

Industrial Proximate Analyzer For Automated Moisture Ash And Volatile Matter Determination

Item Number: KT-TE20



Introduction

Streamline solid fuel characterization with our automated industrial proximate analyzer delivering rapid moisture ash and volatile matter testing for nineteen samples with imported microbalances and precision high temperature furnace control under rigorous coal testing standards.

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Application	Description	Key Benefit
Coal-Fired Power Utilities	Routine proximate analysis of pulverized boiler feed coal, blending stocks, and coal seams	Ensures combustion efficiency, monitors slagging risk, and controls fuel blending economics
Metallurgical & Coking Plants	Evaluation of metallurgical coking coals, semi-coke, and pulverized coal injection (PCI) fuels	Delivers rapid quality metrics to maintain blast furnace thermal stability and coking quality
Commercial Fuel Testing Labs	High-throughput third-party verification of custody-transfer coal, coke, and carbonaceous consignments	Fulfills ASTM and GB/T compliance standards with complete, automated, audit-proof analytical reporting
Biomass & Biofuel Processing	Proximate characterization of agricultural residues, wood pellets, and torrefied biomass fuels	Rapidly tracks volatile content and inherent moisture levels for consistent burner and gasifier performance
Cement & Lime Kiln Operation	Calorific quality monitoring and ash content profiling of alternative fuel inputs and petroleum coke	Optimizes rotary kiln thermal management and maintains precise clinker chemistry targets
Carbon & Graphite Materials	Measurement of fixed carbon yield, residual moisture, and ash impurities in calcined coke and synthetic graphite	Guarantees stringent purity specifications and uniform carbon yield for downstream electrode production
Solid Waste & Sludge Incineration	Screening industrial sludges, refuse-derived fuels (RDF), and municipal solid waste prior to thermal disposal	Verifies moisture and combustible content to balance auxiliary fuel consumption and flue gas emissions
Mining & Geological Exploration	Rapid screening of core samples, run-of-mine bulk coals, and beneficiation plant washed fractions	Provides rapid turnaround to steer extraction planning, coal washing efficiency, and sorting logistics

Technical Parameter	KT-TE22-610	KT-TE22-611	KT-TE22-612
Architectural Configuration	Single Integrated High-Temperature System	Single Compact High-Efficiency System	Dual-Chamber Structure (Dedicated Volatile & Combined Moisture/Ash Modules)
Crucible Capacity	20 positions total	20 positions total	20 positions per active module
Simultaneous Sample Throughput	19 test specimens + 1 reference	19 test specimens + 1 reference	19 test specimens + 1 reference
Furnace Operating Temperature	Ambient to 1000°C	Ambient to 1000°C	Ambient to 1000°C
Sample Initial Mass	Moisture/Ash: 0.6 g to 1.1 g (adjustable); Volatiles: 0.9 g to 1.1 g	Moisture/Ash: 0.6 g to 1.1 g (adjustable); Volatiles: 0.9 g to 1.1 g	Moisture/Ash: 0.6 g to 1.1 g (adjustable); Volatiles: 0.9 g to 1.1 g
Analytical Standard Compliance	GB/T 212-2008 (Standard Test Method for Proximate Analysis of Coal)	GB/T 212-2008 (Standard Test Method for Proximate Analysis of Coal)	GB/T 212-2008 (Standard Test Method for Proximate Analysis of Coal)
Rapid Method Cycle Time (19 Samples)	≤ 180 min (Moisture + Ash + Volatiles)	Process dependent	≤ 120 min (Moisture + Ash + Volatiles)

Technical Parameter	KT-TE22-610	KT-TE22-611	KT-TE22-612
Classic Method Cycle Time (19 Samples)	Full standard cycle (Moisture drying verification, slow ash, and volatiles)	Full standard cycle	Moisture + Ash verification: 260 min; Volatiles: 120 min
Rated Operating Power	≤ 5.0 kW	≤ 2.0 kW	≤ 6.5 kW
Balance Mechanism	Integrated high-precision internal electronic balance	Integrated high-precision internal electronic balance	Dual independent internal electronic balances
Mechanical Drive System	Industrial imported precision stepper motor drive	Industrial imported precision stepper motor drive	Dual independent imported precision stepper drives
Required Process Gas: Oxygen	Purity ≥ 99.5%, Regulated Pressure: 0.1 MPa	Purity ≥ 99.5%, Regulated Pressure: 0.1 MPa (Optional external connection)	Purity ≥ 99.5%, Regulated Pressure: 0.1 MPa (Optional external connection)
Required Process Gas: Nitrogen	Purity ≥ 99.5%, Regulated Pressure: 0.1 MPa	Purity ≥ 99.5%, Regulated Pressure: 0.1 MPa (Optional external connection)	Purity ≥ 99.5%, Regulated Pressure: 0.1 MPa (Optional external connection)
Gas Pressure Regulator Range	High pressure: 0 to 25 MPa; Low pressure: 0 to 0.4 MPa	High pressure: 0 to 25 MPa; Low pressure: 0 to 0.4 MPa	High pressure: 0 to 25 MPa; Low pressure: 0 to 0.4 MPa
Testing Flexibility	Combined batch sequence or independent parameter runs	Combined batch sequence or independent parameter runs	Simultaneous parallel testing of volatiles and moisture/ash