

BOGIE HEARTH FURNACE TT-BHF-2160- 1300



The Bogie Hearth Furnace TT-BHF-2160-1300 is engineered for sintering large materials or supporting small-scale production, delivering reliable and uniform thermal performance. Built with high-performance furnace components and advanced construction techniques optimized for high-capacity systems, it ensures stable temperature control and consistent results. A smart, automated trolley system allows smooth material handling and efficient operation, making it ideal for continuous use in research or production environments.

This furnace is suitable for processing advanced materials such as metals, ceramics, nanomaterials, and semiconductors. It features a 2160L chamber capable of continuous operation at 1100°C and reaching a maximum temperature of 1200°C. Heating is provided via high-quality HRE alloy resistance wire, with precise temperature monitoring using an N-type thermocouple, achieving $\pm 1^{\circ}\text{C}$ accuracy. Operating on 380V/160 kW, the system delivers robust, high-efficiency performance for industrial or laboratory applications.

Model No.	TT-BHF-2160-1300
Chamber Volume	2160L
Continuous Temperature	1100°C
Max Temperature	1200°C
Voltage	380V/160kw
Heating Element	High Quality Alloy Resistance Wire□ HRE□
Temperature Precision	$\pm 1^{\circ}\text{C}$
Thermocouple	N type

APPLICATIONS

Metals Processing – Supports high-temperature sintering and annealing of large metallic components. Ensures uniform heat treatment and consistent mechanical properties for industrial or research applications.

Ceramics Manufacturing – Enables densification and sintering of advanced ceramic materials. Provides precise temperature control for high structural integrity and thermal resistance.

Nanomaterials Research – Delivers accurate and uniform thermal conditions for processing nanomaterials and advanced composites. Supports R&D in electronics, catalysis, and energy storage applications.

Semiconductor Materials – Facilitates annealing, diffusion, and thermal treatment of semiconductor substrates. Ensures precise temperature control critical for microelectronics and optoelectronics development.

Powder Metallurgy – Enables high-temperature sintering of metal powders into dense, uniform components. Ideal for manufacturing complex shapes and advanced alloys in pilot-scale or industrial environments.

Energy & Battery Materials – Provides thermal treatment for lithium-ion battery components, solid-state electrolytes, and other energy materials. Maintains consistent high-temperature performance for research and pilot production.

Universities & Research Institutes – Ideal for studies in materials science, chemistry, and engineering. Offers versatile programming, reliable performance, and robust safety for academic laboratories.

Industrial Quality Control & Certification – Suitable for large-scale product validation, quality testing, and certification. Conforms with ISO, CE, SGS, and TÜV standards, delivering precise and reproducible results.

FEATURES

- The furnace features a multi-layer heat insulation system made of refractory materials, with either lightweight refractory brick lining or ceramic fiber lining. The structure is durable, utilizing high-strength stacking and interlocking methods, and is free of asbestos. This design minimizes heat loss and ensures low energy consumption.

- Heating is applied on three sides—left, right, and bottom—to achieve excellent temperature uniformity inside the chamber.
- A silicon carbide bottom plate shields the furnace base, offering high mechanical strength, excellent thermal conductivity, and stable horizontal load support. The bottom-mounted trolley moves smoothly without impact. Materials are loaded from the bottom, and the workbench is fully movable.
- Customization is available to meet specific process requirements.
- The system includes an advanced control unit for accurate temperature regulation. An automatic flip-type exhaust port on the furnace top supports material debinding. A top-mounted circulation fan enhances temperature uniformity throughout the chamber.
- A rapid cooling unit can be added to enable fast cooling from temperatures up to 400°C. Manual or automatic air intake control units are also 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°C	1100°C	380V	30KW	HRE	±1°C
TT-BHF-640-1200	800×1000×800	640L	1200°C	1100°C	380V	45KW	HRE	±1°C
TT-BHF-1200-1200	1000×1200×1000	1200L	1200°C	1100°C	380V	80KW	HRE	±1°C
TT-BHF-2160-1200	1200×1500×1200	2160L	1200°C	1100°C	380V	150KW	HRE	±1°C
TT-BHF-96-1400	400×600×400	96L	1400°C	1300°C	380V	21KW	SIC	±1°C
TT-BHF-288-1400	600×800×600	288L	1400°C	1300°C	380V	30KW	SIC	±1°C
TT-BHF-640-1400	800×1000×800	640L	1400°C	1300°C	380V	50KW	SIC	±1°C
TT-BHF-1200-1400	1000×1200×1000	1200L	1400°C	1300°C	380V	100KW	SIC	±1°C

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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