
XRY-1A Oxygen Bomb Calorimeter

Summary

The instrument is designed and made as per the National Standard of People's Republic of China *GB/T213-2008* and *ASTM D240 Test Method for Calorific Value of coal*, *GB/T384-1988 Test Method for Calorific Value of Petroleum Products* and Calibration Regulation of People's Republic of China *JJG672-2001 Oxygen Bomb Calorimeter*, as well as Enterprise Standard of Shanghai *Q/YXYY 10 XRY Series Oxygen Bomb Calorimeter*.

The heat capacity of the instrument is 14000 J/K~15000 J/K, and it is suitable to determine calorific value of combustible materials such as petroleum products without water (gasoline, jet fuels, diesel oil and fuel oils, etc.), coal, coke and paraffin, etc.

I. Main technical features

1. This instrument adopts sealed oxygen bomb. The whole structure adopts stainless steel material. The strength is enough to resist the max pressure (60~70 atmospheric pressure) when the solid burning. And it can resist the bigger pressure when liquid fuel burning.
2. The inner water cylinder is composed of stainless steel sheet. The cross section is pyriform and the capacity is 3kg. The water cylinder is equipped with electric stirrer inside. It ensures the temperature in the water cylinder uniform.
3. The external water jacket is double layer container. It filled with water when doing determination. It make the water temperature in the cylinder uniform by water jacket stirrer and form the constant temperature environment meeting the requirements of test.

II. Main technical specifications

1. Heat capacity: 14400 J/K~15000 J/K
 2. Resolution: 0.001 K
 3. Measurement accuracy: ± 60 J/g
 4. Repeatability : $\leq 0.2\%$ (Grade C)
 5. Pressure endurance of oxygen bomb: 20 MPa
 6. Temperature measurement range: 10 °C~35 °C
 7. Ambient temperature: 20 \pm 5 °C, the fluctuation is not more than 1 °C during one test
 8. Data saved: 31 pieces
 9. Relative humidity: $\leq 85\%$
 10. Power supply: AC 220V $\pm 5\%$, 50 Hz
 11. Dimension: 600mm \times 460mm \times 430mm
 12. Total power consumption: Less 150W
- (Note: Pellet press machine is optional accessory)

