

5E-C5808J

Automatic Calorimeter

Standard Configuration

Main analyzer
Standard CV bomb -1 Unit
Computer
Crucibles
Ignition Paper
Benzoic Acid
O-ring kit
Tool kit

Optional Configuration

Lens paper
Pellet press
Halogen Resistant Oxygen Vessel

5E-C5808

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Standard CV bomb -1 Unit
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Ignition Wire
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Patented Laser Ignition Design Define the New Generation of Calorimeter

* Available in C5808J

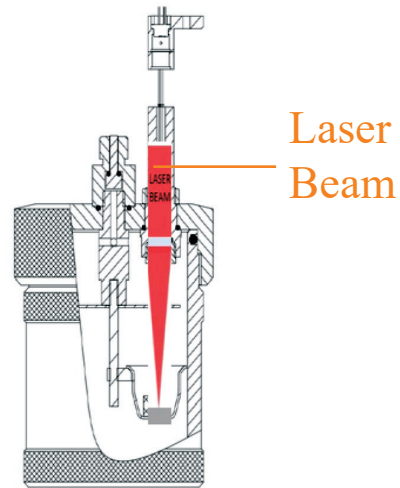


Application

5E-C5808/5E-C5808J is CKIC new generation calorimeter which is used to determine the calorific value of solid and liquid combustibles including oil, coal, coke, foodstuffs and biomass products. The calorific value is a crucial characteristic for each substance, also the key point to calculate the price of coal, so it will directly affect the economic benefits of the customers. This technique is widely applied in power plants, coal mines, metallurgy, chemical industry, commercial inspection, scientific research, etc.

Features

1. Patented laser ignition technology (available in C5808J model) allowing easier and faster sample preparation, no ignition wire or cotton thread is needed
2. 8min fast analysis for one sample
3. Automatic oxygen vessel lifting
4. Automatic oxygen charging and venting
5. Intelligent temperature control of the jacket and the water tank, the water constant temperature stability of the jacket reaches to 0.02 C
6. Small space occupied with compact design
7. Intelligent diagnosis and safety protection function



5E-CYZ

Automatic Oxygen Charger



Application

Support the use of 5E Series Calorimeter, realizing the automatic charging and releasing of oxygen vessel.

Technical Parameters

1. Power: 220V/50Hz, 15W
2. Air Supply: oxygen cylinder with purity $\geq 99.5\%$, electrolytic oxygen is not allowed
3. Air Pressure: 2.8MPa-3.0MPa for the equipped reducing valve

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