



BOGIE HEARTH CAR BOTTOM FURNACE TT- BHF-432-1200

The Bogie Hearth Car Bottom Furnace TT-BHF-432-1200 is engineered for sintering large-sized materials and supporting small-scale production with consistent, high-quality results. Constructed using high-quality furnace components and advanced building techniques optimized for high-capacity operations, it delivers stable and precise temperature control. An integrated smart trolley system ensures smooth material movement and uniform heat treatment, making it ideal for continuous operation in research or production environments.

This furnace is well-suited for processing advanced materials, including metals, ceramics, nanomaterials, and semiconductors. It features a 432L chamber capable of continuous operation at 1100°C and reaching a maximum temperature of 1200°C. Heating is provided by high-quality HRE alloy resistance wire, with precise monitoring via an N-type thermocouple achieving $\pm 1^{\circ}\text{C}$ accuracy. Operating on 380V/30 kW, the system delivers reliable, high-efficiency performance for both industrial and laboratory applications.

Model No.	TT-BHF-432-1200
Chamber Volume	432L
Continuous Temperature	1100°C
Max Temperature	1200°C
Voltage	380V/30kw
Heating Element	High Quality Alloy Resistance Wire□ HRE□
Temperature Precision	$\pm 1^{\circ}\text{C}$
Thermocouple	N type

APPLICATIONS

- **Advanced Ceramic Materials** – Supports high-temperature sintering and densification of ceramics, ensuring structural integrity, thermal resistance, and mechanical strength for both research and industrial applications.
- **Nanomaterials Research** – Provides uniform, precise thermal treatment for nanostructures and advanced composites. Ideal for R&D in functional nanomaterials used in electronics, catalysis, and energy storage.
- **Semiconductor Materials** – Facilitates annealing, diffusion, and oxidation of semiconductor substrates. Delivers stable and accurate temperature control essential for microelectronics and optoelectronics development.
- **Powder Metallurgy** – Enables high-temperature sintering of metal powders into dense, uniform components. Suitable for manufacturing complex shapes and advanced alloys in laboratory and production environments.
- **Petrochemical & Chemical Laboratories** – Suitable for catalyst activation, thermal decomposition, and reaction studies requiring temperatures up to 1200°C. Ensures reproducible, precise results for chemical R&D.
- **Aerospace Materials Engineering** – Supports processing and testing of high-performance metals, ceramics, and composites for aerospace applications. Ensures thermal stability and strength under demanding conditions.
- **Energy & Battery Research** – Provides controlled thermal treatment for solid-state electrolytes, lithium-ion battery materials, and next-generation energy storage systems. Guarantees high-temperature stability and reproducibility.
- **Universities & Research Institutes** – Ideal for advanced studies in physics, chemistry, materials science, and engineering. Offers flexible programming, reliable performance, and robust safety for academic laboratories.

- **Industrial Quality Control & Certification** – Delivers precise high-temperature testing for product validation, compliance verification, and certification. Conforms with ISO, CE, SGS, and TÜV standards for regulated industries.

FEATURES

- The furnace features a multi-layer heat insulation structure using lightweight refractory bricks or ceramic fiber lining, offering a durable design with high-strength stacking and assembly. It contains no asbestos, minimizes heat loss, and ensures low energy consumption.
- Three-sided heating (left, right, and bottom) provides excellent temperature uniformity throughout the chamber. A silicon carbide plate reinforces the bottom of the furnace, delivering strong mechanical support, high thermal conductivity, and stable horizontal load-bearing.
- The bottom-mounted trolley operates smoothly and without impact. Material is loaded from the bottom, and the movable worktable simplifies handling.
- Customization is available to meet specific process requirements.
- An advanced control system ensures accurate temperature regulation. The top of the furnace includes an automatic flip-type exhaust port for material debinding.
- A built-in circulation fan enhances temperature uniformity in the upper section. Optional rapid cooling units are available for fast cooldown at temperatures up to 400°C.
- Both manual and automatic air intake control systems are available as optional features.

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°C	1100°C	380V	18KW	HRE	±1°C

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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