



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)

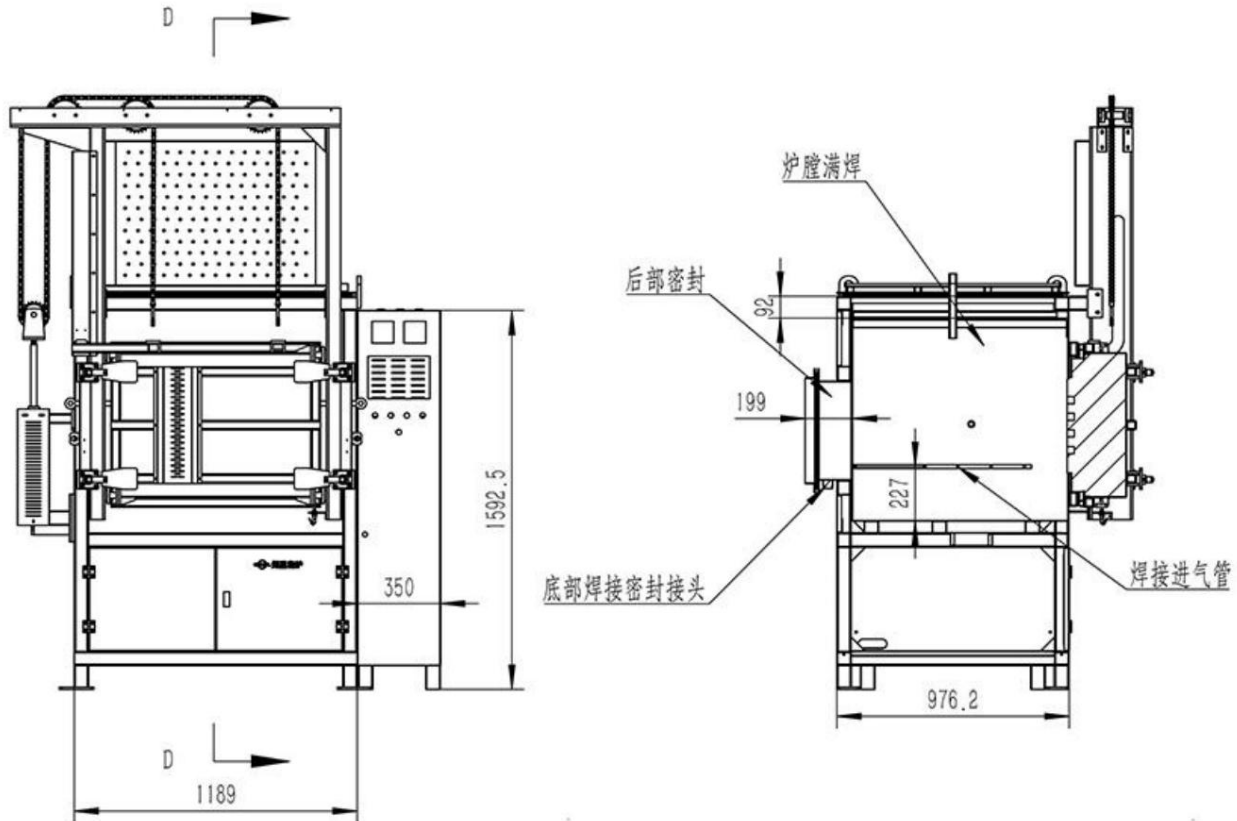
中国热处理行业协会理事单位  
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### GWL-1200LBFS Top-Opening Precision Electric Furnace: Information and Pricing





Technical parameters:

The GWL-LBFS series 1200°C high-temperature top-opening precision electric furnace, as shown in the figure, features a separate design for the control system and furnace chamber. The furnace lining uses vacuum-formed high-purity...  
It is made of alumina lightweight material.

