TORONTECH

INDUSTRIAL FURNACE – TT-IF-1000-1700

The TT-IF-1000-1700 is a high-performance industrial furnace with an automatic door, engineered for advanced heat treatment applications. Capable of reaching a maximum temperature of 1700°C with a continuous working temperature of 1600°C, this furnace is designed for processes such as quenching, tempering, normalizing, and annealing of metal components. It is also highly suitable for the sintering of non-metallic ceramic materials, making it a versatile solution for both metallurgical and ceramic processing needs.

Featuring a spacious 800 × 1000 × 1250 mm chamber, the TT-IF-1000-1700 is equipped with durable $MoSi_2$ heating rods and a B-type thermocouple, ensuring reliable performance and long service life under extreme conditions. With a precision of ±1°C and powered at 380V, it provides accurate, consistent heating control, making it ideal for small-scale production, pilot testing, and research in both laboratory and industrial environments.

APPLICATIONS

Industrial Furnace – TT-IF-1000-1700

Industrial Furnace – TT-IF-1000-1700

- **Metallurgical Heat Treatment** – Designed for quenching, tempering, normalizing, and annealing of metal components. Ensures precise, uniform heating for structural integrity and mechanical performance.
- **Ceramic Sintering** – Supports high-temperature sintering of non-metallic ceramics, enabling production of dense, durable, and high-strength ceramic materials for industrial and research use.

- **Powder Metallurgy** – Provides stable high-temperature conditions for sintering powdered metals into complex shapes and advanced alloys, supporting both research and pilot-scale production.
- **Aerospace & Advanced Materials** – Suitable for processing heat-resistant alloys, ceramics, and composites used in aerospace engineering, ensuring thermal stability and performance validation under extreme conditions.
- **Energy & Electronics** – Applied in the thermal processing of advanced electronic ceramics, solid-state energy materials, and functional components requiring precise temperature control.
- **Research & Development** – Ideal for universities, research institutes, and laboratories conducting material science studies, offering programmable thermal cycles and reliable performance for experimental applications.
- **Industrial Quality Control** – Used in certification and compliance testing of high-temperature materials, meeting international standards such as ISO, CE, SGS, and TÜV.

FEATURES

Furnace Shell

- The shell is constructed from Q235 low-carbon steel with an electrostatic, anti-corrosion finish.
- Its reinforced metal frame design helps maintain a low external surface temperature.
- Equipped with an electro-hydraulic lifting door and a built-in limit switch for added safety.
- Users can choose between a button-activated or foot pedal-activated automatic door opener.

Refractory

- Features a multi-layer thermal insulation system with a double layer of lightweight refractory brick.
- Built for durability with high-strength stacking and tight joints.
- Free from asbestos, the design ensures minimal heat loss and reduced energy use.

Heating System

- Fitted with premium metal or ceramic heating elements that deliver efficient, radiant heat throughout the chamber.
- Three-sided heating—left, right, and bottom—ensures uniform temperature distribution.
- A silicon carbide base plate protects the bottom heating zone, offering strong mechanical support and reliable thermal conductivity.

Temperature Control Panel

- Uses PID and SCR control technology for accurate temperature regulation.
- Includes a high-quality thermocouple designed for extended use.
- A safety switch automatically shuts off power when the door is opened.
- The temperature controller is mounted on the right side of the furnace, with an optional standalone control cabinet available.

Program Controller

- Equipped with an advanced controller capable of handling complex thermal processes.
- User-friendly interface with flexible programming options.
- Supports up to 4 programs with 32 segments each.
- Built-in over-temperature and system fault alarms with automatic safety functions.
- Optional features include manual air intake, automated exhaust, and a rapid cooling system that brings the chamber down to 400°C quickly.

TECHNICAL SPECIFICATIONS

Model	Chamber size（mm）	Chamber volume	Max temp.	Working temp.	Voltage	Power	Heating element	Temp Precision
TT-IF-100-1200P	400×530×460	100L	1200℃	1100℃	380V	15KW	HRE	±1℃
TT-IF-150-1200P	450×530×590	150L	1200℃	1100℃	380V	24KW	HRE	±1℃
TT-IF-200-1200P	500×530×720	200L	1200℃	1100℃	380V	27KW	HRE	±1℃
TT-IF-300-1200P	550×700×780	300L	1200℃	1100℃	380V	45KW	HRE	±1℃
TT-IF-660-1200P	600×1100×1000	660L	1200℃	1100℃	380V	60KW	HRE	±1℃
TT-IF-1000-1200P	800×1000×1250	1000L	1200℃	1100℃	380V	80KW	HRE	±1℃
TT-IF-96-1400P	400×600×400	96L	1400℃	1300℃	380V	21KW	SIC	±1℃
TT-IF-150-1400P	450×530×590	150L	1400℃	1300℃	380V	25KW	SIC	±1℃
TT-IF-200-1400P	500×530×720	200L	1400℃	1300℃	380V	28KW	SIC	±1℃
TT-IF-288-1400P	600×800×600	288L	1400℃	1300℃	380V	30KW	SIC	±1℃
TT-IF-640-1400P	800×1000×800	640L	1400℃	1300℃	380V	50KW	SIC	±1℃
TT-IF-1200-1400P	1000×1200×1000	1200L	1400℃	1300℃	380V	100KW	SIC	±1℃
TT-IF-96-1700P	400×600×400	96L	1700℃	1600℃	380V	25KW	MoSi2	±1℃
TT-IF-150-1700P	450×530×590	150L	1700℃	1600℃	380V	30KW	MoSi2	±1℃
TT-IF-200-1700P	500×530×720	200L	1700℃	1600℃	380V	40KW	MoSi2	±1℃
TT-IF-288-1700P	600×800×600	288L	1700℃	1600℃	380V	50KW	MoSi2	±1℃
TT-IF-640-1700P	800×1000×800	640L	1700℃	1600℃	380V	80KW	MoSi2	±1℃
TT-IF-1200-1700P	1000×1200×1000	1200L	1700℃	1600℃	380V	150KW	MoSi2	±1℃

TORONTECH.com

TORONTECH

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

USA | Canada | EU | UAE | GCC | KSA | India | Africa | Latin America | Asia