



# INDUSTRIAL FURNACE - TT-IF-64-1000A

The Industrial Furnace TT-IF-64-1000A is an advanced air circulation furnace engineered for reliable and consistent thermal processing. Equipped with a high-performance thermal circulation fan and a stainless steel deflector inside the chamber, it ensures uniform temperature distribution during every heating cycle. With a maximum operating temperature of 1000°C and a continuous working temperature of 850°C, this furnace is well-suited for a variety of heat treatment applications, including quenching, tempering, and annealing of metal components.

Its 64-liter chamber capacity and  $\pm 1^{\circ}\text{C}$  temperature precision make it ideal for demanding industrial processes, particularly in fields such as metal molding, high-speed steel processing, machining, tooling, and construction material manufacturing. Powered by alloy resistance wire (HRE) heating elements and an N-type thermocouple, the TT-IF-64-1000A combines efficiency, accuracy, and durability to deliver consistent results in both production and research environments.

## APPLICATIONS

---

Industrial Furnace – TT-IF-64-1000A

Industrial Furnace – TT-IF-64-1000A

- **Metal Heat Treatment** – Provides precise and uniform heating for quenching, tempering, and annealing of metal components. Ensures consistent mechanical properties in steel, alloys, and tooling applications.
- **Metal Molding & Tooling** – Supports heat treatment of molds, dies, and precision tools, delivering durability and hardness required in machining and high-speed steel industries.

- **Construction Materials Processing** – Suitable for thermal processing of structural and construction-related metal components. Guarantees strength, reliability, and long-term performance.
- **Machining & High-Speed Steel** – Enables controlled heat treatment cycles for high-speed cutting tools, ensuring wear resistance, toughness, and dimensional stability.
- **Research & Development** – Ideal for laboratory-scale studies and pilot testing of heat treatment processes. Offers flexibility with programmable temperature control for experimental setups.
- **Industrial Quality Control** – Used for process validation, performance testing, and certification of metal materials. Delivers accurate, reproducible results conforming with ISO, CE, SGS, and TÜV standards.
- **Air Debinding Applications** – Effectively manages the removal of binders from metal or ceramic green parts with controlled air circulation and safe exhaust venting, minimizing combustible atmosphere risks.

## FEATURES

---

- The air circulation furnace supports heating up to 850°C.
- Based on the size and weight of the load, structural options include a manual axial door, automatic lifting door, bottom-loading design, double-door configuration, and other custom setups.
- The chamber lining is available in ceramic fiber modules or mullite brick ceramic materials.
- A high-performance thermal circulation fan is mounted on top of the furnace to deliver strong airflow for optimal heat distribution.

- Stainless steel deflectors on both sides of the chamber help direct hot air circulation, promoting consistent temperature throughout the chamber.
- Stainless steel racks or dividers can be added to segment the furnace space, allowing for multi-level heat treatment.
- During air-based debinding, exhaust gases are diluted with fresh air and safely vented, reducing the risk of a combustible atmosphere inside the furnace.

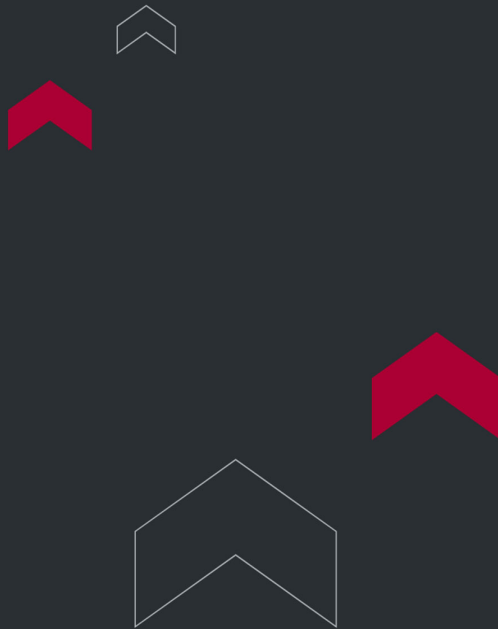
**Program Controller**

- Equipped with advanced controllers capable of handling complex process demands
- User-friendly interface with flexible programming
- Supports up to 30 programmable segments in a single heating curve
- Built-in over-temperature protection and fault alarms for safety
- Optional features include manual air intake and automatic exhaust venting
- Rapid cooling control system (optional) enables quick cooling down to 400°C

**TECHNICAL SPECIFICATIONS**

| Model                         | TT-IF-96-1000                            | TT-IF-288-1000 | TT-IF-640-1000 | TT-IF-1200-1000 | TT-IF-2160-1000 |
|-------------------------------|------------------------------------------|----------------|----------------|-----------------|-----------------|
| Chamber size<br>□ W xD xH□ mm | 400 x600x400                             | 600 x800x600   | 800x1000x800   | 1000x1200x1000  | 1200 x1500x1200 |
| Max temp.                     | 850°C                                    |                |                |                 |                 |
| Working temp.                 | 800°C                                    |                |                |                 |                 |
| Voltage                       | 380V/18KW                                | 380V/30KW      | 380V/45KW      | 380V/80KW       | 380V/150KW      |
| Heating element               | High quality alloy resistance wire (HRE) |                |                |                 |                 |
| Temp precision                | ±1°C                                     |                |                |                 |                 |

|                       |                                                                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Thermocouple          | N type thermocouple                                                                                                                                                                           |
| Temp. controller      | Intelligent microcomputer PID temperature controller, SCR/SSR control, PID parameter self-tuning function; programmable 30 segments, program heating, heat preservation and cooling           |
| 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                 |
| 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<br>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](mailto: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](mailto: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](mailto:me@torontech.com)