Applications of top-opening precision electric furnaces: Top-opening precision furnaces are used in exploration geochemistry, applying geochemical principles to mineral exploration. The aim is to use chemical methods to help clients locate the geographical location of sedimentary deposits and the extent of discovered deposits. Exploration geochemistry includes the analysis of samples such as: cores, rocks, river sediments, soils, glacial debris, and vegetation, etc.

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 interface to monitor the system's operating status at any time. This product uses reliable integrated circuitry, has a good working environment, and is resistant to interference. The furnace shell temperature is  $\gamma 45\gamma$  at the highest temperature, greatly improving the working environment. It features microcomputer program control, programmable curves, fully automatic heating/cooling, and the ability to modify temperature control parameters and programs during operation, making it flexible, convenient, and easy to operate.

Temperature control accuracy:  $\pm 1\gamma$  with no overshoot. Fast heating rate, with a maximum heating rate  $\gamma 45\gamma/\text{min}$ . The furnace lining is entirely made of vacuum-formed high-purity alumina lightweight material, offering high operating temperature, low heat storage, resistance to rapid heating and cooling, and is crack-free, slag-free, and heat-retaining.

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It has excellent temperature performance (energy saving effect is more than 60% of that of old-fashioned electric furnaces). Its reasonable structure, with inner and outer double-layer furnace jackets and air-cooled heat dissipation, can greatly shorten the testing cycle.

category parameter	1200 degrees
Maximum operating temperature;	1200 degrees
long-term operating temperature control	1150 degrees
range; temperature sensing	80 to 1200 degrees
element and heating	Platinum-rhodium K thermocouple, temperature measurement range 0-1300 degrees Celsius
element mounting position; temperature	Vertically installed around the inner wall and bottom of the furnace
control accuracy;	±1 degree (integrated circuit control, no overshoot)
furnace temperature uniformity.	±3 degrees (using two independent temperature control systems)
heating rate	The heating rate is freely adjustable, with an adjustment range of up to 30 degrees Celsius per minute (30 degrees/min).  (Non-linear), slowest heating rate 1 degree per hour (1 degree/h)
Heating element	Employs high-temperature alloy resistance wire from Kanthal A1.
Furnace body	The furnace body is machined using CNC machine tools and undergoes polishing, grinding, pickling, phosphating, powder coating, and high-temperature treatment.  Made through baking and other processes, featuring a two-tone color scheme, a novel and attractive appearance, and possessing antioxidant, acid and alkali resistant properties.  Advantages include corrosion resistance, high temperature resistance, and easy cleaning.
Furnace body structure	The electric furnace body adopts an air-cooled double-layer furnace body structure, and the effective air-cooling guide baffles ensure that the entire furnace shell is cooled.  The air is circulated and finally cooled before being discharged from the furnace, thus preventing the conductive plates of the heating element from burning.  High-temperature oxidation ensures a good working environment.
Furnace door opening method is	The device is electrically and pneumatically operated from the top, with the opening and closing heights controlled by a foot switch.
sealed	Pneumatic lifting and locking; opening and closing heights controlled by a switch. The furnace body is completely sealed.
Intake and exhaust	The exhaust vent is DN30 at the top and adjustable with a valve. Eight air inlets are evenly distributed on the lower left and right sides of the furnace.  The port integrates a main air intake equipped with a flow meter.
The furnace	The furnace bottom plate is made of 310S heat-resistant steel plate, with a bottom height of 920mm.
bottom plate can be	Nitrogen, argon, carbon monoxide, oxygen, etc.
used with the	Siemens PLC + solenoid valve + pressure reducing valve + float flow meter (dual-channel)
atmosphere control loading car.	Manual lifting
Refractory materials	The furnace lining is made of vacuum-formed high-purity alumina lightweight material, which is easy to handle when handling materials and can withstand heavy loads.  The furnace opening and bottom are constructed using lightweight hollow spherical alumina plates, which have high operating temperatures and low heat storage capacity.  It is resistant to rapid heating and cooling, does not crack, does not slag, and has good heat insulation properties (energy saving effect is 80% of that of old-fashioned electric furnaces).  above)
thermal insulation materials	It employs a three-layer insulation system, consisting of: aluminum silicate fiberboard, alumina fiberboard, and polycrystalline alumina.  Fiberboard has an energy-saving effect of more than 80% compared to old-fashioned electric furnaces.
Furnace shell temperature	For long-term use without shutting down the furnace, the outer casing temperature should be less than 45 degrees Celsius.
Protect	An integrated modular control unit is adopted, ensuring accurate control precision. A dual-loop control and dual-return mechanism are also designed.  Circuit protection features include overshoot, undershoot, thermocouple interruption, phase loss, overvoltage, overcurrent, and overtemperature protection.  Current feedback, soft start and other protection

