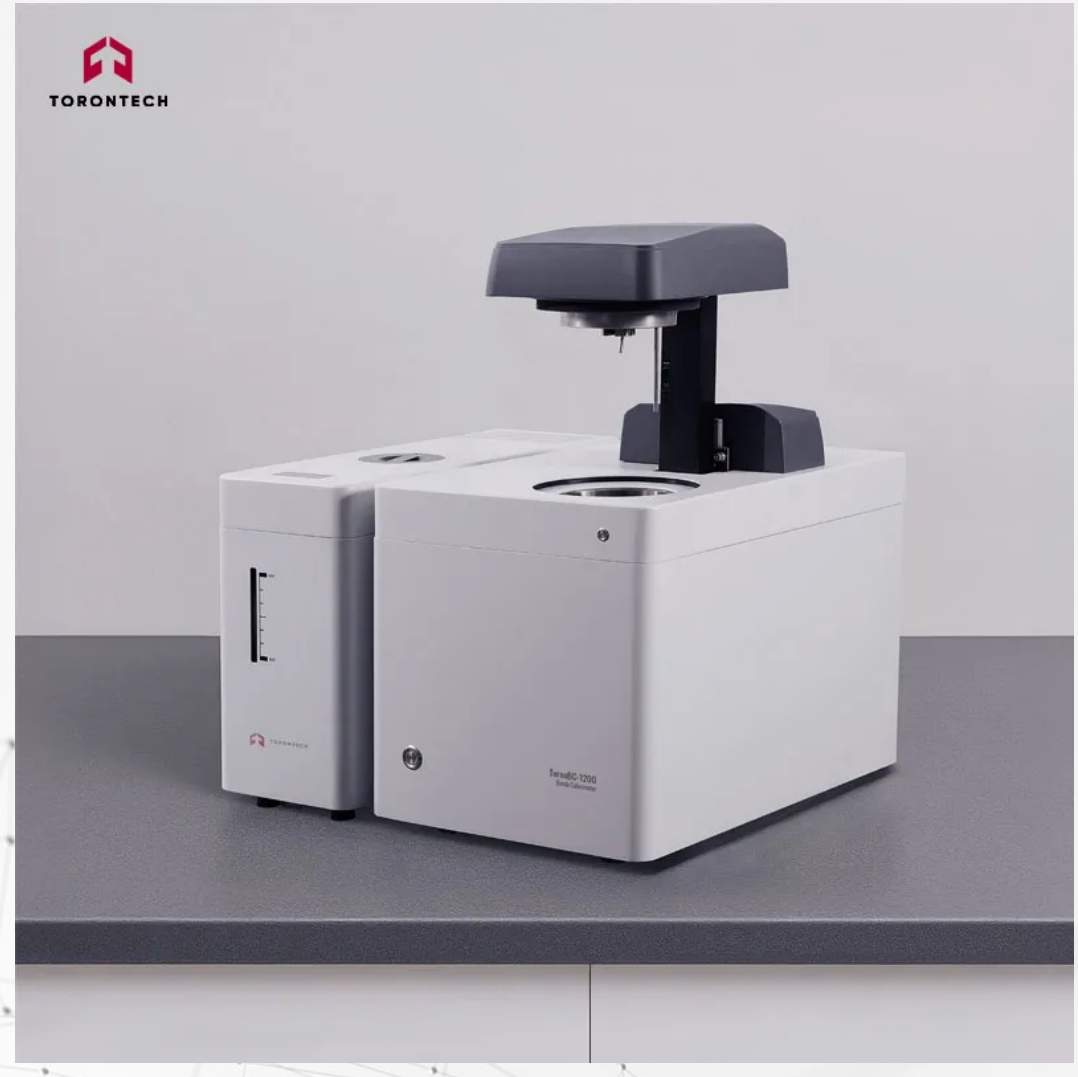
TORONTECH



BOMB CALORIMETER
TORONBC™-1200

Bomb Calorimeter ToronBC™-1200 delivers precise calorific value testing for solid and liquid fuels, including coal, biomass, and petroleum products. With fully automated oxygen handling, a quick-assembly stainless steel bomb, and an efficient water circulation system, it ensures fast, reliable, and user-friendly operation.

