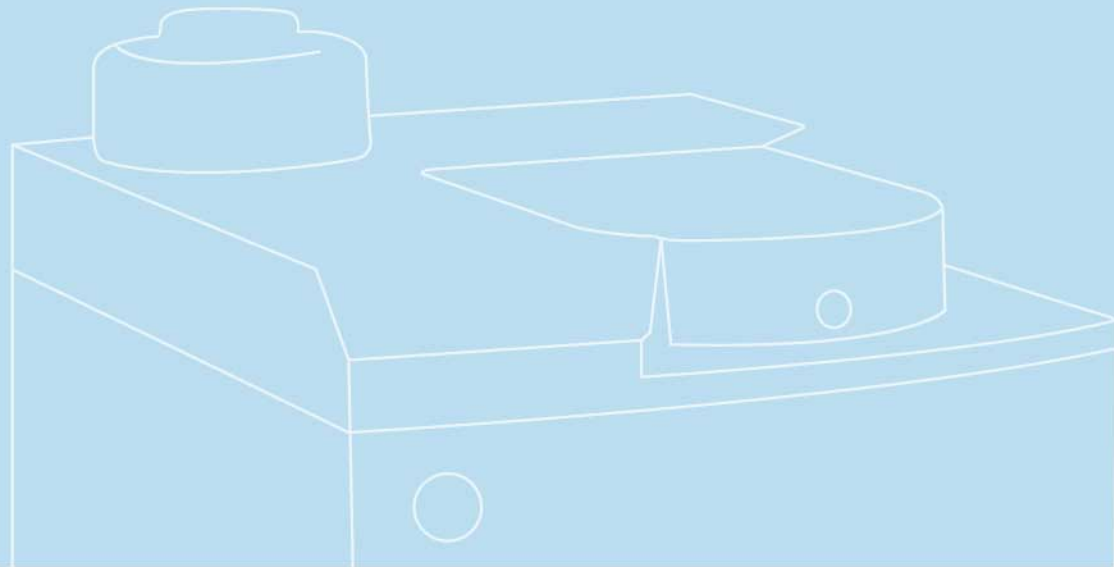


SDAC6000 Bomb Calorimeter

Fully automatic oxygen filling & releasing, fully automatic bomb raising & lowering.
Full test process is less than 10 minutes.



Main body size: 428mm*565mm*485mm
Water tank size: 220mm*565mm*410mm
Main body weight: 50KG

Calorimeter Series

- ▶ Sundy invented the first automatic bomb calorimeter in China (1996).
- ▶ Altogether Sundy developed 5 generations of automatic calorimeters with fully independent intellectual property rights.
- ▶ In calorimeter field, Sundy has obtained 58 patents including 38 invention patents, created two "National Key New Product".
- ▶ "Three-tier structure", "compressor cooling", "Helix tube isothermal technology" are initiative by Sundy which represent the highest technology of different period.
- ▶ After 25 years improvement, SD series calorimeter has been synonymous with "fast", "accuracy" and "stability". Currently, calorimeter is one of Sundy three leading products. Over 1,000 customers worldwide select Sundy calorimeter products annually.

Application

SDAC6000 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 D5865-2007 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 D4809-13 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method)
- ▶ ASTM E711 Standard test method for gross calorific value of refuse-derived fuel by the bomb calorimeter
- ▶ BS EN 14918 Solid Biofuels Method for the determination of calorific value
- ▶ ISO 1928 Solid Mineral Fuels Determination of gross calorific value by the bomb calorimetric method and calculation of net calorific value
- ▶ ISO 9831 Animal Feeding Stuffs, Animal Products, And Faeces Or Urine - Determination Of Gross Calorific Value - Bomb Calorimeter Method

Specification

Analysis Time	Fast mode <8min, Precision mode <10min (Default)
Temperature Resolution	0.0001 C
Heat Capacity Precision	≤ 0.1%
Calorimeter Type	Isoperibol
Heat Capacity Stability	≤0.20% within three months
Network/Balance Connection	Available (by interface RS232)
Power Requirement	220V(-15%~10%), 50/60Hz

Highlights

- ▶ Optimized design, fully automatic oxygen filling & releasing, fully automatic bomb raising & lowering, full test process is less than 10 minutes.



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.



Built-in intelligent water tank with heating and cooling function, water temperature can be kept constant, non-stop working available.



High automation: bomb raising & lowering, oxygen filling & releasing, determination of bucket water volume and control of water temperature and test can be finished automatically.

- ▶ Accurate and reliable test result



Larger heat capacity, it makes the testing result more accurate and reliable.



