high reliability and ease of use. The computer screen displays a wealth of information, including measured values, setpoints, output values, time intervals, segment numbers, temperature curves, and power percentage curves. Temperature curves can be stored on the computer and can be recalled and modified at will, along with setpoints and commonly used parameters. Historical curves and reports can be filtered by time interval (1 second to 1 hour) and can be stored long-term. It can fulfill the client's requirements, including but not limited to setting, reading, and starting/stopping the heating temperature.
Random accessories	A crucible tong and a pair of high-temperature gloves.
Warranty coverage and period	

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The electric furnace is covered by a one-year free warranty, but the furnace bottom plate and heating elements are not covered by the warranty (free replacement for
natural damage
within three months). The packing list includes one electric furnace, one crucible tong, one pair of high-temperature gloves, one furnace bottom plate, one instruction manual, one certificate of conformity, one acceptance report (factory inspection report), and one sales delivery note.
Precautions

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1. To avoid affecting the lifespan of the electric furnace, it is recommended that the maximum heating or cooling rate be 1-15y/min. (Rapid heating at high temperatures may cause problems.) (The lifespan of the heating element will be shortened)
2. This box furnace does not have a vacuum sealing structure, so flammable and explosive gases must not be introduced.
3. 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, and we will disinfect the furnace.
Special treatment
4. The instrument should be placed in a well-ventilated, dry place.
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 dispatch a third party. Dedicated vehicle transportation (packaging: wooden pallets and cardboard boxes)

2、触摸屏控制系统展示：



Project Name	Touchscreen Function Introduction
Size	10-inch TFT true color
and resolution	800*480
Backlight	led
power	5W
and weight	1Kg
language	You can switch freely between Chinese and English.



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Full-screen display and operation	Instrument panel, bar chart, historical trends, data reports, alarm information, data export, process flow, system management, etc.
Control object	Temperature, pressure, flow rate, liquid level, etc.
Control the number of electric furnaces	1-6 units
Temperature control	Touch screen + high-precision integrated module



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Start heating,	Touch operation
temporarily set	Touch operation
heating, stop heating	Touch operation
Temperature profile compilation	Touch operation, 30 segments per curve
Temperature curve storage quantity	Unrestricted (each curve can be named in Chinese or Spanish)
Real-time status display	Running curve name, running segment number, segment time, segment running time, digital temperature Degree, real-time curve, power output 100%
Select segment number to start (cross-segment start)	Touch operation
(Dynamic) Curve Range	Adjustable
Historical curve (text and images)	Stored for approximately 20 months
Data reports (Excel) - Historical	Storage lasts approximately 20 months; multiple displays available simultaneously (can be expanded with a USB flash drive).
curves, report records (stored)	
(Disc) interval time	Adjustable display time from 1 second to 3600 seconds; supports simultaneous display of multiple points (USB flash drive can be inserted for expansion).
Alarm Indication	Color change (red)
Alarm message language	Chinese display (alarm time and event description in Chinese)
Data export interface	USB
Printer interface	parallel port
Operate the touchscreen to protect	Password required (operation is prohibited without a password).
the communication port	RS485

Introduction to Juxing Temperature Controller

1 概述

1.1 主要特点

- 新型 AI 人工智能算法，即使是大滞后系统也能精确控制，对 PID 参数适应性更强。
- 除经典的 AT 自整定功能外，具备 AAT 先进快速自整定功能，能在设备通电升温时分析升温曲线计算 PID 参数，无需如传统 AT 那样来回振荡，大大节约设备调试时间；
- 输入可自由选择热电偶、热电阻、电压、电流并可扩充输入及自定义非线性校正表格，部分输入类型测量精度可达 0.05 级。
- 高精度低温漂测量技术，采用宇电订制的 22/24BIT 高分辨率 A/D 转换器，同时具备 50Hz/60Hz 干扰抑制功能。
- 供电采用全球通用的 100~240VAC 范围开关电源，提供全面电源防护功能，即使长时间误接 380VAC 也不会烧坏；也可选择 24VDC 电源供电，并具备多种外型尺寸供选择。
- 重视节能与环保的设计理念，精选“发烧”级节能元器件，无输出及报警时整机功耗仅 0.2W 左右，使得仪表自身温升大幅度降低从而提升产品可靠性和稳定性。
- 采用先进的模块化结构，提供丰富的输出规格，能广泛满足各种应用场合的需要，交货迅速且维护方便。
- 支持多种通信协议，包括宇电自主开发简洁高效的 AIBUS 协议、通用型 MODBUS 协议等；通过多功能通信控制器可以实现包括 TCP 等多种网络连接方式。

