

# Bomb Calorimeter BCM-SMART



The instrument is designed and made as per Applicable IS standards. The heat capacity of the instrument is 500 cal/gm~10000cal/gm. It is suitable to determine heat value of petroleum products ( Gasoline, jet fuels, diesel oil and fuel oils), coal, paraffin, food and other combustible Substance.

## Technical Specification

- Working Principle: Iso-peribol
- Test per Hour: 4
- Operation Time: 13-15 minutes
- Precision Classification (% RSD): 0.3%
- Repeatability  $\pm 10$ cal/gm
- Jacket Type: Double Jacket
- Oxygen Filling: Manual/Automatic (Optional)
- Bomb Wash: Manual
- Dimension(Approx.): L×W×H, 460 × 600 × 450(mm)
- Cooling Water Supply: Internal chilling unit
- Type of Bomb: Removable
- Operating Oxygen Pressure: 3-4 Mpa
- Working Temperature:  $25\pm 5^{\circ}\text{C}$
- Temperature Resolution: 0.01  $^{\circ}\text{C}$
- Power Supply: 220  $\pm 10$  VAC 50Hz

## Product Description

### 1. Thermal Jacketing

A circulating water system driven by a built-in high capacity pump helps to maintain a continuous forced flow around the sides and bottom of the bucket chamber and through the cover as well.

### 2. Repeatability

The instrument has the capacity of repeatability of determination up to  $\pm 10$  Cal/gm between duplicate determinations of calorific value of standard coal samples.

### 3. Water Refrigeration System

With the semi-conductor water refrigeration system, the instrument can automatically determine the refrigerating capacity and balance the circulation system according to the calorific value of previous time. Thus the water temperature can be kept constant, and the influence of environment can be greatly reduced.

### 4. Bomb & Vessel

Thick walled (High Pressure) Acid resistant Bomb & Vessel with proper insulation and capable of withstanding high pressure and fit for safely burning samples liberating up to 10000 calories per charge with Oxygen Pressure up to 40 atm.

### 5. Gas Filling System

The instrument is equipped with a Suitable gas filling arrangements with proper regulator and gauges for line/ vessel pressure and all necessary attachments. The gas filling arrangement shall take care of the safety of the combustion vessel.

#### Automatic Gas Filling Arrangement (Optional)

### 6. Computer Interface (Optional)

The instrument has optional facilities for automatic calculations of gross calorific value and report generation.

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## Select Your Calorimeter

	BCM-SMART	BCM-MILE STONE	BCM- BENCHMARK
Specifications	Isoperibol Calorimeter	Automatic Isoperibol Calorimeter	Automatic Isoperibol Calorimeter
Calorimeter Type	Isoperibol	Isoperibol	Isoperibol
Display	Digital	Touch Screen Microprocessor	Touch Screen Microprocessor
Operation	Manual	Semi Automatic	Fully Automatic
Precision Class (% RSD)	0.30%	0.20%	0.10%
Tests per Hour	4	4	5 to 6
Bomb Type	Removable	Removable	Removable
Bucket Type	Fixed	Fixed	Removable
Bucket Filling	Automatic	Automatic	Manual
Oxygen Filling	Manual/Automatic(Optional)	(Manual/Automatic(Optional)	Automatic
Memory	N/A	1000 tests	6400 tests Extendable
Printer Connection	N/A	N/A	USB
Balance Connection	N/A	N/A	RS-232
Temperature Resolution	0.01	0.01	0.0001
Water pipette	N/A	N/A	Yes

## SPECTRO GROUP OF COMPANIES

### GROUP COMPANIES

**SPECTRO ANALYTICAL LABS LIMITED**  
Laboratory Services & Turnkey Solutions

**Spectro Weld Institute (P) Ltd.**  
Training Institute for Welding, NDT, etc

