



TORONTECH



LIFTING BOTTOM FURNACE TT-LF-27- 1200

The 1200°C Lifting Bottom Furnace TT-LF-27-1200 is designed for use in universities, research centers, industrial facilities, and laboratory environments. It provides reliable performance for a wide range of applications involving advanced materials such as metals, ceramics, nanomaterials, and semiconductors.

In addition, this furnace is well-suited for dental laboratories, offering precise and consistent sintering for dental prosthetics. With a compact 27L chamber, accurate temperature control, and durable construction, it ensures efficiency and stability for both research and practical applications.

APPLICATIONS

- **Advanced Ceramic Materials** – Enables high-temperature sintering and densification of ceramics, ensuring excellent thermal stability, mechanical strength, and structural integrity for both industrial and academic applications.
- **Nanomaterials Research** – Provides precise, uniform heat treatment for nanostructures and advanced composites. Supports R&D in functional nanomaterials for electronics, catalysis, and next-generation energy storage technologies.
- **Semiconductor Materials** – Facilitates controlled annealing, diffusion, and oxidation processes for semiconductor substrates. Delivers the accuracy required for microelectronics, photovoltaics, and optoelectronics innovation.
- **Powder Metallurgy** – Supports high-temperature sintering of powdered metals into dense, durable components. Widely applied in the production of advanced alloys and complex geometries for both research and small-scale manufacturing.
- **Dental Laboratories** – Ensures consistent and precise sintering of dental prosthetics, offering reliable results for crowns, bridges, and advanced dental ceramics. Provides accuracy and repeatability essential for clinical-grade

applications.

- **Universities & Research Institutes** – Designed for advanced studies in materials science, chemistry, and physics. Offers programmable thermal cycles, robust safety features, and dependable performance for research and education.
- **Industrial Laboratories & Quality Control** – Suitable for product validation, thermal testing, and certification in regulated industries. Delivers reproducible, high-accuracy results in compliance with ISO, CE, and SGS standards.

FEATURES

Furnace Shell

- Constructed from Q235 low-carbon steel with an electrostatic-resistant and anti-corrosion finish.
- Durable metal enclosure designed to maintain a low external surface temperature.
- Side-opening door features a flange-sealed structure with manual screw locking for easy and secure operation.

Refractory Material

- Multi-layer insulation composed of lightweight alumina ceramic fiber and premium-grade insulating boards. Free of asbestos, offering low heat loss and reduced energy consumption.

Heating System

- High-efficiency resistance heating elements provide direct radiant heat within the chamber for extended service life.
- Surrounding ring-type elements deliver uniform temperature distribution.
- Optional features include a top exhaust port and a bottom air inlet with adjustable flow.
- Charging trays can be stacked at the bottom, supporting multi-layer material placement depending on the furnace type.

Temperature Control Panel

- PID controller with SSR/SCR mode ensures accurate temperature regulation.
- Equipped with a high-grade thermocouple built to international standards for long-term reliability.

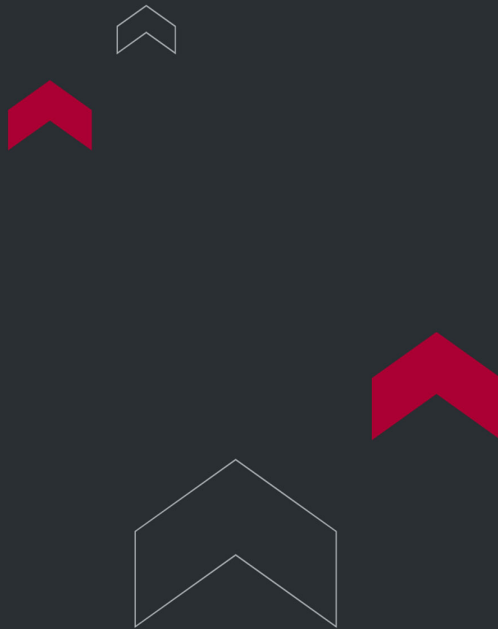
Program Controller

- Advanced control system suitable for complex thermal processes.
- User-friendly interface with flexible programming options.
- Supports up to 30 programmable segments per thermal curve.
- Built-in over-temperature protection and fault alarms for enhanced operational safety.

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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