

# ATC 300AE

## Oxygen Bomb Calorimeter



Automated  
Operation



Precise Temperature  
Control



Rapid  
Testing



Intelligent Dual  
Control



The ATC 300AE Oxygen Bomb Calorimeter is a high-precision instrument designed on the principle of isothermal calorimetry for measuring the heat of combustion of materials. It offers dual ignition options (cotton thread or ignition wire), features full automation, rapid testing, and a wide measurement range. Widely applied across diverse industries such as nutrition, environmental protection, power generation, coal, metallurgy, construction, and petrochemi-

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## Product Features

- Ensures efficient and convenient operation with automated functions: oxygen bomb lifting/identification, oxygen charging/decompression, charging pressure detection, bomb leak testing, precise inner vessel water measurement, and automatic water filling/draining for inner and outer vessels.
- Features a semiconductor-based refrigeration water circulation system with a high-precision filter, enabling real-time water temperature monitoring, rapid adjustment, and effective isolation from ambient interference.
- Intelligently diagnoses ignition wire status and provides short-circuit protection for the ignition circuit.
- Dynamically displays data curves on a color touchscreen for intuitive visualization of the testing process.
- Automatically corrects for calorific value interference from ignition wires, nitric acid, sulfur, etc., providing gross, net, and bomb calorific values with unit conversion support.
- Automatically generates graphs and process data, storing them locally with historical data query capability.

## Test Standards

[GB/T 384](#)
[GB/T 213](#)
[GB/T 30727](#)
[GB/T 21614](#)
[GB/T 14402](#)
[ASTM D5865](#)  
[ASTM D240](#)
[ASTM D4809](#)
[ASTM D5468](#)
[ASTM E711](#)
[ISO 1928](#)

## Technical Specifications

Operating Environment	15 – 30 °C, < 80%RH
Ignition Method	Cotton Thread or Ignition Wire
Test Mode	Isoperibol
Testing Time	Conventional Method < 18 min, Rapid Method < 10 min
Calorific Value Testing Range	≤ 34,000 J
Calorific Value Accuracy	± 50 J (with benzoic acid)
Heat Capacity Precision	≤ 0.1%
Heat Capacity Stability	≤ 0.2% (within one year)
Maximum Bomb Pressure	300 bar
Bomb Material	Stainless Steel, Hastelloy (corrosion-resistant)
Stirrer Maximum Rotation Speed	600 rpm

## Application Fields



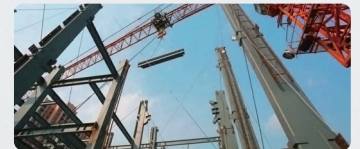
Coal



Metallurgy



Electricity



Construction



Petrochemicals

