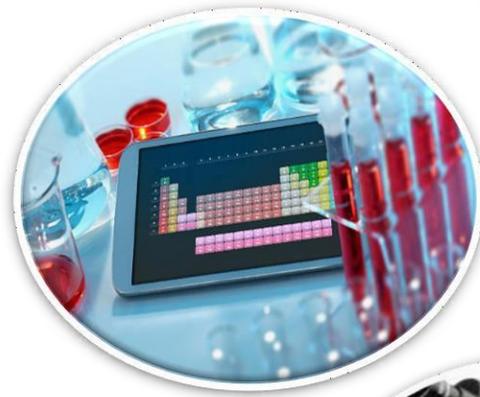




ESTB. 1982



# RICO SCIENTIFIC INDUSTRIES

AN ISO 9001:2015 CERTIFIED COMPANY



*Manufacturer of Scientific Instruments & Equipments for Research, Development & Industries*

## INTRODUCTION

A Bomb Calorimeter is an apparatus used for measuring heats of combustion. **Rico - RSBT Bomb Calorimeter** provides a simple, inexpensive yet accurate method for determination of heat of combustion and the sulfur contents of liquid and solid hydrocarbons and other fuels. Rico - RSBT Bomb Calorimeter is widely used in Industries in diversified fields for quality control, testing laboratories for research & development and in teaching establishments.

The accessories supplied are complete for analysis as per methods recommended by the Indian Standards Institutions (IS-1350, Part 2, 1970), British Standards Institution (BS 1016 Part 5 1967) and the Institute of Petroleum (IP 12/63 T). Each component of the package has been finished and tested according to the specifications by these institutions

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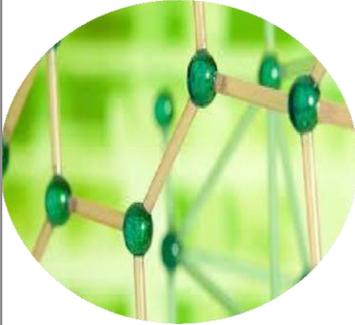
## THE INDIVIDUAL FUNCTION:-



SAMPLE TEST  
MAX. TEMPERATURE 00.74 C  
WATEREQUIVALENT 2467  
MASS OF TABLET 0.300 GM  
CV 5956.46 CAL/GM  
09:05 22/09/17

DIGITAL BOMB CALORIMETER  
REPORT  
WATER EQUIVALENT TEST  
MAX. TEMPERATURE 02.41 C  
SENZOIC ACID CV 6320  
MASS OF TABLET 0.990 GM  
WATER EQUIVALENT 2517  
14:36 28/07/17  
CALIBRATED ON:- 5/1/17

- Compact, Integrated Modular Design
- Working Method: Isothermal
- Working Temperature 15°C To 60°C
- LCD Display.
- Automatic Calculation & Display of Calorific Value.
- Peak Temp. Hold With Alarm.
- With Inbuilt Thermal Printer. Calorific Value, Date & Time Is Printed On The Report Generated.
- Readability of 0.001° C in Ambient & Rising Temp.
- Accuracy Of  $\pm 0.001$ C In Rising Temp.
- Accuracy of Calorific Value  $\pm 50$  Calories.
- Menu Key Is Provided To Select Type Of Test I.E Calibration/Water Equivalent/ GCV Sample Test.
- Numeric Digits 0-9 are provided on the Front Panel for Feeding data such As Weight of the Tablet, Water Equivalent Values etc.
- USB INTERFACE FOR TRANSFER THE DATA IN PC.
- Optional:-** Automatic Gas Filling System.



