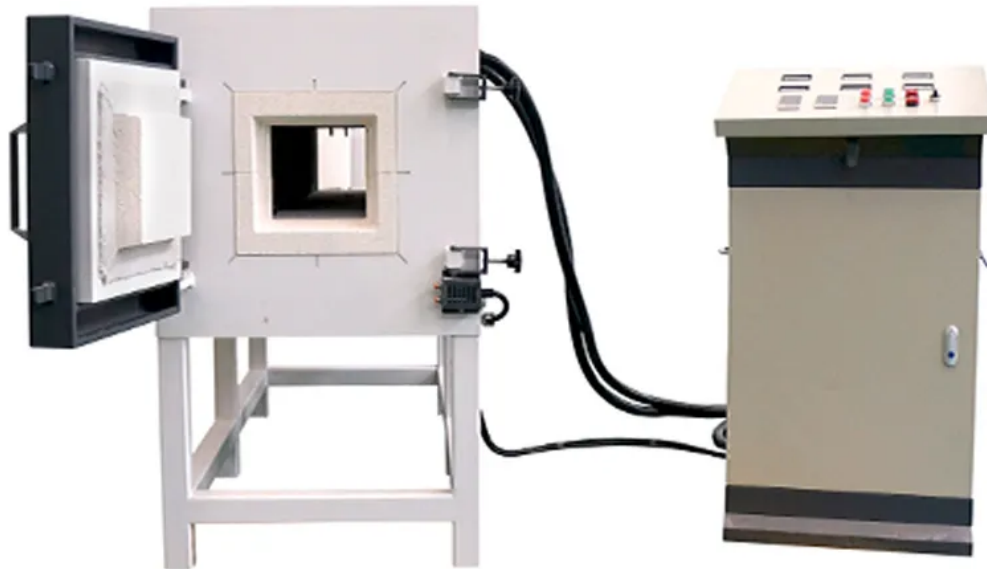




INDUSTRIAL FURNACE - TT-IF-56-1400

The TT-IF-56-1400 Industrial Furnace is engineered for high-temperature heat treatment, delivering a maximum operating temperature of 1400°C with continuous operation up to 1300°C. With a spacious 350 × 500 × 350 mm chamber and a manual door design, it is ideally suited for quenching, tempering, normalizing, and annealing of metal components. The furnace also supports the sintering of non-metallic ceramic materials, making it a reliable solution for laboratory testing, pilot production, and small-scale industrial manufacturing.

Equipped with silicon carbide rod (SiC) heating elements, an S-type thermocouple, and precise $\pm 1^{\circ}\text{C}$ temperature control, the TT-IF-56-1400 ensures uniform heating and consistent results across various applications. Its advanced design combines energy efficiency with long-term durability, enabling dependable performance under demanding operating conditions.

APPLICATIONS

Industrial Furnace – TT-IF-56-1400

Industrial Furnace – TT-IF-56-1400

Industrial Furnace – TT-IF-56-1400

Ceramic & Refractory Materials Processing – Enables sintering and densification of non-metallic ceramics and high-temperature composites, providing strength, durability, and thermal stability for industrial and research use.

Powder Metallurgy & Alloy Development – Supports precise high-temperature treatment of metal powders and advanced alloys, ensuring density, uniformity, and repeatability in research and pilot-scale manufacturing.

Chemical & Petrochemical Research – Suitable for catalyst activation, thermal decomposition, and reaction studies under controlled high-temperature conditions, delivering accurate and reproducible laboratory results.

Aerospace & Automotive Engineering – Provides reliable thermal treatment of advanced alloys and composites for aerospace and automotive applications, ensuring performance validation under extreme operating conditions.

Energy & Advanced Materials Research – Facilitates thermal processing of high-performance materials such as battery components, energy storage systems, and next-generation composites requiring stable high-temperature environments.

Universities & Research Institutes – Ideal for advanced studies in materials science, chemistry, and engineering. Offers precise control, robust safety features, and programmable multi-segment operation for complex research needs.

Industrial Quality Control & Certification – Ensures precise $\pm 1^{\circ}\text{C}$ temperature accuracy with PID-SCR control, over-temperature protection, and compliance with ISO9001, CE, SGS, and TÜV standards for regulated testing and certification.

