

BOGIE HEARTH CAR BOTTOM FURNACE TT- BHF-6000-1400



The 1400°C Car Bottom Furnace – TT-BHF-6000-1400 is engineered for sintering large-scale materials or supporting small-scale production with reliable, uniform results. Constructed using high-quality furnace components and advanced assembly techniques designed for high-capacity systems, it delivers stable temperature control and consistent performance. An intelligent, automated trolley system ensures smooth material handling and efficient operation, making it suitable for continuous production or research environments.

This furnace is ideal for processing advanced materials, including metals, ceramics, nanomaterials, and semiconductors. It features a large inner chamber measuring 6000 × 1000 × 1000 mm, capable of continuous operation at 1300°C and reaching a maximum temperature of 1400°C. Heating is provided by durable silicon carbide (SiC) rods, while an N-type thermocouple monitors temperature with ±1°C precision. The system operates on 380V/300 kW, delivering robust, high-efficiency performance for industrial or laboratory applications.

Model No.	TT-BHF-6000-1400
Inner Dimension (WxDxH MM)	6000x1000x1000
Continuous Temperature	1300°C
Max Temperature	1400°C
Voltage	380V/300kw
Heating Element	Silicon Carbide Rods(SiC)
Temperature Precision	±1°C
Thermocouple	N type

APPLICATIONS

- **Metals & Alloy Processing** – Enables high-temperature sintering, annealing, and heat treatment of large-scale metal components. Ensures uniform microstructure development, mechanical strength, and dimensional stability for industrial and research applications.
- **Ceramic & Advanced Materials** – Supports densification and sintering of ceramics, nanomaterials, and composites. Provides precise thermal control for developing high-performance structural and functional materials.
- **Nanomaterials Research** – Delivers uniform and reproducible heating for nanostructured materials, advanced composites, and thin-film substrates. Facilitates R&D in electronics, catalysis, and energy storage materials.
- **Semiconductor & Electronics** – Suitable for annealing, oxidation, and high-temperature processing of semiconductor substrates. Maintains precise temperature stability critical for microelectronics and optoelectronic device fabrication.
- **Powder Metallurgy & Large Component Fabrication** – Ideal for sintering metal powders into dense, high-quality components. Supports batch processing of large or complex parts with consistent heat distribution.
- **Energy Materials & Battery Research** – Enables thermal treatment of lithium-ion battery electrodes, solid-state electrolytes, and other energy storage materials. Ensures high-temperature consistency and stability for energy R&D.
- **Chemical & Petrochemical Applications** – Supports catalyst activation, thermal decomposition, and reaction studies requiring precise high-temperature control up to 1400°C. Delivers reproducible results for chemical and materials research.
- **Universities & Research Institutes** – Provides a versatile platform for studies in materials science, physics, chemistry, and engineering. Offers robust safety, precise temperature control, and large-scale experimental flexibility.

- **Industrial Quality Control & Certification** – Facilitates high-temperature testing for large components and batch production. Ensures compliance with ISO, CE, SGS, and TÜV standards for regulated industrial processes.

FEATURES

- **Multi-layer Insulation:** Constructed with layered refractory materials, including lightweight refractory bricks or ceramic fiber linings with a reinforced structure. High-strength stacking and splicing techniques reduce heat loss and energy consumption. Free from asbestos components.
- **Three-Sided Heating:** Heating elements on the left, right, and bottom ensure uniform temperature distribution throughout the furnace chamber.
- **Durable Base Plate:** The bottom is covered with a silicon carbide plate, offering high mechanical strength, excellent thermal conductivity, and stable horizontal load support.
- **Smooth Trolley Operation:** The bottom-mounted trolley moves smoothly and with minimal impact for safe and efficient material handling.
- **Bottom Loading & Movable Workbench:** Materials are loaded from below, and the workbench can be repositioned as needed.
- **Customizable Design:** The furnace can be tailored to meet specific process requirements.
- **Advanced Control System:** Equipped with a precision temperature control and adjustment system for consistent performance.
- **Top Exhaust Port:** An automatic flip-type exhaust vent at the top facilitates the debinding process.
- **Circulation Fan:** A top-mounted circulation fan improves temperature uniformity within the chamber.
- **Rapid Cooling Option:** An optional rapid cooling unit allows quick temperature reduction down to 400°C.
- **Air Intake Controls:** Available with manual or automatic air intake systems for enhanced process flexibility.

TECHNICAL SPECIFICATIONS

Model	Chamber size□ mm□	Volume	Max temp.	Working temp.	Voltage	Power	Heating element	Temp precision
TT-BHF-96-1200	400×600×400	96L	1200℃	1100℃	380V	18KW	HRE	±1℃
TT-BHF-288-1200	600×800×600	288L	1200℃	1100℃	380V	30KW	HRE	±1℃
TT-BHF-640-1200	800×1000×800	640L	1200℃	1100℃	380V	45KW	HRE	±1℃
TT-BHF-1200-1200	1000×1200×1000	1200L	1200℃	1100℃	380V	80KW	HRE	±1℃
TT-BHF-2160-1200	1200×1500×1200	2160L	1200℃	1100℃	380V	150KW	HRE	±1℃
TT-BHF-96-1400	400×600×400	96L	1400℃	1300℃	380V	21KW	SIC	±1℃
TT-BHF-288-1400	600×800×600	288L	1400℃	1300℃	380V	30KW	SIC	±1℃
TT-BHF-640-1400	800×1000×800	640L	1400℃	1300℃	380V	50KW	SIC	±1℃
TT-BHF-1200-1400	1000×1200×1000	1200L	1400℃	1300℃	380V	100KW	SIC	±1℃
TT-BHF-2160-1400	1200×1500×1200	2160L	1400℃	1300℃	380V	200KW	SIC	±1℃
TT-BHF-96-1700	400×600×400	96L	1700℃	1600℃	380V	25KW	MoSi2	±1℃
TT-BHF-288-1700	600×800×600	288L	1700℃	1600℃	380V	50KW	MoSi2	±1℃
TT-BHF-640-1700	800×1000×800	640L	1700℃	1600℃	380V	80KW	MoSi2	±1℃
TT-BHF-1200-1700	1000×1200×1000	1200L	1700℃	1600℃	380V	150KW	MoSi2	±1℃
TT-BHF-2160-1700	1200×1500×1200	2160L	1700℃	1600℃	380V	300kw	MoSi2	±1℃



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