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control	<p>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. Built-in Siemens PLC, it can realize one-button operation of fully automatic processes such as temperature, time corresponding conditions, pressure, atmosphere, and exhaust through a 10-inch touch screen,</p> <p>as well as</p>
Automation control	<p>temperature corresponding conditions. Real-time temperature, temperature segment number, segment time, remaining time, output power percentage, voltage, current, etc. are displayed. It adopts an intelligent temperature controller with multiple adjustment modes such as</p>
Display parameters	<p>standard PID, artificial intelligence adjustment APID or MPT. It has self-tuning and self-learning functions, and excellent control characteristics with no overshoot</p> <p>and no</p>
Temperature profile setting	<p>undershoot. It has 30-segment program control function, which can realize temperature rise and fall control with arbitrary slope. It has programmable/operable commands such as jump (loop), run, pause and stop, and allows modification of the program at any time during program control operation. It adopts an artificial intelligence adjustment algorithm with curve fitting function, which can obtain a smooth curve control effect. 50-segment (customizable 50-segment) program control function, which can input settings: 30 (50) segments for one curve, 14 (28) segments/line for two curves, 9 (15) segments/line for three curves, and 5 (9) segments/line for five curves. Segment/line; Multiple curves can be entered simultaneously and can be called up arbitrarily during use.</p>
Multiple curve inputs	
Communication interface	<p>The electric furnace is equipped with an RS485 communication interface with a communication distance of up to 1200 meters. It can be controlled by computer to start, pause, stop, set and read the heating curve, and set parameters. It is highly reliable and easy to operate. The computer screen displays a wealth of information, including measured values, setpoints, output values, time intervals, segment numbers, heating curves, and power percentage curves. Heating curves can be stored on the computer and can be recalled and modified at will. Setpoints and commonly used parameters can be modified. Historical curves and historical reports can be filtered by time interval (1 second to 1 hour) and can be stored for a long time.</p>
Random accessories	<p>Two heating elements, two sets of rods, one crucible tongs, and one pair of high-temperature gloves.</p>
Warranty Scope and Period:	<p>The electric furnace is covered by a one-year free warranty, but the heating element is not covered by the warranty (it will be replaced free of charge if it fails naturally within three months).</p>
Packing list	<p>One electric furnace, two heating elements, two sets of heating rods, one pair of high-temperature gloves, one instruction manual, one certificate of conformity, one acceptance report (factory inspection report), and one sales delivery note. 1. The electric furnace is packaged in three layers: wrapped in foam</p>
Shipping Information	<p>paper, then wrapped in plastic film, and finally placed in a wooden crate.</p> <p>Package</p> <p>2. Free delivery within China (free delivery within the city). 3. We will bear any damage that occurs during the transportation of the electric furnace. 4. Logistics methods: truck, rail, ship (foreign trade export), air freight (foreign trade export). For nearby locations, our company will arrange special vehicles for transportation (packaging is wooden pallets and cardboard boxes).</p>



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	Specifications and Models:	Furnace Chamber Dimensions (Length, Width, Height) mm:	Effective Dimensions	Voltage ACV	power kW
	GWL-1200LBFS  Open door precision electric furnace	600×600×400	450×450×300	380	30
Note:	1. All listed models are in stock. Custom furnace dimensions for special models can be made to order (7-day delivery time)! 2. Delivery time: 45-50 days				

Thank you for contacting us!

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