



MUFFLE FURNACE (CORROSION RESISTANT) TT-MF-8- 1000N

Muffle Furnace (Corrosion Resistant) TT-MF-8-1000N is designed for heat treatment of a wide range of laboratory samples, including those with corrosive properties. The furnace chamber is constructed from high-alumina lightweight refractory material.

APPLICATIONS

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- **Corrosive Sample Processing** - Specially engineered to handle laboratory samples with corrosive properties. The corrosion-resistant chamber lining ensures durability and extended furnace lifespan.
- **Advanced Ceramic Materials** - Supports sintering and densification of ceramics at high temperatures. Provides excellent thermal stability and uniformity for structural ceramics, catalysts, and coatings.
- **Nanomaterials Research** - Enables controlled thermal treatment of nanostructures and composites, ensuring consistent properties for advanced R&D in energy storage, catalysis, and functional materials.

- **Semiconductor Materials** - Facilitates annealing, oxidation, and controlled heating of semiconductor substrates. Ensures precise temperature regulation critical for electronics and microfabrication.
- **Powder Metallurgy** - Allows sintering of metallic powders into dense and uniform components, supporting research and small-scale production of specialized alloys and metal composites.
- **Chemical and Petrochemical Laboratories** - Designed for safe testing of corrosive materials, catalyst activation, and decomposition studies. Delivers reproducible results with strong resistance to chemical attack.
- **Energy and Battery Materials** - Provides stable heat treatment of solid-state electrolytes, cathode/anode materials, and advanced energy storage components. Ensures reliable performance for next-generation battery research.
- **Academic and Research Institutes** - Ideal for multidisciplinary studies in chemistry, materials science, and engineering. Combines durability, safety, and ease of use for long-term laboratory applications.
- **Industrial Quality Control** - Delivers precise thermal processing for product validation and compliance testing, particularly where exposure to corrosive environments is required. Meets ISO, CE, SGS, and TÜV quality standards.

FEATURES

Furnace Shell

1. Constructed from Q235 low-carbon steel with an electrostatically applied anti-corrosion coating.
2. Features a solid metal frame that helps maintain a low external surface temperature.

3. Side-opening door with a fixed left hinge for easy operation.

Refractory

1. Multi-layer insulation system with a durable double-layer lightweight refractory brick lining.
2. Strongly stacked and joined for stability.
3. Asbestos-free design with low heat loss and energy consumption.

Heating System

1. Equipped with high-quality HRE spiral resistance wire, wound on ceramic support tubes for efficient, radiant heating.
2. Three-sided heating (left, right, and bottom) ensures uniform temperature distribution.
3. A silicon carbide bottom plate protects the bottom heating elements, offering high mechanical strength, excellent thermal conductivity, and stable horizontal support.

Temperature Control Panel

1. Utilizes PID with SCR for accurate temperature control.
2. Features an international-standard N-type nickel-chromium-silicon thermocouple with a measurement range of 0–900 °C and long lifespan.
3. Includes a safety switch that cuts power when the furnace door is opened.

Program Controller

1. Advanced controller designed for complex thermal processes.
2. User-friendly interface with flexible programming capabilities.
3. Supports up to 30 programmable segments per curve.
4. Built-in over-temperature and fault alarms with automatic safety shutoff.
5. Optional manual air inlet and automatic top exhaust system.
6. Optional rapid cooling unit for accelerated cooling when furnace temperature is below 400 °C.

Model	TT-MF-8-1000N	TT-MF-16-1000N	TT-MF-30-1000N
Chamber size W xD xH mm	200x300x120	250 x300x250	300 x500x200
Outer size W xD xH mm	480 x630x630	550x635x780	600 x870x735
Max temperature	1000°C		
Working temperature	900°C		
Voltage	220V/3KW (110V is also available)	220V/6KW (110V is also available)	380V/7.5KW
Heating element	HRE Alloy resistance wire		
Chamber material	Polycrystalline inorganic alumina ceramic fiber material prepared by wet vacuum filtration		
Temp.Precision	±1°C		
Termocouple	N Type termocouple		
Temperature controller	Intelligent microcomputer PID temperature control instrument, SSR control, PID parameter self-tuning function; programmable 4 groups of 8 program segments, program temperature rise, program heat preservation, program cooling		
Heating rate	1-25°C/min free adjustment		
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 coupler 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 certificate	ISO9001 CE SGS TUV		



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