

PW-OBC-01

EN ISO 1716:2018

Oxygen Bomb Calorimeter

Determine the gross heat of combustion of solid materials by constant-volume oxygen bomb calorimetry.



PCS

Gross heat of combustion
MJ/kg

O₂

Combustion atmosphere
Constant volume

7-inch

Touchscreen interface
PLC/HMI

MATERIAL DEVELOPMENT & QUALITY CONTROL

For R&D and internal quality control of fiberglass membranes and treated building products. Assess the heat contribution of binders, coatings and additives.

Precision at Every Stage. Confidence in Every Test.

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From specimen to result

Test sequence based on the EN ISO 1716:2018 method.

1	2	3	4
Weigh & prepare	Charge & load	Ignite & record	Calculate PCS
Record sample mass; prepare the crucible and ignition assembly.	Fill the closed bomb with oxygen externally, then place it in the water bucket.	Ignite electrically and record the stirred bucket water temperature rise.	Apply calibration and method corrections; verify complete combustion.

Technical specifications

Model	PW-OBC-01
Method reference	EN ISO 1716:2018 - gross heat of combustion
Measurement principle	Combustion in oxygen at constant volume
Thermal arrangement	Isoperibol: constant jacket temperature; bucket temperature rises
Reported quantity	Gross heat of combustion, PCS, in 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; PC-based result analysis
Specimen handling	Manual bomb loading; separate external oxygen filling station
Calibration basis	Certified benzoic acid; configuration-specific energy equivalent

Main assembly

- Water jacket, inner bucket and peripheral stirrer
- Temperature probes and measurement electronics
- Oxygen bomb, crucible and ignition assembly
- Touchscreen control and PC reporting configuration

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

The bomb is immersed in the bucket during testing. Low-energy samples require method-specific preparation, combustion aids and corrections.

Accessories and services are specified in the quotation.

Gökevler Mahallesi, Adnan Kahveci Bulvarı, 563. Sokak, No: 9-A, Esenyurt / İstanbul, Türkiye

Method reference: EN ISO 1716:2018

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