

BCAL - 3005

Bomb Calorimeter



EPCC / PRODUCTS / APPLICATION / SOFTWARE / ACCESSORIES / CONSUMABLES / SERVICES

Analytical Technologies Limited

An ISO 9001 Certified Company

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▶▶ Dimension

Main body dimension: 390mm*565mm*485mm

Water tank dimension: 220mm*565mm*410mm

Main body weight: 50KG

Water tank weight: 25KG

▶▶ Application

BCAL 3005 can be used to determine the calorific value of solid and liquid combustibles such as coal, coke, petroleum oil, cement black meal, biomass fuels as well as building material.

▶▶ Conformance to Standards

- ASTM D5865 Standard test method for gross calorific value of coal and coke.
- ASTM D240 Standard test method for heat of combustion of liquid hydrocarbon fuels by bomb calorimeter.
- ASTM 04809 Standard test method for heat of combustion of liquid hydrocarbon fuels by bomb calorimeter (precision method).

▶▶ Specification

Analysis Time	Fast mode < 10min, Standard mode <12min Precision mode <14min (Default)
Energy Measurement Range	0~50000J
Inner Jacket Capacity	2.5 Liter
Temperature Resolution	0.0001K
Precision(RSD) (based on analysis of 1g Benzoic Acid)	≤0.05%
Heat Capacity Stability	≤0.2% within 12 months
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
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
Ambient Temperature	10-35°C
Average Temperature Increase	2°C
Temperature Measurement	PT1000
Working Temperatures	35°C
Cooling method	Refrigerating Device
Network	Yes
Power	AC 220V (-10% +10%)50/60Hz
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

►► Highlights

Optimized design, fully automatic oxygen filling & releasing, automatic bomb raising & lowering.

- Unique bucket water circle system, which is able to determine water volume for each testing automatically. New stainless steel oxygen bomb can be easily assembled and disassembled. High stirring efficiency by propeller, faster heat transfer of oxygen bomb, testing time is greatly reduced.

- Unique automatic press type oxygen filling & releasing design, no blockage, much more stable than traditional automatic calorimeter.



Automatic bomb raising & lowering
Automatic oxygen filling & releasing

- Equipped with a semiconductor thermostatic water tank with cooling and heating function. More precise temperature control and lower power consumption and noise than conventional compressor cooling water tank.
- High automation: bomb raising & lowering, oxygen filling & releasing, oxygen filling pressure and air tightness detection, bucket water volume constant bucket water temperature control, pipeline flushing, water change, etc.

Accurate and reliable test result

- Larger heat capacity, it makes the testing result more accurate and reliable.
- Support two ignition methods: nickel wire and cotton thread

Reasonable Structure, reliable operation, safe and environment friendly.

- With self-diagnostic function, malfunction can be detected accurately, easy to maintain.
- Unique crucible support design, convenient to use.

Good environment adaptability, precise, accurate and reliable rest result.

Helix tube mul -point isothermal technology, create a controllable and stable internal environment (consists of jacket and jacket lid, temperature difference <0.050C), stop the interference of external environment (such as air flow, temperature) to bucket test result is reliable.

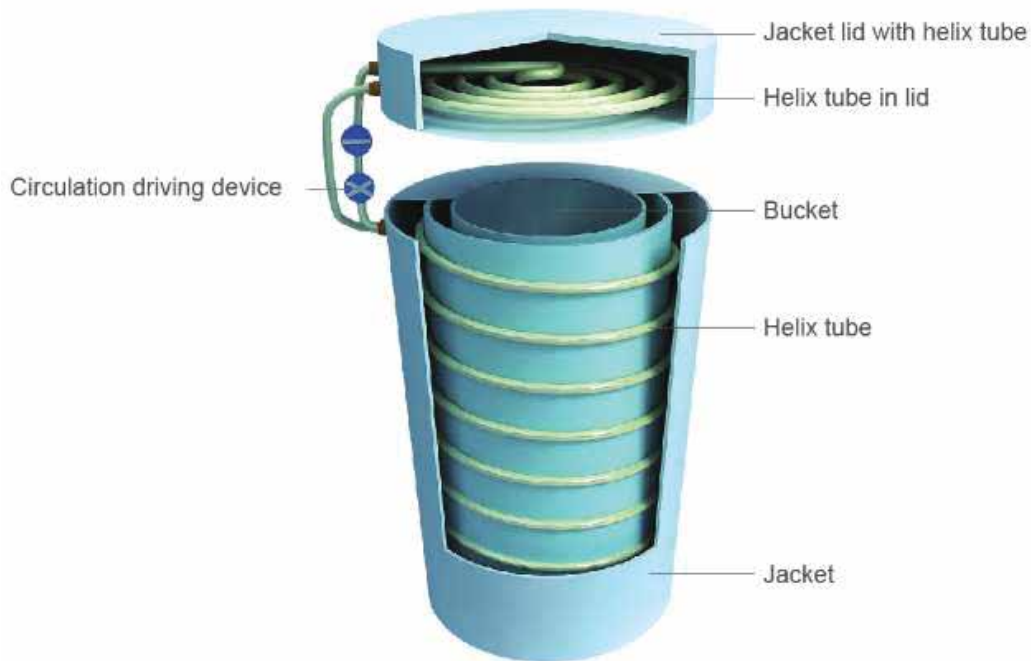


Diagram for helix tube multi-point isothermal technology

- Independent jacket and bucket water system. After the test, bucket water automatically flows back into water tank, no effect on between inlet and outlet of bucket water and jacket water. Jacket water temperature is stabilized.
- Constant volume oxygen vessel, the bucket water volume will not be affected by the operator, so that heat capacity is more stable.



Constant volume oxygen vessel

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Spectrophotometer



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URINOVA 2800
Urine Analyzer



Total Organic
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