Both cotton wire and nickel wire available.

- ▶ Good environment adaptability, precise, accurate and reliable test result.



Helix tube multi-point isothermal technology, create a controllable and stable internal environment (consists of jacket and jacket lid, temperature difference <math><0.1\text{ }^\circ\text{C}</math>), stop the interference of external environment (such as air flow, temperature) to bucket, test result is reliable.



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.

- ▶ 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.



Diagram for helix tube multi-point isothermal technology



Diagram for cross section of bucket

SDC715 Bomb Calorimeter

Analysis time <math><15\text{min}</math>.

Optional support stand, customer can choose either benchtop / vertical type.



Main body size: 428mm*565mm*450mm
Water tank size: 390mm*565mm*410mm
Main body weight: 45KG

Application

SDC715 can be used to determine the calorific value of solid and liquid combustibles such as coal, coke, petroleum oil, cement black meal, biomass fuels, solid wastes as well as building material.

Conformance to Standards

- ▶ ASTM D5865-2007 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 D4809-13 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method)
- ▶ ASTM E711 Standard test method for gross calorific value of refuse-derived fuel by the bomb calorimeter
- ▶ BS EN 14918 Solid Biofuels Method for the determination of calorific value
- ▶ ISO 1928 Solid Mineral Fuels Determination of gross calorific value by the bomb calorimetric method and calculation of net calorific value
- ▶ ISO 9831 Animal Feeding Stuffs, Animal Products, And Faeces Or Urine - Determination Of Gross Calorific Value - Bomb Calorimeter Method

Specification

Analysis Time	<math><15\text{min}</math>
Temperature Resolution	0.0001 $^\circ\text{C}$
Heat Capacity Precision	$\leq 0.1\%$
Calorimeter Type	Isoperibol
Heat Capacity Stability	$\leq 0.2\%$ within three months
Network/Balance Connection	Available (by interface RS232)
Power Requirement	220V(-15%~10%), 50/60 Hz



Diagram for helix tube multi-point isothermal technology



Diagram for cross section of bucket

SDACM3100 Bomb Calorimeter



Main body size: 600mm * 417mm * 908mm
Main body weight: 106KG

Application

SDACM3100 can be used to determine the calorific value of solid and liquid combustibles such as coal, coke, petroleum oil, cement black meal, biomass fuels, solid wastes as well as building material.

Conformance to Standards

- ▶ ASTM D5865-2007 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 D4809-13 Standard Test Method for Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter (Precision Method)
- ▶ ASTM E711 Standard test method for gross calorific value of refuse-derived fuel by the bomb calorimeter
- ▶ BS EN 14918 Solid Biofuels Method for the determination of calorific value
- ▶ ISO 1928 Solid Mineral Fuels Determination of gross calorific value by the bomb calorimetric method and calculation of net calorific value
- ▶ ISO 9831 Animal Feeding Stuffs, Animal Products, And Faeces Or Urine - Determination Of Gross Calorific Value - Bomb Calorimeter Method

Specification

Analysis Time	15-25min
Temperature Resolution	0.0001°C
Heat Capacity Precision	≤ 0.1%
Jacket Type	Isoperibol
Heat Capacity Stability	≤0.25% within three months
Network/Balance Connection	Available (by interface RS232)
Power Requirement	220V(-15% ~ 10%), 50/60 Hz

Highlights

- ▶ Weighing the bucket water and measuring the water temperature manually, then the calorimeter will finish the whole test automatically.
- ▶ Simple structure, easy for maintenance.
- ▶ Durable bombs need hydrostatic pressure test only once a year.
- ▶ Measuring the temperature by PT1000 Platinum resistance to improve the test precision.
- ▶ With CAN bus communication technology, one PC controls several calorimeters.
- ▶ Connected with balance and network by standard interface RS232, real time data can be transmitted by internal network.

Highlights

- ▶ Good environment adaptability, precise, accurate and reliable test 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.



With semiconductor temperature control technology for the jacket, both cooling and heating can be realized. There is no need to fill cold water to decrease the water temperature to ensure 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.

- ▶ Accurate and reliable test result.



All the data is reliable and objective without software correction.



Both cotton wire and nickel wire available.

- ▶ Humanized design, high automation, fast test speed.



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, faster heat transfer of oxygen bomb, testing time is greatly reduced. Analysis time for each sample is less than 15 min.



Built-in intelligent water tank with heating and cooling function, water temperature can keep constant, test efficiency is higher.

- ▶ 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.



Strong data processing capability, statistics report and printing function. Capable of connecting with network and balance.