

INDUSTRIAL FURNACE - TT-IF-36-1700



TT-IF-36-1700 is a 1700°C manual-door industrial furnace designed for high-temperature sintering of electronic ceramics, magnetic materials, functional and structural ceramics, target materials, and composites. Ideal for small-scale production and testing in labs and industrial settings.

APPLICATIONS

Industrial Furnace – TT-IF-36-1700

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- **Advanced Ceramic Sintering** – Designed for high-temperature processing of functional and structural ceramics, ensuring precise densification, stability, and durability.
- **Electronic and Magnetic Materials** – Supports the sintering and thermal treatment of electronic ceramics, ferrites, and magnetic materials, delivering reliable performance for electrical and electronic applications.
- **Target Material Production** – Ideal for preparing high-purity target materials used in thin-film deposition, coating, and semiconductor research.

- **Composite Materials Research** – Provides accurate and repeatable heating conditions for the development and testing of composite materials across industrial and academic R&D environments.
- **Laboratory and Pilot Testing** – Well-suited for universities, research institutes, and industrial labs conducting experimental studies, pilot-scale production, and thermal process validation.
- **Quality Control and Certification** – Enables precise high-temperature treatment required for compliance verification, product testing, and certification under ISO, CE, SGS, and TÜV standards.

FEATURES

Furnace Shell

Constructed from Q235 low-carbon steel, the shell features an electrostatically resistant, corrosion-resistant finish. The reinforced metal frame ensures structural strength while maintaining a low exterior temperature. The side-opening door is hinged on the left for convenient and reliable access.

Refractory

The furnace incorporates a multi-layer insulation system with a double layer of lightweight refractory bricks. These are precisely stacked and interlocked for enhanced durability. The design is asbestos-free, ensuring low heat loss and reduced energy consumption.

Heating System

Equipped with high-quality MoSi_2 heating elements, securely installed on both sides of the chamber to allow free-radiation heating. This setup delivers energy efficiency, excellent thermal distribution, and a long service life. Dual-side heating ensures uniform temperature across the interior.

Temperature Control Panel

Features PID and SCR control for accurate temperature regulation. Utilizes an international-standard B-type platinum-rhodium thermocouple with a temperature range of 50-1800°C and extended lifespan. A safety switch cuts power automatically when the door is opened.

Program Controller

Designed to handle complex thermal processes with ease. The user-friendly interface supports flexible operation and programming. Allows for up to 30 programmable segments per curve. Includes over-temperature and fault alarms with automatic safety shutdown.

Optional features include manual air intake, automated exhaust venting, and a rapid cooling system that brings internal temperatures down quickly from 400°C.

TECHNICAL SPECIFICATIONS

Model	TT-IF-36-1700
Chamber size□ W xD xH □ mm	300 x300x400
Max temperature	1700°C
Working Temperature	1600°C
Voltage	380V/20KW
Heating element	High quality Molybdenum Disilicide (MoSi2) heater
Chamber material	High temperature 1800 type polycrystal alumina ceramic fiber plate
Temp. precision	±1°C
Thermocouple	B type platinum rhodium thermocouple

Temp controller	Intelligent microcomputer PID temperature controller, SCR/SSR control, PID parameter self-tuning function; programmable 30 segments, program heating, program heat preservation, program cooling
Heating rate	≤20 °C/min (suggest 10°C/min for longer life using of furnace)
Furnace structure	Furnace & temperature control integrated structure
Equipment protection	Modular control, sound and light alarm signal will be sent out for over temperature and broken thermocouple in the working process, and the protection action will be completed automatically
Safety protection	The equipment is equipped with a circuit breaker, which will automatically pop open in case of short circuit leakage, which can protect the safety of equipment and operators
Furnace shell	High-quality cold-rolled steel plate CNC processing, after welding, grinding, polishing, phosphating, pickling, surface electrostatic spraying
Quality Certification	ISO9001 CE SGS TUV
Standard packing	1. furnace body 2. Temperature controller 3. power cable 3 meters 4. Thermocouple 1 pc 5. operation manual 6. one pair of crucible tongs 7. one pair of high temperature gloves



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