



HIGH TEMPERATURE LIFTING FURNACE TT- LF-321-1800C

The High Temperature Lifting Furnace TT-LF-321-1800C, with a maximum temperature of 1800°C, is specifically designed for use in universities, research institutes, manufacturing facilities, and industrial laboratories. Built for reliability and precision, it supports advanced thermal processing across a broad spectrum of applications.

This furnace is ideal for handling advanced materials such as metals, ceramics, nanomaterials, and semiconductors. In addition, it is well-suited for dental laboratories, providing accurate and consistent sintering performance for dental prosthetics in the denture industry.

APPLICATIONS

- **Advanced Ceramic Materials** – Enables high-temperature sintering and densification of electronic, structural, and functional ceramics. Provides excellent thermal stability and mechanical strength, making it suitable for both R&D and industrial applications.
- **Magnetic & Electronic Materials** – Facilitates precise sintering of magnetic materials, ITO targets, and electronic ceramics. Ensures uniform temperature distribution critical for stable magnetic and electronic performance.
- **Nanomaterials Research** – Delivers accurate and consistent thermal treatment for nanostructures and composite materials. Supports advanced R&D in electronics, catalysis, coatings, and energy storage.
- **Semiconductor Processing** – Ideal for annealing, diffusion, and oxidation processes at ultra-high temperatures. Ensures precise control for microelectronics, semiconductor wafers, and optoelectronic device fabrication.
- **Powder Metallurgy & Advanced Alloys** – Provides reliable sintering of powdered metals and advanced alloy systems into dense, high-performance components. Supports the production of complex geometries in laboratory-scale

manufacturing.

- **Dental Prosthetics** – Suitable for dental laboratories requiring precise and consistent sintering of prosthetic teeth and advanced dental ceramics. Ensures repeatable results with superior structural integrity.
- **Universities & Research Institutes** – Widely used in academic research programs across physics, chemistry, and materials science. Offers versatility, safety, and programming flexibility for teaching and experimental work.
- **Industrial R&D and Quality Control** – Supports testing, certification, and validation of high-performance materials under extreme thermal conditions. Provides dependable results for industries requiring compliance with ISO, CE, and SGS standards.

FEATURES

Furnace Shell

- Constructed with Q235 low-carbon steel, featuring an electrostatic-resistant, corrosion-resistant surface.
- Durable metal tank design ensures low external surface temperatures during operation.
- The furnace door includes a flange-sealed structure with manual screw compression and a side-opening design for easier access and operation.

Refractory Material

- Multi-layer insulation system made from lightweight alumina ceramic fiber and premium-grade insulating boards. The insulation is asbestos-free, with excellent thermal efficiency, minimal heat loss, and reduced energy use.

Heating System

- Equipped with high-quality resistance heating elements that provide efficient, radiant heating within the chamber for long-term reliability.
- Surrounding ring-type heating elements ensure uniform temperature distribution throughout the furnace.
- Optional features include a top-mounted exhaust port and a bottom air inlet with adjustable flow.
- The bottom platform supports stackable charge containers, allowing for multi-layer loading depending on furnace configuration.

Temperature Control Panel

- PID controller with SSR/SCR output for highly accurate temperature regulation.
- Uses a high-durability, internationally standardized thermocouple for consistent readings.

Program Controller

- Advanced controller designed to handle complex heating processes.
- User-friendly interface with flexible and intuitive programming.
- Supports up to 30 programmable segments per curve.
- Includes over-temperature and system fault alarms with automatic safety shutoff.

TECHNICAL SPECIFICATIONS

Product Model	Chamber Size mm	Volume	Max Temperature	Working Temperature	Voltage	Power	Heating Element	Temperature control accuracy
TT-LF-120-1200	Φ120×120	2L	1200°C	1100°C	220V (110V is also available)	2KW	HRE	±1°C
TT-LF-150-1200	Φ150×150	3L	1200°C	1100°C	220V (110V is also available)	3KW	HRE	±1°C

TT-LF-200-1200	Φ200×200	6L	1200℃	1100℃	220V (110V is also available)	4KW	HRE	±1℃
TT-LF-300-1200	Φ300×300	20L	1200℃	1100℃	380V	6KW	HRE	±1℃
TT-LF-120-1400	Φ120×120	2L	1400℃	1350℃	220V (110V is also available)	3KW	SIC	±1℃
TT-LF-150-1400	Φ150×150	3L	1400℃	1350℃	220V (110V is also available)	4KW	SIC	±1℃
TT-LF-200-1400	Φ200×200	6L	1400℃	1350℃	220V (110V is also available)	5KW	SIC	±1℃
TT-LF-300-1400	Φ300×300	20L	1400℃	1350℃	380V	6KW	SIC	±1℃
TT-LF-120-1700	Φ120×120	2L	1700℃	1600℃	220V (110V is also available)	3KW	MoSi2	±1℃
TT-LF-150-1700	Φ150×150	3L	1700℃	1600℃	220V (110V is also available)	4KW	MoSi2	±1℃
TT-LF-200-1700	Φ200×200	6L	1700℃	1600℃	220V (110V is also available)	4KW	MoSi2	±1℃
TT-LF-300-1700	Φ300×300	20L	1700℃	1600℃	380V	8KW	MoSi2	±1℃



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