

Rapid Ash Determination Apparatus Continuous Ash Content Analyzer For Coal Coke And Biomass

Item Number: KT-TE38

KT-TE38



Introduction

Engineered for rapid laboratory analysis, this continuous ash determination apparatus delivers automated ashing for coal, coke, and biomass fuels according to standard industrial testing methods. Featuring precise temperature zoning and adjustable conveyance, it prevents deflagration while ensuring superior analytical repeatability.

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Application	Description	Key Benefit
Coal Mining & Preparation	Continuous monitoring of raw coal and washed clean coal fractions to regulate flotation circuits and heavy-medium separation density.	Delivers rapid ash content feedback to optimize coal washing yields and ensure contracted grade classification.
Thermal Power Generation	On-site proximate analysis of pulverized coal deliveries, boiler feed blends, and residual fly ash or bottom ash streams.	Prevents boiler fouling, optimizes air-to-fuel combustion ratios, and ensures accurate fuel billing compliance.
Metallurgical Coke Production	Evaluation of coking coal blends and final blast-furnace coke samples during continuous high-temperature carbonization processes.	Maintains strict control over coke ash levels to protect blast furnace slag chemistry and maximize hot metal production efficiency.
Biomass Fuel Manufacturing	Ash yield assessment of wood pellets, agricultural residues, forestry briquettes, and refuse-derived fuel (RDF) stocks.	Identifies high-alkali inorganic content to avert boiler tube corrosion, clinkering, and excessive particulate emissions.
Commercial Fuel Inspection	Third-party quality verification and commercial certification testing of solid mineral fuels at export terminals and transshipment hubs.	Shortens sample turnaround intervals significantly compared to static muffle furnaces while meeting mandatory standard tolerances.
Waste-to-Energy Incineration	Characterization of processed combustible municipal solid waste and industrial sludge blends prior to energy recovery.	Provides accurate inorganic non-combustible baseline data necessary to calculate thermal recovery efficiency and manage fly ash disposal.
Cement Clinker Manufacturing	Rapid verification of alternative fuel sources and petcoke ash contributions that directly enter the calciner and rotary kiln raw mix.	Ensures stable clinker chemical composition and avoids uncontrolled fluctuations in silica and alumina moduli.

Specification Parameter	Value / Operational Characteristic
Product Item Number	KT-TE38
Furnace Chamber Type	Inclined Horseshoe-Shaped Tube Chamber
Internal Chamber Dimensions	700 mm (L) × 75 mm (W) × 45 mm (H)
Overall Instrument Dimensions	1000 mm (L) × 290 mm (W) × 420 mm (H)
Equipment Net Weight	40 kg
Operating Temperature Range	100 °C – 1000 °C (Fully Adjustable)
Constant High-Temperature Zone	815 ± 3 °C (Zone Length > 200 mm)
Heating Ramp Performance	Ambient to 815 °C in approximately 60 min
Sample Conveyance Speed Range	5 mm/min – 50 mm/min (Continuously Adjustable)
Conveyance Drive Mechanism	Precision Low-Vibration Motorized Chain Conveyor

Specification Parameter	Value / Operational Characteristic
Flue Gas Exhaust Flow	Natural Convective Updraft along Inclined Muffle Ceiling
Applicable Sample Mass	0.5 ± 0.01 g per crucible
Maximum Sample Particle Size	< 0.2 mm (Standard Sieve Fraction)
Analytical Standard Compliance	Fully Compliant with GB/T 212 Industrial Analysis of Coal
Testing Accuracy and Precision	Within Repeatability and Reproducibility Limits of GB/T 212
Electrical Power Requirements	AC 220 V ± 22 V, 50 Hz
Rated Power Consumption	1500 W