

Touchscreen Hardgrove Grindability Index Tester Automated Coal Grindability Analyzer

Item Number: KT-TE41



Introduction

Engineered for precision coal quality testing, this touchscreen Hardgrove grindability index tester delivers automated 60-revolution cycles, calibrated linear regression calculation, and reliable digital data storage to optimize milling energy consumption across mining, metallurgical, and power generation laboratory facilities.

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Application	Description	Key Benefit
Thermal Power Plant Fuel Assessment	Evaluates incoming steam coal grindability to forecast pulverizer mill throughput, power draw, and auxiliary boiler energy consumption.	Prevents mill overload, reduces auxiliary power usage, and optimizes boiler burner feed consistency.
Commercial Coal Inspection & Trade	Verifies contractually specified HGI values for coal shipments, transshipment terminals, and export loading ports.	Delivers third-party verification, preventing contractual disputes through auditable linear regression metrics.
Metallurgical Coke & Steel Manufacturing	Tests coking coals and pulverized coal injection (PCI) grades for blast furnace feed preparation.	Optimizes blast furnace injection rates and ensures uniform fine particle generation in heavy pulverizers.
Coal Mining & Wash Plant Quality Control	Analyzes raw run-of-mine (ROM) coal and washed clean coal fractions across geological seams during exploration and processing.	Provides rapid seam classification data to guide washing plant yield and sorting parameters.
Solid Fuel Blending Facilities	Assesses grindability variability when blending high-HGI soft coals with low-HGI hard coals to create uniform burner feeds.	Minimizes differential grindability problems in downstream roller and bowl mills.
Academic & Geological Research	Investigates mechanical comminution characteristics, petrographic constituents, and fracture mechanics of solid fuels.	Yields repeatable, standardized research data compatible with international coal petrology benchmarks.

Parameter Category	Specification Attribute	Value / Standard (KT-TE41)
Core Identification	Model Item Number	KT-TE41
Mechanical Kinematics	Working Revolutions	60 ± 0.25 revolutions (automatic stop)
	Spindle Rotational Speed	20 ± 1 r/min
	Applied Grinding Vertical Force	284 ± 2 N (pre-calibrated deadweight mechanism)
	Steel Ball Quantity / Diameter	8 precision ground bearing balls / standard calibrated diameter
Sample Requirements	Feed Particle Size	0.63 mm to 1.25 mm (prepared via standard sieving)
	Initial Sample Mass Requirement	50.00 ± 0.01 g
	Sieve Sizing for Sub-Sieve Mass	0.071 mm (200 mesh) standard test sieve
Analytical Intelligence	Calibration Standards Supported	GBW12005b, GBW12006b, GBW12007b, GBW12008b
	Calculation Engine	Onboard unitary linear regression algorithm ($HGI = a + b \times m$)
	Interface Type	Industrial full-color touchscreen with interactive graphical menus
	Data Management	Local non-volatile memory storage with historical record recall

Parameter Category	Specification Attribute	Value / Standard (KT-TE41)
Operational Parameters	Power Supply	220 V AC ± 10%, 50/60 Hz single-phase
	Structural Materials	Heavy-cast structural housing, hardened alloy tool steel grinding components
	Safety Systems	Interlocked drive enclosure, overload protection, emergency stop switch