



TORONTECH

LIFTING BOTTOM FURNACE TT-LF-64- 1000A



The 1000°C Lifting Bottom Furnace TT-LF-64-1000A is specifically designed for use in universities, research institutions, industrial facilities, and laboratories. It supports a wide range of applications involving advanced materials, including metals, ceramics, nanomaterials, and semiconductors.

In addition, this furnace is suitable for dental laboratories, providing reliable sintering performance for dental prosthetics. With a compact 64L chamber, precise temperature control, and robust construction, it ensures consistent and efficient operation for both research and practical applications.

APPLICATIONS

- **Advanced Ceramic Materials** – Supports high-temperature sintering and densification of ceramics, ensuring structural integrity, thermal resistance, and mechanical durability for both research and industrial applications.
- **Nanomaterials Research** – Provides precise and uniform heating conditions for nanostructures and composites, enabling R&D in electronics, catalysis, and next-generation energy storage materials.
- **Semiconductor Processing** – Facilitates thermal treatments such as annealing, oxidation, and diffusion of semiconductor substrates. Ensures temperature stability and accuracy critical for microelectronics and optoelectronics development.
- **Dental Laboratories** – Delivers reliable sintering performance for dental prosthetics, offering consistent results with excellent repeatability for clinical and research applications.
- **Powder Metallurgy** – Enables efficient sintering of metal powders into dense, uniform components. Ideal for producing advanced alloys and complex geometries at laboratory or pilot-scale production levels.

- **Universities & Research Institutes** – Perfect for academic studies in physics, chemistry, and materials science. Provides versatile programming, reliable operation, and strong safety features for laboratory use.
- **Industrial Laboratories** – Supports small-scale production, heat treatment, and process development with precise temperature control and energy-efficient performance.

FEATURES

Furnace Shell

- Constructed from Q235 low-carbon steel with an electrostatic, corrosion-resistant finish.
- Durable metal shell design ensures a low external surface temperature.
- Equipped with a flange-sealed side-opening door, manually compressed with a screw system for easier operation.

Refractory Material

- Multi-layer insulation structure made of lightweight alumina ceramic fiber and high-performance thermal boards. Asbestos-free, it offers excellent heat retention, minimal heat loss, and reduced energy consumption.

Heating System

- High-efficiency resistance heating elements are freely radiated inside the furnace chamber for optimal performance and extended service life.
- Ring-type heating elements on all sides provide uniform temperature distribution throughout the chamber.
- Optional accessories include a top-mounted exhaust port and a bottom air inlet with adjustable airflow.
- The base of the furnace allows for stacking charge containers, supporting multi-layer material processing depending on the model.

Temperature Control Panel

- PID control with SSR/SCR output ensures precise temperature management.
- Fitted with a high-quality thermocouple built for extended durability.

Program Controller

- Advanced controller accommodates complex process requirements.
- Intuitive interface with flexible programming capabilities.
- Supports up to 30 programmable segments in a single heating curve.
- Built-in over-temperature and fault alarms with automatic safety protection.

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°C	1100°C	220V (110V is also available)	4KW	HRE	±1°C
TT-LF-300-1200	Φ300×300	20L	1200°C	1100°C	380V	6KW	HRE	±1°C
TT-LF-120-1400	Φ120×120	2L	1400°C	1350°C	220V (110V is also available)	3KW	SIC	±1°C

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



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