

Automatic Sulfur Analyzer High Temperature Coulometric Sulfur Determinator

Item Number: KT-TE56



Introduction

Streamline quality inspection with our high-temperature automatic sulfur analyzer. Engineered for coal, coke, and petroleum laboratories, this advanced coulometric titration instrument features a twenty-five position continuous auto-loader, rapid analysis cycles, modular gas handling, and total compliance with GB/T 214-2007 testing standards.

[Learn More](#)

Application	Description	Key Benefit
Coal Mining & Beneficiation	Evaluation of total sulfur content in raw run-of-mine coal, washed clean coal, middlings, and mine tailings	Enables accurate coal grading, optimizes washing efficiency, and guarantees adherence to contractual quality tiers
Thermal Power Plants	Continuous monitoring of pulverized coal feedstocks and flue-gas desulfurization feed inputs	Prevents boiler tube corrosion, optimizes limestone-based desulfurization dosing, and ensures SO ₂ emission compliance
Metallurgical & Coking Operations	Quality verification of metallurgical coke, semi-coke, coking coal blends, and blast-furnace fuels	Minimizes sulfur transfer into molten pig iron, protects refractory linings, and reduces costly secondary desulfurizing additives
Petrochemical Refining	Determination of sulfur levels in petroleum coke, heavy fuel oils, refinery bottoms, and asphaltic residues	Assures compliance with strict fuel oil sulfur caps and protects downstream catalytic cracking units from sulfur poisoning
Cement Manufacturing	Screening alternative combustible fuels, industrial waste-derived fuels (RDF), and petcoke for kiln firing	Controls clinker sulfur-to-alkali ratios, prevents cyclone preheater blockages, and manages plant emissions
Commercial Testing Laboratories	High-throughput third-party commercial verification, custody transfer certification, and dispute settlement	High sample throughput with 25-sample auto-loading ensures rapid turnaround and legally defensible, reproducible results
Environmental Quality Testing	Analytical screening of solid combustible wastes, hazardous industrial sludges, and biomass combustion materials	Provides high-precision quantification of potential acid-gas emissions for environmental impact assessments

Specification Parameter	Value / Operational Characteristic
Product Item Number	KT-TE56
Measurement Principle	Automated High-Temperature Combustion Coulometric Titration
Standard Compliance	GB/T 214-2007 (Determination of Total Sulfur in Coal)
Sulfur Determination Range	0.1% to 99.0%
Sulfur Measurement Resolution	0.001%
Analysis Duration per Sample	4 to 8 minutes (dependent on sample matrix and mass)
Operating Combustion Temperature	1150°C (Solid Fuels / Coal / Coke) / 920°C (Heavy Oils / Hydrocarbons)
Temperature Control Accuracy	±3°C
Sample Mass Range	10 mg to 100 mg
Sample Carousel Capacity	25 positions (continuous loading with priority interruption capability)

Specification Parameter	Value / Operational Characteristic
Sample Loading Mode	Automated motorized linear/rotary feed with dynamic sample queuing
Heating Core Construction	Vertical tube pyrolysis configuration with low-thermal-mass ceramic fiber insulation
Balance Connectivity	Direct digital input interface compatible with standard analytical balances
Pneumatic System Architecture	Integrated internal dual-stage diaphragm pump, stabilized flow control, and quick-release drying tubes
Control System Architecture	High-performance ARM series 32-bit MCU with embedded multi-tasking OS
Host Communication Interface	Hot-swappable USB interface supporting one-PC-to-multiple-analyzer networking
Titration Precision	Fully compliant with GB/T 214-2007 repeatability and reproducibility thresholds
Analytical Accuracy	Within permissible error tolerances of certified reference materials (CRMs)
Power Supply Requirements	220V AC $\pm$ 10%, 50 Hz
Maximum Power Consumption	$\leq$ 3.0 kW