

Microcomputer Automatic Moisture Analyzer For Total And Analytical Moisture Testing

Item Number: KT-TE27



Introduction

Discover high precision microcomputer automatic moisture analyzer systems featuring dual microwave and infrared drying modes for rapid, automated total and analytical moisture testing in industrial solid fuels, chemical feedstocks, and quality control laboratories.

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Application	Description	Key Benefit
Coal Mining & Beneficiation	Quantitative analysis of total and air-dried inherent moisture in raw coal, washed coal, and tailings during processing and blending operations.	Ensures rapid feedback for washing plant optimization and verifies precise calorific value calculations for contract compliance.
Thermal Power Generation	Monitoring moisture content in incoming pulverized coal feedstocks and boiler combustion blends to optimize boiler thermal efficiency.	Prevents mill fouling, optimizes combustion air ratios, and reduces fuel waste through rapid 20-minute batch screening.
Metallurgical & Coking Plants	Determining moisture levels in coking coals, metallurgical coke blends, and pulverized coal injection (PCI) fuels before blast furnace charging.	Prevents thermal shock in refractories, optimizes coke oven battery heating cycles, and stabilizes carbon balance.
Petrochemical & Heavy Oil Refining	Moisture determination in petroleum coke, heavy refinery residues, organic slurries, and chemical synthesis raw materials.	Guarantees compliance with downstream refining specifications and prevents corrosion or catalyst deactivation in processing units.
Biomass & Renewable Energy Fuels	Rapid moisture verification of wood pellets, agricultural residues, and densified biofuel briquettes prior to transport and co-firing.	Eliminates mold degradation risks during storage and guarantees accurate energy billing based on net calorific value.
Commercial Inspection & Testing Labs	High-volume certification testing of bulk mineral commodities, solid fuels, and combustible imports/exports under official trade standards.	Boosts daily sample throughput by analyzing 8 samples simultaneously with automated reweighing and auditable reporting.
Chemical Manufacturing & Mineral Salts	Dehydration kinetics and free moisture verification for granulated chemical compounds, synthetic fertilizers, and industrial minerals.	Enhances batch-to-batch consistency and prevents caking during packaging, storage, and pneumatic bulk transfer.

Specification Parameter	KT-TE27 (Total Moisture Configuration)	KT-TE27F (Dual Analytical & Total Moisture Configuration)
Functional Scope	Measurement of total moisture in coal, coke, and combustible materials	Measurement of both analytical moisture (inherent/air-dried) and total moisture
Simultaneous Sample Capacity	8 samples per test run	8 samples per test run
Analysis Time	Approximately 20 min per batch	Approximately 20 min per batch
Determination Precision	Total Moisture: $\leq 0.4\%$	Total Moisture: $\leq 0.4\%$; Analytical Moisture: $\leq 0.2\%$
Sample Mass Requirement	10 g to 12 g (Total Moisture)	10 g to 12 g (Total Moisture); 0.9 g to 1.1 g (Analytical Moisture)
Sample Particle Size	≤ 6 mm (Total Moisture)	≤ 6 mm (Total Moisture); ≤ 80 mesh (Analytical Moisture)
Drying Technologies Available	Microwave drying, Infrared drying, Combined hybrid drying	Microwave drying, Infrared drying, Combined hybrid drying
Microwave Input Power	≤ 1400 W	≤ 1400 W
Microwave Output Power	≤ 900 W	≤ 900 W
Microwave Frequency	2450 MHz	2450 MHz
Infrared Heating Power	≤ 1100 W	≤ 1100 W

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Weighing System	Imported high-precision automatic electronic balance	Imported high-precision automatic electronic balance
Testing Programs	Rapid determination program, Classical determination program	Rapid determination program, Classical determination program
Intelligent Diagnostics	Sample presence auto-detection, Weighing error re-measurement	Sample presence auto-detection, Weighing error re-measurement
Data Output & Reporting	Automated result printing, Repeat printing capability	Automated result printing, Repeat printing capability
Control Workstation	Microcomputer control with dedicated analytical software	Microcomputer control with dedicated analytical software
Electrical Power Requirements	AC 220 V $\pm$ 10%, 50 Hz	AC 220 V $\pm$ 10%, 50 Hz
Total System Power Consumption	1 kW	1 kW