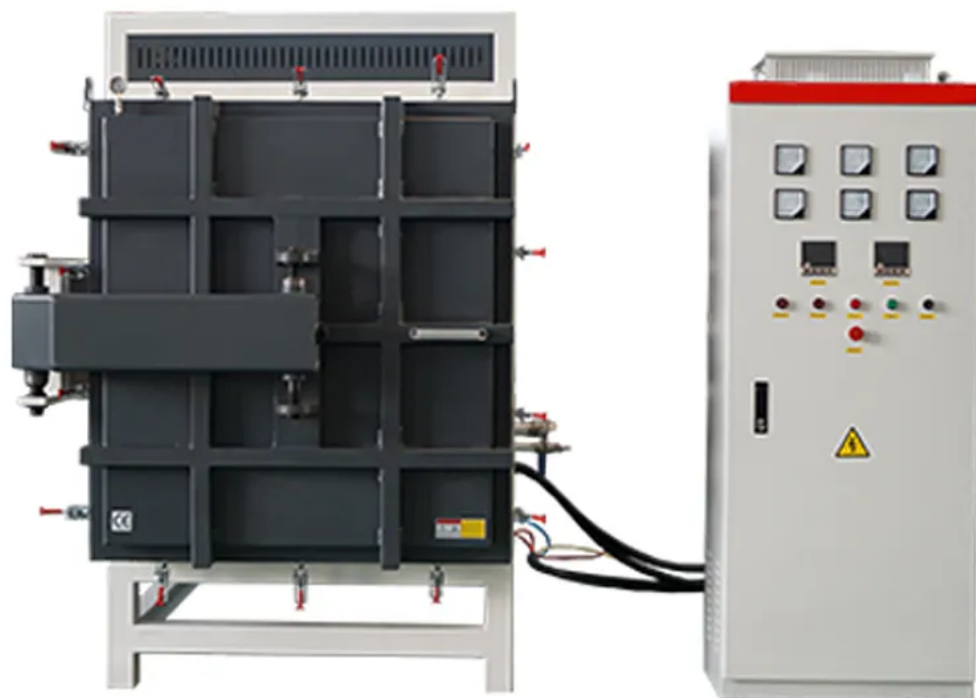




TORONTECH



ATMOSPHERE FURNACE TT-AF-500-1400

1400°C chamber atmosphere furnace features a flange-sealed body for reliable operation. 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.

Model No.	TT-AF-500-1400
Inner Dimension (WxDxH MM)	400x400x400
Continuous Temperature	1300°C
Max Temperature	1400°C
Voltage	380V/18kw
Heating Element	Silicon Carbide Rod (SiC) heater
Temperature Precision	±1°C
Thermocouple	S type

APPLICATIONS

- **Medium-High Temperature Production:** Ideal for pilot-scale heat treatment, annealing, and materials processing in a robust 400 x 400 x 400mm chamber, with a maximum temperature 1400°C.
- **Advanced Sintering:** Excellently suited for the sintering of ternary lithium battery materials, ceramics, and other industrial components that require stable thermal cycles up to 1300°C continuous operation.
- **Complex Thermal Cycling:** Features an advanced controller that supports up to 4 programmable curves and 8 segments per curve, enabling sophisticated, multi-step thermal processing routines.
- **Precise Atmosphere Management:** Utilizes a flange-sealed chamber to reliably process samples under controlled atmospheres (N₂, Ar, O₂) or pre-evacuation vacuum, achieving up to 20,000Pa.

- **Scalable Industrial Use:** The design is built for durability and continuous operation, with chamber volume options available up to 1000L for full factory production needs.

Atmosphere Furnace TT-AF-500-1400

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FEATURES

Furnace Shell

- Constructed from Q235 low-carbon steel with an electrostatically resistant, anti-corrosion surface.
- Durable tank-style design with a low exterior surface temperature.
- Side-opening furnace door with a flange-sealed structure and manual screw compression for easier operation.

Refractory Material

- Multi-layer insulation system made of lightweight alumina ceramic fiber and high-quality insulation boards.
- Asbestos-free design ensures low heat loss and reduced energy consumption.

Heating System

- High-performance heating elements securely installed on both sides of the furnace for safe operation, efficient heat radiation, and long service life.
- Dual-sided heating (left and right) provides excellent temperature uniformity within the chamber.

Temperature Control Panel

- PID control with SSR mode for precise temperature regulation.
- Long-lasting thermocouple built to international standards.
- Chamber capacity available up to 1000L, suitable for industrial-scale production.

Program Controller

- Advanced controller designed to meet complex process requirements.
- Easy-to-use interface with flexible programming.
- Supports up to 4 programmable curves and 8 segments per curve.
- Over-temperature and fault alarm with automatic safety protection.

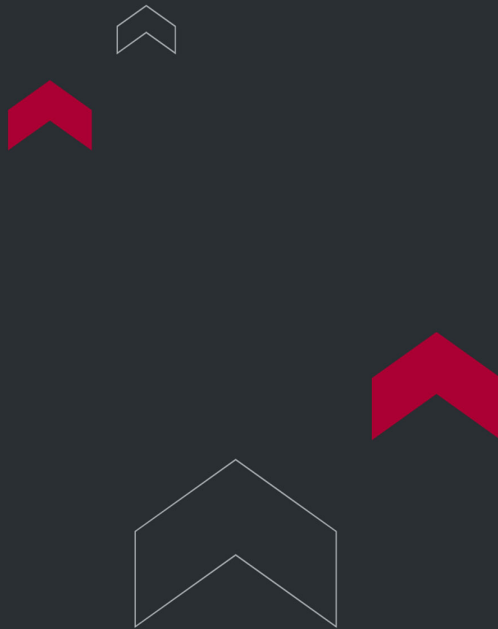
Vacuum Atmosphere Function

- Chamber equipped with adjustable air inlet and outlet ports for protective gas input.
- High-performance rotary vane vacuum pump capable of achieving a vacuum level of 20,000 Pa.
- Optional gas circuit control unit available with 1–3 adjustable 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°C	1100°C	220V (110V is also available)	6KW	HRE	±1°C
TT-AF-30-1200	300×500×200	30L	1200°C	1100°C	380V	7.5KW	HRE	±1°C
TT-AF-8-1400	200×200×200	8L	1400°C	1350°C	220V (110V is also available)	5KW	SIC	±1°C
TT-AF-12-1400	200×300×200	12L	1400°C	1350°C	220V (110V is also available)	5KW	SIC	±1°C
TT-AF-18-1400	250×300×250	18L	1400°C	1350°C	220V (110V is also available)	6KW	SIC	±1°C
TT-AF-36-1400	300×400×300	36L	1400°C	1350°C	380V	12KW	SIC	±1°C
TT-AF-45-1400	300×500×300	45L	1400°C	1350°C	380V	14KW	SIC	±1°C
TT-AF-8-1700	200×200×200	8L	1700°C	1600°C	220V (110V is also available)	5KW	MoSi2	±1°C
TT-AF-12-1700	200×300×200	12L	1700°C	1600°C	220V (110V is also available)	6KW	MoSi2	±1°C
TT-AF-20-1700	250×320×250	20L	1700°C	1600°C	380V	7KW	MoSi2	±1°C
TT-AF-36-1700	300×400×300	36L	1700°C	1600°C	380V	13KW	MoSi2	±1°C



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