

CONTROLLED ATMOSPHERE FURNACE TT-AF-8-1200



1200°C chamber atmosphere furnace features a flange-sealed body for reliable performance. During heat treatment, protective gases such as nitrogen, argon, or oxygen can be introduced for processing carbon, metal, and biomass materials. It is also suitable for sintering ternary lithium battery materials.

APPLICATIONS

- **Standard High-Temperature Processing:** Primary use for general heat treatment, annealing, and sintering of materials, including processing carbon, metal, and biomass, with a maximum temperature of 1200 degrees C.
- **Lithium Battery Precursor Work:** Suitable for sintering ternary lithium battery materials and other processes that require controlled heating environments within the 1200 degrees C range.
- **Precise Atmosphere Management:** Features a flange-sealed chamber for reliable processing under protective inert (N₂, Ar) or reactive (O₂) gases, and includes vacuum capabilities up to 20,000 Pa for pre-evacuation.
- **Flexible Process Control:** Essential for R&D and manufacturing, featuring a program controller capable of executing up to 30 segments for complex, multi-stage temperature cycling.
- **Scalable Industrial Use:** The robust design and control system are suitable for continuous factory production, with chamber volume options available up to 1000 L.

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FEATURES

Furnace Shell

- Constructed with Q235 low-carbon steel, featuring an electrostatically resistant, anti-corrosion surface.
- Durable metal tank design ensures a low external furnace temperature.
- Furnace door with flange-sealed structure and manual screw compression, side-opening design for easier operation.

Refractory Material

- Multi-layer insulation made from lightweight alumina ceramic fiber and high-quality insulating boards.
- Asbestos-free composition with low heat loss and reduced energy consumption.

Heating System

- High-performance heating elements securely mounted on both sides of the chamber, providing efficient free-radiation heating, energy savings, and long service life.
- Dual-side element placement (left and right) ensures excellent temperature uniformity inside the chamber.

Temperature Control Panel

- PID with SSR control mode for precise temperature management.
- International standard thermocouple designed for durability.
- Chamber volume options up to 1000L, suitable for factory production.

Program Controller

- Advanced controllers designed for complex processes.
- User-friendly interface with flexible programming.
- Supports up to 30 programmable segments for a single curve.
- Over-temperature and fault alarms with automatic safety protection.

Vacuum Atmosphere Function

- Furnace chamber equipped with adjustable air inlet and outlet ports for protective gas flow.
- High-performance rotary vane vacuum pump capable of reaching 20,000 Pa vacuum level.
- Optional air circuit control unit with 1-3 adjustable gas flow meters.

TECHNICAL SPECIFICATIONS

Product Model	Chamber Size □ mm□	Volume	Max Temp	Work Temp	Voltage	Power	Heating Element	Controller Accuracy
TT-AF-8-1200	200×300×120	8L	1200℃	1100℃	220V (110V is also available)	3KW	HRE	±1℃
TT-AF-12-1200	200×300×200	12L	1200℃	1100℃	220V (110V is also available)	4KW	HRE	±1℃
TT-AF-18-1200	250×300×250	18L	1200℃	1100℃	220V (110V is also available)	6KW	HRE	±1℃
TT-AF-30-1200	300×500×200	30L	1200℃	1100℃	380V	7.5KW	HRE	±1℃
TT-AF-8-1400	200×200×200	8L	1400℃	1350℃	220V (110V is also available)	5KW	SIC	±1℃
TT-AF-12-1400	200×300×200	12L	1400℃	1350℃	220V (110V is also available)	5KW	SIC	±1℃
TT-AF-18-1400	250×300×250	18L	1400℃	1350℃	220V (110V is also available)	6KW	SIC	±1℃
TT-AF-36-1400	300×400×300	36L	1400℃	1350℃	380V	12KW	SIC	±1℃
TT-AF-45-1400	300×500×300	45L	1400℃	1350℃	380V	14KW	SIC	±1℃
TT-AF-8-1700	200×200×200	8L	1700℃	1600℃	220V (110V is also available)	5KW	MoSi2	±1℃
TT-AF-12-1700	200×300×200	12L	1700℃	1600℃	220V (110V is also available)	6KW	MoSi2	±1℃
TT-AF-20-1700	250×320×250	20L	1700℃	1600℃	380V	7KW	MoSi2	±1℃
TT-AF-36-1700	300×400×300	36L	1700℃	1600℃	380V	13KW	MoSi2	±1℃



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