

# 5E-AC/PL Calorimeter

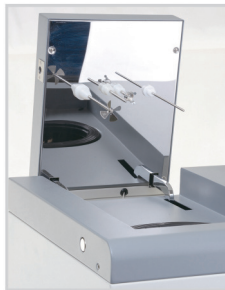
## Standard Configuration

Main analyzer: Controlling  
Unit and Chiller  
Standard CV bomb  
Computer  
Handle Oxygen Charger  
Crucibles  
Ignition Wire  
Benzoic Acid  
O-ring kit  
Tool kit

## Optional Configuration

Lens paper  
Pellet press  
Bench-top oxygen charger  
Halogen Resistant Oxygen Vessel

Typical structure ensures  
trouble free operation



## Features

1. Water cycling system applies the theory of communicating vessels, simple and reliable.
2. Large jacket volume minimizes the heat transfer between bucket and the environment.
3. Large water tank is equipped for cooling down water from the bucket after each analysis.
4. Auto-diagnosis, remote data transfer and balance connection available.

## Test Data

Calibrate Mass, g	Temperature Rise	°C or °F	as-determined Heat Capacity	units
0.8207	2.1783	°C	9885	J/K
0.8115	2.1811	°C	9887	J/K
0.8881	2.3862	°C	9888	J/K
0.9111	2.4498	°C	9880	J/K
0.9746	2.6188	°C	9885	J/K
0.9965	2.6735	°C	9878	J/K
1.0957	2.9393	°C	9879	J/K
1.2052	3.2391	°C	9880	J/K
1.1251	3.0238	°C	9889	J/K
1.2214	3.2827	°C	9879	J/K
Average: 9883J/K			RSD:0.043%	

**Remark:** ASTM-D5865, the precision of ten acceptable calibration test runs shall have a relative standard deviation (RSD) no greater than 0.17% and CKIC's specification is less than 0.05%RSD.

**Conclusion:** 5E-C5500 Automatic Calorimeter exceeds the ASTM precision requirement.

## Specification

Model	5E-C5808J	5E-C5808	5E-C5500	5E-C5508	5E-AC/PL
Conforms to Method	AS 1038.5, ASTM D240, ASTM D5865, ASTM D4809, ASTM E711, BIS 1350, BS EN 15400, GB/T 213,GB/T 30727, ISO 1928, ISO 9831,ISO 18125				
Precision (1g Benzoic Acid)	0.05% RSD*				
Measuring Range	Up to 50000J				
Temp. Resolution	0.0001°C				
Control Ability	2 Units / 1 PC available				
Analysis Time per Sample	8mins		Dynamic method:10mins, Classical method:15mins		Dynamic method: 11mins Classical method: 16mins
Jacket Type	Isoperibol				
Ignition Method	Laser Ignition	Ignition Wire			
Vessel Identification	Yes				
Heat Capacity Stability	≤0.2% within one year				
Balance Connection	Available				
Network Connection	Available				
Bucket Filling	Automatic				
Oxygen Filling	Automatic		Semi-Automatic	Automatic	Semi-Automatic
Structure	Benchtop		Benchtop/Vertical	Benchtop	Vertical
Bomb Vessel Lifting	Automatic		Manual	Automatic	Manual
Power Supply	Single phase, AC220±10%, 50/60Hz, ≤500W				
Net Weight	75kg		Bench top: 75kg Vertical type: 103kg	80kg	75kg
Dimensions (L×W×H)	705×520×595mm		Bench top: 480×500×420mm (Analysis Unit ) 370×500×420mm (Temp. Control Unit) Vertical: 480×400×940mm	Analysis unit: 580×550×550mm Temp. control unit: 370×540×400mm	580×550×950mm

**\*Test Condition:**

1. Ambient temperature 20°C±1°C, humidity 75%±5%
2. No strong interference source nearby
3. Clean water circuit with distilled water
4. Refer to the precision of ten acceptable calibration test runs