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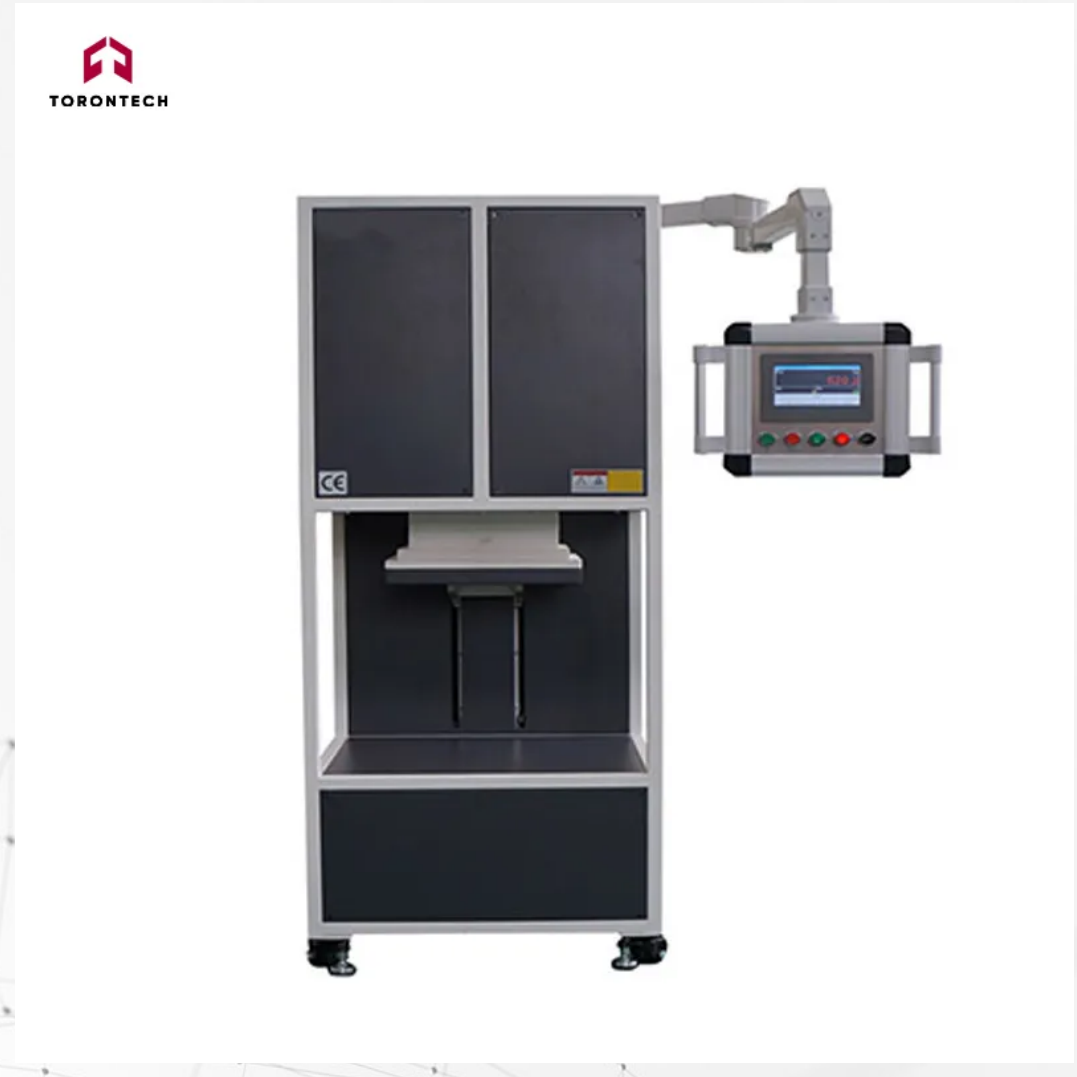

LIFTING BOTTOM LOADING FURNACE TT-LF-27-1700

The TT-LF-27-1700 Lifting Bottom Loading Furnace, with a maximum temperature of 1700°C, is engineered for use in universities, research institutions, industrial facilities, and advanced laboratories. It provides reliable performance across a broad spectrum of applications involving advanced materials, including metals, ceramics, nanomaterials, and semiconductors.

In addition, this furnace is well-suited for dental laboratories, offering precise sintering for prosthetic teeth. With a 27L chamber, advanced $MOSi_2$ heating elements, and accurate temperature control of ±1°C, it ensures stable, efficient, and consistent operation for both research and practical applications.

APPLICATIONS

- **Advanced Ceramic Materials** – Enables high-temperature sintering and densification of ceramics, ensuring superior structural integrity, thermal stability, and mechanical strength. Suitable for industrial and research environments.
- **Nanomaterials Research** – Provides precise and uniform heating for nanostructures and advanced composites. Supports R&D in functional nanomaterials applied in electronics, catalysis, and energy storage systems.
- **Semiconductor Materials** – Facilitates processes such as annealing, diffusion, and oxidation of semiconductor substrates. Ensures reliable, precise temperature control critical for microelectronics and optoelectronics manufacturing.
- **Powder Metallurgy** – Supports sintering of metal powders into dense, uniform components. Widely applied in the production of complex shapes and advanced alloys in both research and industrial applications.

- **Dental Laboratories** – Delivers consistent, high-precision sintering of dental prosthetics. Ensures reliable strength, durability, and performance in dental materials.

- **Aerospace Materials Engineering** – Suitable for thermal testing and processing of high-performance alloys, ceramics, and composites. Ensures reliability of materials under extreme conditions.

- **Energy & Battery Research** – Provides thermal treatment for solid-state electrolytes, lithium-ion materials, and next-generation battery components. Ensures material stability and reproducibility in energy research.

- **Universities & Research Institutes** – Ideal for advanced studies in physics, chemistry, materials science, and engineering. Offers flexible programming, precise control, and dependable safety features for academic labs.

- **Industrial Quality Control & Certification** – Provides high-temperature testing for validation, compliance, and certification. Meets stringent international standards such as ISO, CE, SGS, and TÜV.

FEATURES

Furnace Shell

- Constructed from Q235 low-carbon steel with an electrostatic and corrosion-resistant surface.
- Durable metal tank structure helps maintain a low external surface temperature.
- Side-opening furnace door features a flanged sealing design and manual screw-lock mechanism for easier access.

Refractory Material

- Multi-layer insulation includes lightweight alumina ceramic fiber and premium insulating boards. Asbestos-free, with minimal heat loss and low energy consumption.

Heating System

- High-efficiency resistance heating elements deliver uniform, radiant heat and ensure long service life.
- Ring-style elements positioned on all sides provide excellent temperature uniformity.
- Optional components include a top exhaust port and a regulated air inlet at the bottom.
- The furnace base supports stacking of containers, allowing for two or three material layers depending on the furnace model.

Temperature Control Panel

- PID controller with SSR/SCR output ensures accurate temperature regulation.
- Equipped with a high-quality thermocouple designed for durability and reliability.

Program Controller

- Advanced control system handles complex thermal processes.
- Intuitive interface allows flexible and straightforward programming.
- Supports up to 30 programmable segments in a single curve.
- Built-in safety features include over-temperature protection and fault alarms.

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℃	1100℃	220V (110V is also available)	2KW	HRE	±1℃

TT-LF-150-1200	Φ150×150	3L	1200℃	1100℃	220V (110V is also available)	3KW	HRE	±1℃
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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