## SYSTEM DISCRPTION

### SYSTEM DISCRPTION OF MODEL RSBT-6

**AUTOMATIC BOMB CALORIMETER MICROPROCESSOR BASED** For determining gross calorific value of liquid and solid fuel samples. With automatic calculation & **WITHOUT RS232 INTERFACE.**

### SYSTEM DISCRPTION OF MODEL RSBT-7

**AUTOMATIC BOMB CALORIMETER MICROPROCESSOR BASED** For determining gross calorific value of liquid and solid fuel samples. **WITH PRINTER & USB COMPUTER INTERFACE, AUTOMATIC CALCULATION.**

### SYSTEM DISCRPTION OF MODEL RSBT – 8 AUTOGAS

**AUTOMATIC BOMB CALORIMETER MICROPROCESSOR BASED** For determining gross calorific value of liquid and solid fuel samples. **WITH AUTOMATIC CALCULATION, RS232 COMPUTER INTERFACE & AUTOMATIC GAS FILLING SYSTEM.**

# TECHNICAL SPECIFICATIONS

Specifications	MODEL RSBT-6	MODEL RSBT-7	MODEL RSBT-8
Operational Principle	ISOTHERMAL	ISOTHERMAL	ISOTHERMAL
Fundamental Standards	IS PER IP Standard	IS PER IP Standard	IS PER IP Standard
Inner Vessel	Made of Copper	Made of Copper	Made of Copper
Outer Jacket	Made of S.S.	Made of S.S.	Made of S.S.
Bomb Design	As per IP Standards	As per IP Standards	As per IP Standards
Bomb & Bucket	Bomb is made of Non Corrosive S.S.	Bomb is made of Non Corrosive S.S.	Bomb is made of Non Corrosive S.S.
Oxygen Filling	Manual	Manual	Automatic
O2 Filling Time	1-2 Minutes Approx	1 minute Approx	30 Second
Pressure Regulator			<b>HIGH PRESSURE DUAL GAUGE REGULATOR.</b> Body made of Heavy Duty Brass Material with Pressure gauge for both inlet & outlet pressure display. Inlet Pressure Range: - 0- 250 kg/cm <sup>2</sup> Outlet Pressure Range: - 0 – 250 kg/cm <sup>2</sup> .
Sensor	Imported RTD.	Imported RTD.	Imported RTD.
Temperature Resolution	0.001 °C	0.001 °C	0.001 °C
Temperature Display	in Degree Celsius	in Degree Celsius	in Degree Celsius
Temperature Stability	± 0.001°C	± 0.001°C	± 0.001°C
Stirrer	Low voltage Modular Type DC Stirrer	Low voltage Modular Type DC Stirrer	Low voltage Modular Type DC Stirrer
Bomb Firing	with a press of a key	with a press of a key	with a press of a key
Printer Facility (Temp Vs Time)	N/A	Available	Available
Calculation	Automatic	Automatic	Automatic
Memory	No.	Result can be stored in P.C. via Software.	Result can be stored in P.C. via Software.
Auto Oxygen Filling Device	NO	NO	Available
Testing Time	10-15 Min/sample	10-15 Min/sample	10-15 Min/sample
Operating Temperature	15°C to 60 °C	15°C to 60 °C	15°C to 60 °C
Computer Connectivity	NO	Yes	Yes
USB Port	NO	Yes	Yes
Power Requirement 230 V ,50 hz ± 10 %	Yes	Yes	Yes

**MORE ELEGANT SYSTEM (AVAILABLE IN MODEL RSBT-7 & 8).  
RS232 INTERFACE FOR TRANSFER THE DATA IN PC.**



**AUTOMATIC GAS FILLING SYSTEM**



**AUTOMATIC GAS FILLING SYSTEM FOR MODEL RSBT-8**

- Automatic Gas filling system is the latest technologies developed by Rico Scientific Industries.
- The Auto gas unit is very user friendly, using the auto gas system the oxygen is filled in the bomb with great accuracy and repeatability, thus resulting in accurate result of Gross Calorific Value.
- Best Quality imported high pressure solenoid valves & Pressure Switches are used for the utmost safety during the operation of gas filling.
- The Oxygen Tube is filled simply by pressing "Fill" micro switch & the relay automatically cut off the oxygen when the desired pressure is reached. The latest coupling technology is provided, which is very user friendly which operates simply by pull & push System.