



LARGE LIFTING LOADING FURNACE TT- LF-300-1700

1700°C Large Lifting Loading Furnace TT-LF-300-1700 is purpose-built for use in universities, research institutions, manufacturing facilities, and industrial labs. It is suitable for work involving advanced materials such as metals, ceramics, nanomaterials, and semiconductors. Additionally, it can be used for dental sintering processes in the denture industry.

APPLICATIONS

- **Advanced Ceramics** – Provides precise high-temperature sintering and densification of structural and functional ceramics. Ensures excellent thermal stability, mechanical strength, and long-term durability for industrial and research use.
- **Nanomaterials & Composites** – Supports controlled thermal treatment of nanostructures and composite materials. Enables uniform processing for applications in catalysis, energy storage, and next-generation electronic devices.
- **Semiconductor Processing** – Facilitates annealing, diffusion, and oxidation processes for semiconductor substrates. Delivers exceptional temperature control essential for microelectronics, photovoltaics, and optoelectronics development.
- **Metallurgical Research & Powder Metallurgy** – Enables sintering of metal powders and advanced alloys into dense, uniform components. Widely applied in manufacturing high-performance materials for aerospace, automotive, and industrial applications.
- **Dental Laboratories** – Suitable for precise sintering of dental ceramics and prosthetic teeth. Ensures accuracy, consistency, and repeatability critical for clinical and research dental environments.

- **Universities & Research Institutes** – Ideal for academic studies in chemistry, physics, materials science, and engineering. Offers flexible programming, reliable performance, and robust safety protections for demanding laboratory research.
- **Industrial R&D & Quality Control** – Delivers reproducible results for pilot production, product validation, and compliance testing. Designed to meet the rigorous standards of industrial laboratories and certification facilities.

FEATURES

Furnace Shell

- Constructed from Q235 low-carbon steel with an anti-corrosive, electrostatically resistant finish.
- Durable metal tank design ensures a low external surface temperature.
- The furnace door features a flange-type sealing structure with manual screw compression and a side-opening design for easier operation.

Refractory Material

- Multi-layer insulation system composed of lightweight alumina ceramic fiber and other high-performance insulation boards. Asbestos-free, it offers low heat loss and reduced energy consumption.

Heating System

- Premium resistance heating elements installed for free-radiation heating inside the chamber—energy-efficient and long-lasting.
- Ring-style heating elements on all sides promote uniform temperature distribution.
- Optional components include a top exhaust port and a regulated air inlet at the bottom.

- The furnace bottom allows for stacking charge containers, supporting two to three material layers depending on the furnace model.

Temperature Control Panel

- PID controller with SSR/SCR control mode for accurate temperature regulation.
- Equipped with an international-grade thermocouple designed for extended use.

Program Controller

- High-performance controller supports complex thermal processing.
- User-friendly interface with flexible programming options.
- Capable of storing up to 30 segments in a single temperature curve.
- Integrated over-temperature and 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°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℃	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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