APPLICATIONS

- **Energy & Power Industry** - Determination of calorific values for coal, petroleum products, and biomass fuels to support energy production and efficiency optimization.
- **Cement & Construction Materials** - Analysis of raw mixes and alternative fuels to ensure consistent quality and compliance in cement manufacturing.
- **Chemical & Petrochemical Industry** - Precise fuel testing for process optimization, safety assessments, and product development.
- **Research & Academia** - Advanced calorimetry for scientific studies, educational programs, and development of new fuel and material technologies.
- **Quality Control & Certification Labs** - Standardized calorific value testing in compliance with ASTM, ISO, and other international standards for certification and regulatory approval.
- **Environmental & Waste Management** - Evaluation of solid waste, biomass, and alternative fuels for recycling, energy recovery, and sustainability projects.

FEATURES

Featuring an optimized design, the ToronB™C-1200 offers fully automated oxygen handling and bomb operation for enhanced efficiency. Its innovative water circulation system automatically measures the required water volume for each test, while the newly engineered stainless steel oxygen bomb allows for quick and easy assembly and disassembly.

A high-efficiency propeller ensures rapid stirring and effective heat transfer, significantly shortening test durations. The advanced press-type oxygen filling and release mechanism ensures smooth, blockage-free operation, providing greater reliability and stability than conventional automatic calorimeters.

Bomb Calorimeter ToronBC-1200

Advanced Features for Reliable Performance

Precision Temperature Control
The ToronBC-1200 is equipped with a semiconductor thermostatic water tank that supports both heating and cooling functions. This system delivers highly accurate temperature regulation while consuming less power and operating with significantly lower noise compared to conventional compressor-based tanks.

High Level of Automation
Automation covers every critical function—bomb lifting and lowering, oxygen filling and release, pressure and sealing checks, water volume control, temperature regulation, pipeline flushing, and water replacement—streamlining the entire testing process for greater efficiency.

Accurate and Consistent Results

1. Enhanced Heat Capacity
   An increased heat capacity contributes to higher accuracy and more consistent test outcomes.
2. Dual Ignition Compatibility
   Supports both nickel wire and cotton thread ignition methods for flexible operation.

Smart Design for Safe and Efficient Use

1. Self-Diagnostic System
2. Integrated diagnostics quickly detect and identify system issues, simplifying maintenance and minimizing downtime.

User-Friendly Crucible Holder

A specially designed crucible support enhances ease of use and operator safety.

Stable Operation in Varying Environments

Helix Tube Multi-Point Isothermal Technology
Utilizes a jacket and lid system to maintain a stable internal test environment with temperature variation kept under 0.05°C. This minimizes the impact of external factors such as airflow or ambient temperature, ensuring consistent and reliable test results.

Bomb Calorimeter ToronBC-1200

Independent Jacket and Bucket Water System
The ToronBC-1200 features a fully independent water circulation system for the jacket and bucket. After each test, the bucket water is automatically returned to the tank, preventing any cross-interference between the inlet and outlet flows. This separation ensures the jacket water maintains a stable temperature throughout the testing process, enhancing result accuracy and system efficiency.

TECHNICAL SPECIFICATIONS

Description	ToronBC-1200
Analysis Time	Fast mode <10min,Standard mode<12min Precision mode <14min (Default)
Temperature Resolution	0.0001K
Precision(RSD) (based on analysis of 1g Benzoic Acid)	≤0.05%
Heat Capacity Stability	≤0.2% within 12 months
System Structure	Benchtop
Standard	ASTM D5865, ASTM D240, ASTM D4809, ASTM E711, ASTM D5468, ISO 1928, ISO 9831, ISO18125, AS 1038.5， BS EN 15400, BIS1350
Precision(RSD)	≤0.08%
Bomb volume	250ml
Calorimeter Type	Isoperibol
Oxygen Filling	Fully automatic oxygen filling & releasing, fully automatic bomb raising & lowering
Bomb Washing	Manual
Max. Bomb pressure	20Mp
Bomb Identity	Yes
Gas Requirement	99.5% Oxygen
Water Requirement	Distilled Water
Energy Measurement Range	0~50000J
Bucket Filling	Automatic
Constant Volumetric Tank with Temp Control Device	Bucket determine water volume automatically

Independent Bucket and Jacket Water System	Yes
Stirring Method	Propeller
Power Inverter	No
Ambient Temperature	10-35°C
Average Temperature Increase	2℃
Temperature Measurement	PT1000
Working Temperatures	35℃
Cooling method	Refrigerating Device
Network	Yes
Voltage	AC 220V (-10% +10%)50/60Hz (110V is also available)
Max. Power	0.6KW
Dimension	Main body: 428*565*485 Water tank: 220*565*410
Weight	50kg
Advance Calculation	Yes
Analysis Report	Yes
Statistics Report	Yes
System Monitor	Yes

TORONTECH.com

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