



BOGIE HEARTH MANUAL TROLLEY FURNACE TT-BHF-290- 1300

The 1200°C Bogie Hearth Manual Trolley Furnace TT-BHF-290-1300 is engineered for sintering large materials or supporting small-scale production with consistent, high-quality results. Constructed using high-grade furnace components and advanced building techniques, it provides stable temperature control and reliable performance. The smart manual trolley system allows smooth material handling, ensuring uniform heat treatment and reproducible results.

This furnace is ideal for processing advanced materials, including metals, ceramics, nanomaterials, and semiconductors. It features a 290L chamber capable of continuous operation at 1200°C, reaching a maximum temperature of 1300°C. Heating is achieved via high-quality HRE alloy resistance wire, with precise temperature monitoring through an N-type thermocouple, achieving $\pm 1^{\circ}\text{C}$ accuracy. The system operates on 380V/30 kW, delivering robust and efficient performance suitable for laboratory or industrial applications.

Model No.	TT-BHF-290-1300
Chamber Volume	290L
Continuous Temperature	1200°C
Max Temperature	1300°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** – Enables high-temperature sintering and densification of ceramics, ensuring excellent structural integrity, thermal resistance, and mechanical strength for industrial and research applications.
- **Nanomaterials Research** – Provides precise, uniform thermal processing for nanostructures and advanced composites. Supports R&D in functional nanomaterials used in electronics, catalysis, and energy storage.
- **Semiconductor Materials** – Facilitates annealing, diffusion, and oxidation of semiconductor substrates at ultra-high temperatures. Ensures precise temperature control critical for microelectronics and optoelectronics development.
- **Powder Metallurgy** – Supports high-temperature sintering of metal powders into dense, uniform components. Widely used for manufacturing complex shapes and advanced alloys in research and production environments.
- **Petrochemical & Chemical Laboratories** – Suitable for catalyst activation, thermal decomposition, and reaction mechanism studies requiring temperatures up to 1300°C. Delivers accurate, reproducible results for chemical R&D.
- **Aerospace Materials Engineering** – Enables testing and processing of high-performance alloys, ceramics, and composites used in aerospace applications. Ensures thermal stability and strength validation under extreme conditions.
- **Energy & Battery Research** – Provides thermal treatment for solid-state electrolytes, lithium-ion battery materials, and next-generation energy storage systems. Ensures high-temperature stability and consistency in energy materials research.
- **Universities & Research Institutes** – Ideal for advanced studies in physics, chemistry, materials science, and engineering. Offers versatile programming, reliable performance, and robust safety for academic laboratories.

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

FEATURES

- Multi-layer heat insulation using high-quality refractory materials, featuring lightweight refractory brick or ceramic fiber lining with a strong, durable structure. No asbestos is used. The design ensures minimal heat loss and reduced energy consumption.
- Three-sided heating (left, right, and bottom) delivers excellent temperature uniformity throughout the furnace.
- A silicon carbide bottom plate protects the furnace base, offering high mechanical strength, excellent thermal conductivity, and reliable horizontal load support.
- The bottom-mounted trolley moves smoothly and operates without impact.
- Materials are loaded from below, and the workbench is movable for added convenience.
- Customization options available to meet specific process requirements.
- Advanced control and regulation system enables precise temperature management.
- An automatic flip-type exhaust port on the top of the furnace supports material debinding.
- A circulation fan at the top of the furnace enhances temperature uniformity inside the chamber.
- Optional fast-cooling system allows rapid temperature reduction down to 400°C.
- Manual or automatic air intake control units are available as options.

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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