



TORONTECH



ZIRCONIA SINTERING LIFTING FURNACE TT- LF-150-1700

The Zirconia Sintering Lifting Furnace TT-LF-150-1700, also known as a denture crystallization furnace, is equipped with 1800°C pure silicon molybdenum rods as heating elements. This ensures clean, contaminant-free crystallization and precise sintering of zirconia dental crowns. With its high-uniformity temperature field, the furnace guarantees consistent and reliable processing results.

Designed with a bottom-loading automatic lifting mechanism, the furnace simplifies material loading and unloading, enhancing efficiency in daily operations. Tailored for dental clinics and denture laboratories, it delivers stable performance and reproducible outcomes for zirconia crown sintering and crystallization.

APPLICATIONS

Zirconia Dental Applications – Specially engineered for sintering and crystallization of zirconia dental crowns, bridges, and prosthetics. Ensures contamination-free processing with pure MoSi₂ heating elements, delivering consistent results in dental clinics and laboratories.

Dental Laboratories & Clinics – Optimized for daily high-throughput operations, supporting batch processing of up to 50 zirconia crowns per cycle. Simplifies workflow with automatic bottom-loading design and preloaded sintering profiles for major zirconia block brands.

Restorative Dentistry & Prosthetics – Provides reliable crystallization and sintering for zirconia-based dental restorations. Guarantees precise temperature uniformity to achieve high translucency, strength, and durability in dental prosthetics.

Material Research in Ceramics – Applicable for small-scale high-temperature sintering of ceramic components beyond dentistry. Ideal for R&D in functional ceramics requiring clean, contamination-free environments.

Universities & Research Institutes – Suitable for academic and institutional research on zirconia and other advanced ceramic materials. Offers precise control, repeatability, and robust safety features for laboratory use.

Industrial Dental Manufacturing – Supports standardized workflows for dental prosthetic production, ensuring reproducibility, compliance with quality standards, and long-term reliability for professional fabrication facilities.

FEATURES

- **7-Inch Embedded Touchscreen Interface:**

Intuitive menu system with real-time process curve display. Data export supported. Up to 15 sintering profiles from various zirconia block brands can be preloaded and accessed instantly. Each profile allows up to 30 programmable segments for full customization.

- **Clean, High-Performance Insulation:**

Lined with high-purity alumina ceramic fiber for exceptional thermal insulation. Free from contaminants, with iron content ≤ 440 ppm to maintain material purity.

- **Contamination-Free Heating Elements:**

Features pure U-shaped silicon molybdenum rods for heating, which prevent secondary contamination during sintering and support rapid sintering of single crowns.

- **Optimized Furnace Design:**

Cylindrical chamber with annular heating structure ensures a uniform temperature field. This design enhances the consistency and permeability of zirconia crowns.

- **Stable Bottom-Lift Mechanism:**

Automatic bottom-loading system with a precision screw drive and high-accuracy linear guide rails ensures smooth, shake-free lifting and easy operation.

- **High Capacity for Batch Processing:**

Accommodates two $\phi 100$ mm sintering trays simultaneously, allowing processing of approximately 25–50 zirconia crowns per cycle—ideal for high-throughput workflows.

- **Integrated Safety System:**

Modular design includes audio-visual alarms for over-temperature, overload, and thermocouple failure. The system automatically activates protective responses to ensure equipment 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℃	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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