Fully Automatic Dual Furnace Industrial Proximate Analyzer For Coal And Biofuel Thermogravimetric Analysis

Item Number: KT-TE37

Introduction

Accelerate proximate analysis with this fully automated dual furnace thermogravimetric analyzer engineered for rapid determination of moisture ash and volatile matter across nineteen samples delivering certified arbitration accuracy and regulatory compliance in under ninety minutes for industrial quality testing

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Application	Description	Key Benefit
Coal-Fired Power Generation	High-frequency proximate screening of incoming coal deliveries, pulverized fuel blends, and boiler combustion feedstocks to verify calorific baseline values and combustion behavior.	Eliminates combustion inefficiencies, safeguards boiler refractory linings, and provides rapid fuel quality feedback for immediate boiler tuning.
Commercial Coal Trade & Quality Arbitration	Independent testing of thermal and coking coal shipments during port loading, rail transfer, and contract settlement disputes where certified precision is legally required.	Delivers fully standardized, dispute-free proximate data that meets regulatory arbitration criteria without human procedural bias.
Solid Biomass & Biofuel Processing	Determination of moisture, volatile matter, and residual ash in agricultural residues, wood pellets, sawdust briquettes, and energy crops per standard bioenergy specifications.	Accelerates batch release cycles, ensures compliance with pellet burner standards, and optimizes moisture control during pelletization.
Metallurgical Coke & Sintering Plants	Rigorous monitoring of metallurgical coke, coal charges, semi-coke, and carbon additives used in blast furnace ironmaking and ferroalloy smelting operations.	Guarantees consistent carbon content, controls ash accumulation in the blast furnace, and reduces coke rate consumption.
Waste-to-Energy & Refuse Derived Fuels	Proximate characterization of municipal solid waste, shredded industrial waste, and refuse-derived fuel pellets prior to thermal processing and gasification.	Enables real-time feedstock categorization, optimizes secondary air distribution, and prevents slagging caused by unexpected ash spikes.
Third-Party Analytical Laboratories	High-volume contract laboratory testing requiring continuous batch throughput, automated audit trails, and strict data traceability for external commercial clients.	Maximizes sample turnaround capacity per operator hour while providing reproducible, tamper-proof electronic analytical certificates.
Cement & Lime Kiln Manufacturing	Evaluation of alternative fuels, petcoke, and low-grade coal utilized as primary and secondary firing fuels in rotary calcining kilns and precalciner towers.	Maintains consistent kiln temperature profiles, reduces specific thermal energy consumption, and controls residual clinker mineralogy.

Parameter	Specification Details (KT-TE37)
Product Item Number	KT-TE37
Operating Principle	Thermogravimetric Analysis (TGA) with synchronized internal balance weighing
Furnace Architecture	Dual-furnace configuration with dual integrated electronic weighing structures
Test Parameters	Moisture (M), Ash (A), Volatile Matter (V), Fixed Carbon (FC, calculated)
Batch Sample Capacity	Up to 19 samples per single analysis run (plus automated reference balance checks)
Full Cycle Duration	≤ 90 minutes for comprehensive tri-parameter determination (Moisture + Ash + Volatiles)
Operation Mode	Fully automatic: automated tare, dosing confirmation, dynamic heating, re-weighing, calculation, upload
Industry Standard Compliance	Compliant with GB/T 212 (Proximate Analysis of Coal) and GB/T 28731 (Solid Biofuels)

Parameter	Specification Details (KT-TE37)
Legal & Commercial Validity	Certified for official commercial trade settlement, legal disputes, and quality arbitration
Analytical Weighing Mechanism	Built-in high-precision microbalance assembly with dynamic thermal isolation
Atmospheric Control	Programmed automated switching between inert (carrier gas) and oxidizing environments
Temperature Control Method	Microprocessor-controlled PID heating curves optimized for rapid stabilization and zero overshoot
Data Management System	Dedicated PC workstation software with live mass-loss curve display, database archiving, and LIMS export
Operator Intervention Level	Zero intervention required following crucible loading and test initiation