

RAMSBOTTOM CARBON RESIDUE APPARATUS(ELECTRIC FURNACE METHOD)



Ramsbottom Carbon Residue Apparatus(Electric furnace method) TT-524

Ramsbottom Carbon Residue Apparatus (Electric furnace method) TT-524 complies with the ASTM D524 Standard for Ramsbottom Carbon Residue of Petroleum Products.

Ramsbottom Carbon Residue Apparatus(Electric furnace method) TT-524 is utilized to assess the quantity of carbon residue remaining post-evaporation and pyrolysis of an oil, offering insight into its coke-forming tendency. This method is typically suitable for relatively nonvolatile petroleum products that undergo partial decomposition during atmospheric pressure distillation.

APPLICATIONS

The primary application of the Ramsbottom Carbon Residue Apparatus is to determine the coke-forming tendency of petroleum products. It measures the amount of carbon residue left after a sample undergoes evaporation and pyrolysis under controlled conditions, in compliance with the ASTM D524 standard. This test is particularly important for less volatile products like lubricating oils and heavy fuels, where a higher carbon residue value indicates a greater likelihood of forming harmful deposits in engines or systems.

Key Industries

- **Petroleum Refining:** Refineries use this test as a critical quality control measure for base oils and heavier fuel oils. The results help ensure that these products meet specifications before they are sold or blended into finished lubricants.
- **Lubricant Manufacturing:** For companies that blend and formulate finished lubricants (e.g., engine oils, industrial oils), this test is vital for evaluating the quality of the base stocks they use. A lower carbon residue is essential for producing high-performance lubricants that resist deposit formation.
- **Marine and Power Generation:** These industries rely on heavy fuel oils and large engine lubricants. Testing for carbon residue is crucial to prevent the buildup of coke on pistons, valves, and injectors, which can lead to severe

engine damage, reduced efficiency, and costly downtime.

FEATURES

- The apparatus can conduct four experiments simultaneously, enhancing operational efficiency.
- The apparatus utilizes a metal bath for temperature control, ensuring rapid and uniform temperature distribution.
- Equipped with a digital display temperature controller, the apparatus allows for convenient adjustment, with high precision in temperature control.
- The output features solid-state relay technology, which is contactless, sparkless, and noiseless, ensuring safety, reliability, and long-term durability.
- Designed with user-friendly operation and an appealing appearance.

TECHNICAL SPECIFICATIONS

1. Rated Voltage: AC 220V $\pm 10\%$, 50Hz (110V also available)
2. Heating Power: 2000W
3. Temperature Controlling Mode: Digital display
4. Temperature Control Point: 520°C $\pm 5^\circ\text{C}$
5. Sensor: Pt100 (platinum resistor)
6. Bath Holes: Four holes
7. Ambient Requirements: Temperature 10°C to 40°C; Humidity $\leq 85\%$



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