



TORONTECH



HIGH TEMPERATURE SPLIT-TYPE TENSILE TEST FURNACE TORONTF™ 900

High Temperature Split-Type Tensile Test Furnace ToronTF™ 900 features a cylindrical split-type design, consisting of the test furnace and a temperature controller. The controller uses a PID fuzzy control system, ensuring minimal temperature overshoot and high precision. This advanced testing equipment is ideal for universities, research institutions, and industrial material testing.

It integrates seamlessly with testing machines based on environmental requirements and can perform high-temperature tensile tests on various metals and non-metals, including applications in specialized industries such as plastics and rubber. For standard temperature tests, the high-temperature furnace can be easily removed. It accommodates strength testing for round bars, rectangular samples, and pipes under specific environmental conditions.

APPLICATIONS

Standards

1. Metallic materials-Tensile testing- Part 2: Method of test at elevated temperature.
2. Metallic materials high temperature tensile test method.

FEATURES

Key Features

1. The high-temperature furnace features a barrel-type split structure with resistance wire heating. By controlling the heating time percentage, the upper, middle, and lower sections are heated independently to ensure precise

temperature control.

2. The temperature controller uses a PID control system, digitally displaying both the set and measured temperatures. This ensures stable temperature regulation throughout the test, minimizing fluctuations and preventing overshoot.
3. The high-temperature furnace is equipped with a crank-arm support, allowing adjustment of the elevation angle to keep the furnace level. During testing, the furnace can be easily positioned within the test space. For standard temperature tests, it can be removed as needed.
4. A built-in water cooling system protects the electronic universal testing machine.
5. The furnace includes a high-temperature extensometer installation port and a through-hole for a high-temperature extraction device, providing two options for deformation measurement.

TECHNICAL SPECIFICATIONS

Control temperature range	300℃~900℃			
Length of average heat segment	Axial center 150 mm			
Temperature parameters	Temperature setting T ℃	Temperature deviation ℃	Temperature gradient ℃	Temperature control accuracy ℃
	T≤600	≤±3	≤3	≤±3
	600<T≤800	≤±4	≤4	≤±3
	800<T≤900	≤±5	≤5	≤±3
Temperature control mode	Upper, middle, lower three sections PID control			
Inner diameter of furnace	Φ90 × 300 mm			
Furnace outline dimension	Φ300 × 420 mm, detailed dimension refer to dimension image			
Temperature measuring instrument accuracy	0.3 class			

Voltage	3 phase, AC380V, 50HZ
Power	3 kW
Work environment	5°C~30°C

Configuration

1. **Split-Type Atmospheric Furnace** – Stainless steel shell for durability and performance.
Quantity: 1 set
2. **High-Temperature Tensile Fixtures for Bar Materials** – Includes upper and lower fixture sets, consisting of a high-temperature tie rod and a water-cooled tie rod. The high-temperature tie rod is designed for $\phi 10$ standard samples and features an M16 joint.
Quantity: 1 set
3. **Temperature Controller** – High-precision digital PID regulator. Equipped with three temperature control meters to regulate three heating wire groups, along with three ammeters for real-time monitoring of heating wire operation.
Quantity: 1 set
4. **Lifting Mobile Cart System & Rotatable Straight-Arm Furnace System** – Ensures ease of movement and positioning.
Quantity: 1 set
5. **Water Cooling Circulation System** – Includes a water tank, water pump, and necessary components for effective cooling.
Quantity: 1 set

Dimensions



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