



INDUSTRIAL FURNACE - TT-IF-96-1700

TT-IF-96-1700 is a 1700°C manual-door industrial furnace designed for heat treatment processes such as quenching, tempering, normalizing, and annealing of metal materials. It's also suitable for sintering non-metallic ceramic components. Ideal for small-scale production and pilot testing in laboratories and industrial settings.

APPLICATIONS

Industrial Furnace – TT-IF-96-1700

Industrial Furnace – TT-IF-96-1700

Industrial Furnace – TT-IF-96-1700

- **Metal Heat Treatment** – Provides precise high-temperature processing for quenching, tempering, normalizing, and annealing of metal materials. Ensures uniform heating for improved material strength, hardness, and structural stability.
- **Ceramic Sintering** – Suitable for sintering non-metallic ceramics and advanced ceramic composites, delivering consistent results for laboratory research and small-scale industrial production.
- **Electronic and Functional Materials** – Supports R&D of electronic ceramics, magnetic materials, and functional ceramics requiring controlled high-temperature environments.

- **Research and Development** – Ideal for universities, laboratories, and research institutes conducting experiments on heat treatment, material transformation, and high-temperature sintering.
- **Pilot-Scale Production** – Compact chamber design makes it suitable for small-batch production and pilot testing, bridging the gap between laboratory-scale research and industrial-scale manufacturing.
- **Specialty Applications** – Can be applied in industries requiring precise high-temperature performance for customized material processing, including aerospace components, chemical materials, and advanced alloys.

FEATURES

Furnace Shell

- Constructed from Q235 low-carbon steel, the shell features an electrostatic-resistant, corrosion-resistant finish.
- The durable metal frame helps maintain a low surface temperature during operation.
- A side-opening door with a fixed left hinge ensures easy and safe access.

Refractory

- Engineered with multi-layer thermal insulation, the furnace includes a double layer of lightweight refractory bricks, offering a strong, tightly stacked structure.
- Free of asbestos, the design minimizes heat loss and supports efficient energy use.

Heating System

- Equipped with premium MoSi₂ heating elements securely mounted on both side walls. These provide radiant heat throughout the chamber, ensuring high energy efficiency and consistent performance.

- Bilateral heating delivers excellent temperature uniformity inside the furnace.

Temperature Control Panel

- Utilizes PID and SCR control for precise temperature regulation.
- Features an international-standard Type-B platinum-rhodium thermocouple with a range of 50–1800°C and extended service life.
- The furnace door includes a safety switch that cuts power when opened.

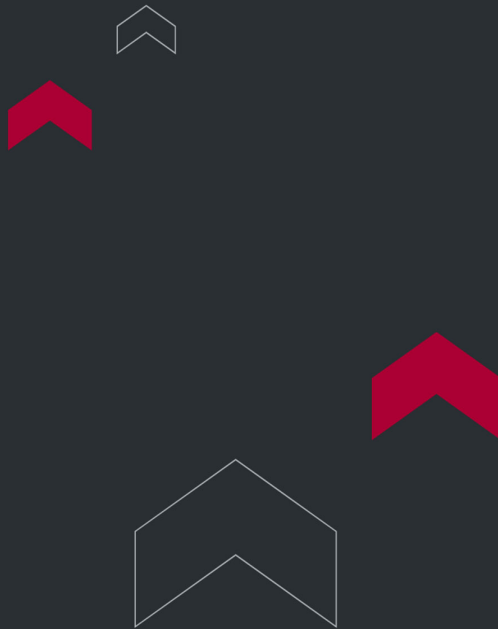
Program Controller

- Includes an advanced controller designed for complex process needs.
- User-friendly interface allows flexible programming with up to 30 segments per cycle.
- Built-in safety functions include over-temperature protection, fault alarms, and automatic shutdown.
- Optional features include manual air intake, automatic top-mounted exhaust, and a rapid cooling system capable of reducing temperature from 400°C quickly and safely.

TECHNICAL SPECIFICATIONS

Model	TT-IF-36-1700	TT-IF-45-1700	TT-IF-64-1700	TT-IF-80-1700	TT-IF-96-1700
Chamber size □ W xD xH□ mm	300 x400x300	300 x500x300	400x400x400	400x500x400	400 x600x400
Max temperature	1700°C				
Working Temperature	1600°C				
Voltage	380V/12KW	380V/15KW	380V/18KW	380V/20KW	380V/21KW

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	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

