

# BCAL - 3005

---

## Bomb Calorimeter



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

**Analytical Technologies Limited**

An ISO 9001 Certified Company

[www.analyticalgroup.net](http://www.analyticalgroup.net)

## ►► 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)
Temperature Resolution	0.0001°C
Heat Capacity Precision	≤ 0.08%
Calorimeter Type	Isoperibol , Adiabatic
Heat Capacity Stability	≤ 0.20% with 12 months
Balance Connection	RS 232
Power Requirement	220V±10% , 50/60Hz
Inner Jacket Capacity	2.5 liter
Pressure	3-3.5 Mpa
Temperature	19- 35 degree Celsius
Resolution	0.01 cal/gm
Bomb Volume	250ml
Bomb Pressure	30Mpa

## ►► 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 multi-point isothermal technology, create a controllable and stable internal environment (consists of jacket and jacket lid, temperature difference <0.05°C), stop the interference of external environment (such as air flow, temperature) to bucket test result is reliable.

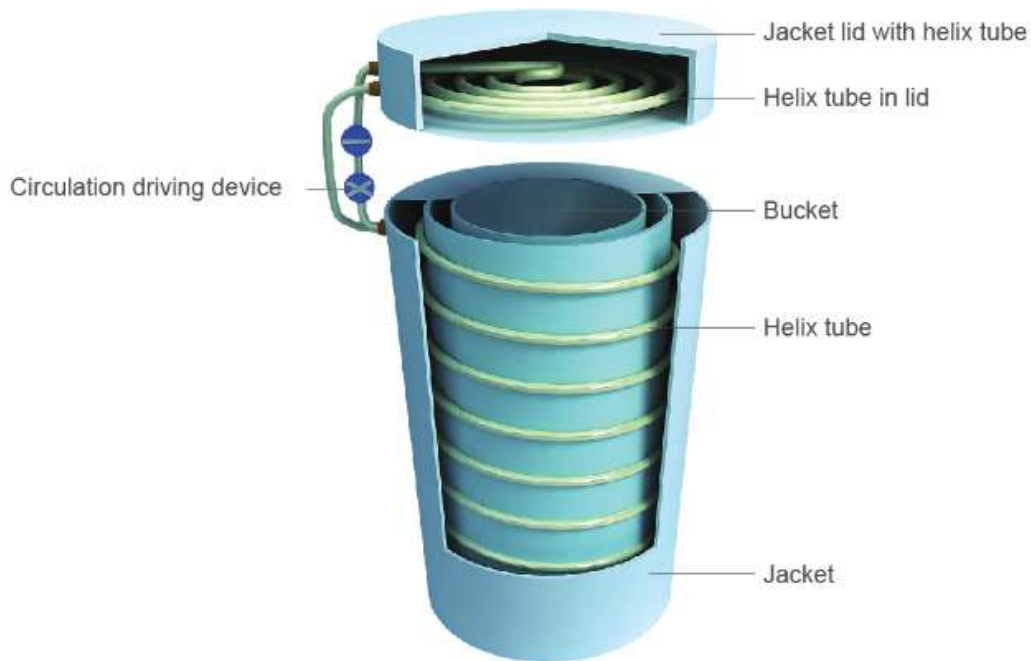


Diagram for helix tube multi-point isothermal technology

- Independent jacket and bucket water system. After the test, bucket water automatically flow back into water tank, no affection 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 affected by the operator, so that heat capacity more stable.



Constant volume oxygen vessel

## HPLC Servicing, Validation, Trainings and Preventive Maintenance :

**HPLC Servicing** :HPLC Servicing : We have team of service engineers who can attend to any make of HPLC promptly @the most affordable cost.

**Trainings** :We also take up preventive Maintenance to reduce downtime of HPLC's Trainings.

**AMC's/CMC** :AMC's/CMC :We offer user training both in-House and at customer sites on HPLC principles, operations, trouble-shooting.

**Validations** :Validations :We have protocols for carrying out periodic Validations as per GLP/GMP/USFDA norms.

**Instruments** :Instruments :We offer instruments/Renting Services Modules like pumps,detector etc. on Rent.



## About Analytical Technologies

Analytical Technologies is synonymous for offering technologies for doing analysis and is the Fastest Growing Global Brand having presence in at least 96 countries across the global. Analytical Technologies Limited is an ISO:9001 Certified Company engaged in Designing, Manufacturing, Marketing & providing Services for the Analytical, Chromatography, Spectroscopy, Bio Technology, Bio Medical, Clinical Diagnostics, Material Science & General Laboratory Instrumentation. Analytical Technologies, India has across the Country operations with at least 4 Regional Offices, 6 Branch Offices & Service Centers. Distributors & Channel partners worldwide.

## Our Products & Technologies



UV/VIS  
Spectro 2080+  
Double Beam



Infra FTIR



Optima Gas  
Chromatograph  
3007



Optima Gas  
Chromatograph  
2979 Plus



Flash  
Chromatograph



Atomic Absorption  
Spectrophotometer



Liquid Particle  
Counter



Optical Emission  
Spectrophotometer



DSC/TGA



Semi Auto Bio  
Chemistry Analyzer



HEMA 2062  
Hematology  
Analyzer



Micro Plate  
Reader/Washer



URINOVA 2800  
Urine Analyzer



Total Organic  
Carbon 3800



Fully Automated  
CLIA



NOVA-2100  
Chemistry Analyzer



PCR/Gradient PCR/  
RTPCR



TOC  
Analyzer



Laser Particle  
Size Analyzer



Ion Chromatograph



Water purification  
system



## Regulatory compliances



## Corporate Social Responsibility

Analytical Foundation is a nonprofit organization (NGO) found for the purpose of:



# Analytical Foundation

1. Research & Innovation Scientist's awards/QC Professional Award : Quality life is possible by innovation only and the innovation is possible by research only, hence ANALYTICAL FOUNDATION is committed to identify such personalities for their contributions across various field of Science and Technology and awarding them yearly. To participate for award, send us your details of research / testing / publication at [Info@analyticalfoundation.org](mailto:Info@analyticalfoundation.org)

2. Improving quality of life by offering YOGA Training courses, Work shops/Seminars etc.

3. ANALYTICAL FOUNDATION aims to DETOXYFY human minds,souls and body by means of yoga, Meditation, Ayurveda, Health Care, Awards, Media, Events, Camps etc.



 **Analytical**<sup>®</sup>  
Technologies Limited

HPLC Solutions   MultipleLabs   Analytical Bio-Med   Analytical Distributors   Analytical Foundation (Trust)

**Corporate & Regd. Office:**  
Analytical House, # E67 & E68,  
Ravi Park, Vasna Road, Baroda,  
Gujarat 390 015. INDIA

T: +91 265 2253620  
+91 265 2252839  
+91 265 2252370  
F: +91 265 2254395

E: [info@hplctechnologies.com](mailto:info@hplctechnologies.com)  
[info@multiplelabs.com](mailto:info@multiplelabs.com)  
[info@analyticalgroup.net](mailto:info@analyticalgroup.net)

W: [www.analycalgroup.net](http://www.analycalgroup.net)  
[www.hplctechnologies.com](http://www.hplctechnologies.com)  
[www.multiplelabs.com](http://www.multiplelabs.com)

Sales & Support Offices:  
across the country :  
Distributors & Channel  
partners World Wide