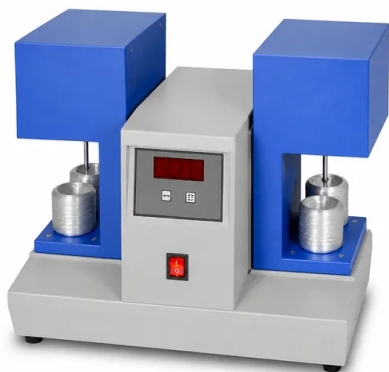


Automatic Coal Caking Index Mixer Four Crucible Laboratory Stirring System

Item Number: KT-TE59



Introduction

This automated four crucible coal caking index mixer provides precise dual speed kinematics, standardized 45° tilt control, and automated digital timing to eliminate manual error and optimize sample consistency for metallurgical coal testing laboratories.

[Learn More](#)

Application	Description	Key Benefit
Metallurgical Coking Coal Evaluation	Homogenizing coking coal samples with reference anthracite in steel manufacturing and coke production laboratories to determine coal agglutinating power (G index).	Eliminates human bias in manual stirring, ensuring dependable predictive modeling for coke strength and blast furnace performance.
Commercial Coal Washing and Beneficiation	Routine verification of cleaned coal fractions, middlings, and blend ratios during washing plant process control and quality assurance audits.	Accelerates batch turnaround times through simultaneous four-crucible mixing, enabling real-time adjustments to washing plant circuits.
Third-Party Commodity Inspection	Certification of export and import coal shipments at maritime shipping terminals, rail depots, and independent analytical inspection hubs.	Delivers strict audit-compliant repeatability that conforms exactly to standard testing procedures, minimizing commercial dispute risks.
Thermal Power Plant Fuel Blending	Analysis of metallurgical and pulverized fuel blends to verify volatile matter release characteristics and caking propensities in boiler feed streams.	Safeguards combustion parameters by providing uniform, fully homogenized laboratory test specimens from heterogeneous raw deliveries.
Geological Exploration and Mine Quality Mapping	Characterization of drill core samples and newly intersected coal seams to map coal rank, caking quality, and economic deposit viability.	High-throughput multi-sample processing handles high volumes of exploration core samples with zero mechanical drift or thermal error.
Academic and Industrial Energy Research	Fundamental studies on coal petrology, carbonization kinetics, thermal plastic development, and synthetic pitch-coal binder interactions.	Provides tightly controlled differential shear mechanics and exact angular timing required for peer-reviewed experimental consistency.

Specification Parameter	System Value / Operational Limit
Product Item Number	KT-TE59
Crucible Testing Capacity	4 crucibles simultaneously
Primary Crucible Inclination Angle	45°
Stirring Rod Rotational Speed	150 r/min
Crucible Base Rotational Speed	15 r/min
45° Inclined Stirring Stage Duration	1 min 45 s (105 seconds)
Transition Time (45° Incline to Vertical)	15 seconds
Initial Alignment Mode	Automatic vertical positional adjustment at startup
Sample Clamping Mechanism	Manual spring-loaded quick-clamping mechanism
Cycle Automation Level	Fully automated sequence (rotation, tilt, and timing) post-clamping

Specification Parameter	System Value / Operational Limit
Human-Machine Interface	High-visibility LED digital display
Operating Power Supply	220V AC $\pm$ 10%, 50 Hz
Rated Power Consumption	12 W
External Dimensions (W $\times$ D $\times$ H)	400 mm $\times$ 350 mm $\times$ 340 mm
Enclosure and Form Factor	Compact benchtop analytical workstation