FEATURES

Furnace Shell

- The shell is constructed from Q235 low-carbon steel with an electrostatic, corrosion-resistant coating.
- Its reinforced metal frame ensures structural integrity and maintains a low surface temperature.
- The side-opening door, hinged on the left, offers convenient and reliable operation.

Refractory

- Designed with a multi-layer thermal insulation system, featuring double-layer lightweight refractory brick lining.
- The structure is robust, with high-strength stacking and seamless splicing.
- Free from asbestos, the design minimizes heat loss and ensures energy efficiency.

Heating System

- High-performance silicon carbide (SiC) heating elements are securely mounted on both sides of the furnace for efficient, uniform heating and reduced energy use.
- Dual-side heating ensures consistent temperature distribution throughout the chamber.
- A durable silicon carbide base plate shields the bottom heating elements, offering strong horizontal load support and excellent thermal conductivity.

Temperature Control Panel

- Equipped with a PID controller using SCR (silicon-controlled rectifier) control for accurate temperature regulation.
- Features an S-type platinum-rhodium thermocouple, conforming to international standards, with a temperature range of 0–1600°C and extended service life.
- Includes a safety switch that cuts power when the furnace door is opened.

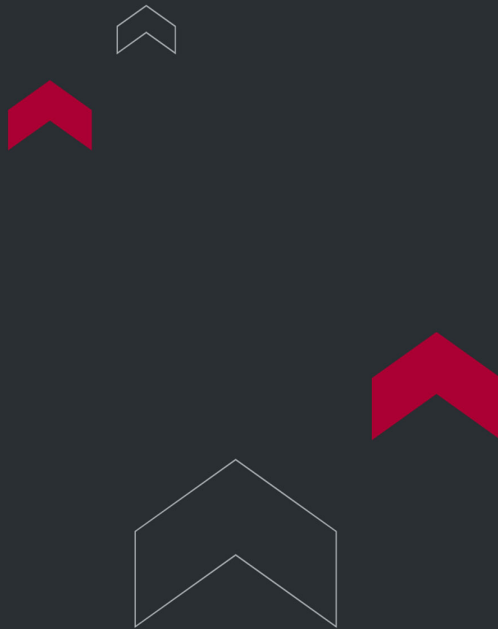
Program Controller

- Advanced controller designed for complex processing needs.
- User-friendly interface with flexible programming capabilities.
- Supports up to 30 programmable segments per temperature curve.
- Includes over-temperature and fault alarms, along with automatic safety functions.
- Optional features include manual air intake, automated exhaust venting, and a rapid cooling system that enables fast cooldown from 400°C.

TECHNICAL SPECIFICATIONS

Model	TT-IF-36-1400	TT-IF-45-1400	TT-IF-64-1400	TT-IF-80-1400	TT-IF-96-1400
Chamber size □ W xD xH□ mm	300 x400x300	300 x500x300	400x400x400	400x500x400	400 x600x400

Max temperature	1400°C				
Working Temperature	1300°C				
Voltage	380V/12KW	380V/15KW	380V/18KW	380V/20KW	380V/21KW
Heating element	High quality Silicon carbide Rod (SIC) heater				
Chamber material	High temperature 1500 type polycrystal alumina ceramic fiber plate				
Temp. precision	±1°C				
Thermocouple	S type platinum rhodium thermocouple				
Temp controller	SHIMADEN (Japan) brand intelligent microcomputer PID controller can program 30 segments				
Heating rate	Suggest 1-15°C/min for longer life using				
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				



Torontech Inc.

251 Consumers Road, Suite 1200
Toronto, Ontario, M2J 4R3, Canada 

Phone: +1 416 368 2721 | Fax: +1 416 981 7652
Email: info@torontech.com

Torontech, LLC

601 Brickell Key Drive, Suite 700
Miami, FL 33131, USA 

Toll-Free: 1-866-383-7919
Email: sales@torontech.com

Torontech ME FZE

Meydan Grandstand, 6th Floor,
Meydan Road, Nad Al Sheba,
Dubai-261440, UAE 

Phone: +971 488 19252
Email: me@torontech.com