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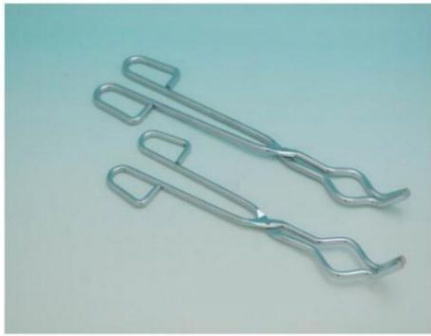
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- 强抗干扰设计，通过 6KV 群脉冲抗干扰测试，抗干扰性能符合在严酷工业条件下电磁兼容（EMC）的要求。
- 数码管升级为新一代自发光 LED 显示技术，无漏光或视角问题，发光效率更高，颜色更艳丽，功耗大幅度降低，并可选不同 LED 颜色搭配模式。
- 电网欠压瞬时断电保护功能，启动电压低至 50VAC 左右，电网瞬时断电后持续工作时间长达 1 秒左右。
- 设计使用温度范围宽达-10~+60 度，并采用高精度晶体振荡器，实际老化测试温度高达 100 度。
- 当仪表具有多组输入输出时，能提供完善的电源及光电隔离解决方案。
- 内建程序控制功能，参数 Pno 程序段数设置为 0 时可完全兼容定点操作模式，设置为 1 时仅需设置给定值和定时控制时间，AI-8*8 系列可支持长达 50 段程序控制功能。
- 自动/手动无扰动切换功能，可设置作为手操器使用。
- 具备外给定值控制功能（仅 AI-8*8 系列）以及测量值/给定值变送为 4~20mA 或 0~20mA 输出功能。
- 内建 50 点表格/折线处理功能，可用于测量值输入多点修正和高温炉输出跟随测量值限幅等功能。
- 外部事件输入功能支持给定值切换、PID 参数切换及手动/自动无扰动切换等功能。
- 包括上限、下限、正偏差、负偏差等多种报警模式功能，可自由设置报警输出位置。
- 多种热电偶冷端补偿方式选择：除普通的内部补偿模式外，支持高精度的外接 CU50 及冰点补偿方式。
- 传感器断线时可以定义输出百分比，可选择人为设置或系统自主限制。
- 多种盘装及导轨安装方式可选：包括 48*48、72*72、48*96、96*48、96*96、160*80、80*160 等盘装形式和 D7 导轨安装型模块。

Spare parts diagram

堆垛钳



高温手套



Electrical Component Configuration List

Category order	Number	Component Name	brand	Remarks/Model
Temperature control	1.	Temperature controller (Shimaden, Japan)	2.	FP93
Thermocouple low-voltage electrical appliance			Taisho	K type
3. Plastic casing circuit breaker		Circuit breaker (or switchboard)	Schneider	EZD100E/3P60
Low-voltage electrical appliances	4	Miniature circuit breakers (Open the circuit)	Schneider	ICP65N-DC
5. Low-voltage electrical appliances: AC contactors (Schneider Electric)				LC1D50
6. Thermal overload relays (Schneider Electric)	7.	Two-position push-button switches (Schneider Electric)	8.	Phase loss and phase sequence protection devices
		Protection relay	Schneider/Europe M'Ron	RM22TG20 TR32
Control and Automation	9.	PLC	Siemens	S7-200
Control and Automation	10.	Touch Screen (HMI)	Bike	10-inch
Control and Automation	11	Intermediate Relays Omron/Schwarz	Ned	RXM2AB2BD+RXZE1M2C
Control and Automation	12	Electrical Control System - Juxing (including heating power supply and human-machine interface)		
Control and Automation	13	Servo Motors - New Era		
Sensor Category	14	Limit Switches (Omron)	Sensor Category	15
Proximity Sensors		switches, etc.)	(Omron	XS618B1MAL2

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Heating and Power Supply	16 DC Power Supply	Sichuan Yingjie	150A
Heating and Power Supply 17	24V power	WAGO	30A
supply for heating and power supply	18 bronze plate/cable	Luotong	/



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Other 21: Fuse holder;	Other 22: Buzzer, signal	/
	Torchlight	/
Other 23 terminal blocks, wires	WAGO	/
	Cables, wire gauges, etc.	
Other 24 AC axial flow fan multi-bonded cable	25 Related	TA-15025
matching cables 1 set		10 meters of power supply cable (provided by the supplier)

Price list of products and equipment for industrial and mining enterprises

Supplier: Luoyang Juxing Kiln Co., Ltd.

Company Address: No. 1, Xingye 1st Road, Science and Technology Industrial Park, Jianxi District, Luoyang City

Product Name, Trademark, Model, Manufacturer, Quantity, Amount, Delivery Time and Quantity: September 22, 2025

name	Specifications and Models	Furnace dimensions (length, width, height) in mm	Voltage AC	power kW
Clean and dust-free lifting oven	GWDL-YS	1000x1000x1000	380V	75
Delivery period: Delivery within 55 days of receiving payment.				

Thank you for contacting us!
Thank you to get in touch with us!
Company Name: Luoyang Juxing Kiln Co., Ltd.
Company Name: Luoyang Ju Xing Kiln Co., Ltd. Company Address:
Advanced Manufacturing Cluster Area, Jianxi District, Luoyang City
Company Address: Jianxi District, Luoyang advanced manufacturing enclave

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