

PW-OBC-01

Building Materials · Coal & Coke

Oxygen Bomb Calorimeter



Product details

Measure the gross heat of combustion of building materials and the gross calorific value of coal and coke.



PCS / GCV

Gross calorific value
MJ/kg

O₂

Combustion atmosphere
Constant volume

7-inch

Touchscreen interface
PLC/HMI

MATERIAL DEVELOPMENT & QUALITY CONTROL

Building materials, fiberglass membranes, binders and coatings; coal and coke for fuel quality control.

Precision at Every Stage. Confidence in Every Test.

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From specimen to result

One platform for building materials, coal and coke.

1	2	3	4
Weigh & prepare	Charge & load	Ignite & record	Evaluate & report
Select the method; weigh the sample and prepare the ignition assembly.	Fill the bomb at the external oxygen station; load it into the water bucket.	Ignite electrically and record bucket and jacket temperatures.	Check complete combustion; apply corrections and calculate the result.

Technical specifications

Model	PW-OBC-01
Test methods	EN ISO 1716:2018; ISO 1928:2025; ASTM D5865/D5865M-19; IS 1350 (Part 2):2022 / ISO 1928:2020
Measurement system	Constant-volume oxygen combustion; isoperibol water jacket
Reported quantities	Gross heat of combustion (PCS) / gross calorific value (GCV), MJ/kg
Temperature measurement	Separate precision measurement of bucket and jacket temperatures
Combustion vessel	Sealed oxygen bomb with crucible and electrical ignition
Operator interface	7-inch touchscreen PLC/HMI
Specimen handling	Manual bomb loading; separate external oxygen filling station
Calibration basis	Certified benzoic acid; configuration-specific energy equivalent
Method corrections	Heat exchange, ignition and combustion aids; acid/sulfur corrections
PC software	Method selection, temperature curves, evaluation and reports; included

Main assembly

- Water jacket, inner bucket and peripheral stirrer
- Temperature probes and measurement electronics
- Oxygen bomb, crucible and ignition assembly
- 7-inch touchscreen control and PC software

Accessories & services

- External thermostatic bath, circulator and cooler
- Oxygen filling station and suitable pressure regulator
- Analytical balance and certified benzoic acid
- Sample preparation kit, combustion aids and spares

Net calorific value and moisture-basis conversions are calculated from the required additional analysis inputs. Low-energy samples use method-specific combustion aids and corrections.

PC software is included. Computer hardware is optional and quoted separately.

Other accessories and services are specified in the quotation.
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Methods: EN ISO 1716 / ISO 1928 / ASTM D5865/D5865M / IS 1350 (Part 2)

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