

# Automatic Hardgrove Grindability Index Tester For Coal Grindability Analysis

Item Number: KT-TE18



## Introduction

Streamline coal grindability assessment with an automated Hardgrove grindability index tester featuring microcomputer revolution control automatic weight loading precision ground components and standardized load execution for power metallurgical and commercial testing laboratories.

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| Application                           | Description                                                                                                                          | Key Benefit                                                                                                                                         |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Coal-Fired Thermal Power Plants       | Routine analysis of incoming raw coal and blended fuel stocks to evaluate pulverizer throughput and mill power consumption.          | Optimizes burner feed consistency, prevents mill overloading, and reduces auxiliary energy consumption across generating units.                     |
| Metallurgical Coke and PCI Operations | Evaluation of coking coals and pulverized coal injection (PCI) grades utilized in blast furnace ironmaking processes.                | Ensures optimal injection combustibility and mill wear predictability while maximizing operational safety in high-pressure pneumatic transport.     |
| Cement Clinker and Lime Production    | Grindability characterization of solid fuels used in rotary kiln calcination and precalciner burner firing systems.                  | Enhances kiln firing efficiency by matching coal fineness targets directly with mill grinding kinetics and specific power consumption.              |
| Commercial Fuel Testing Laboratories  | High-throughput commercial sample verification and certification according to standardized Hardgrove grindability testing protocols. | Maximizes laboratory sample throughput while eliminating operator bias through automated mechanical execution and digital revolution counts.        |
| Mining and Coal Preparation Plants    | Geological survey core analysis, clean coal washability testing, and beneficiation process characterization across mining sites.     | Delivers reliable geomechanical baseline data for plant sizing, crushing circuit engineering, and long-term contract fuel specification compliance. |
| Chemical and Synthetic Fuel Research  | Benchmarking coal feedstocks for gasification, liquefaction, and activated carbon precursor grinding trials.                         | Provides dependable particle degradation metrics required for fluidization modeling, gasifier feed sizing, and pneumatic conveyance planning.       |

| Parameter Specification        | Value / Description (Model: KT-TE18)                                                      |
|--------------------------------|-------------------------------------------------------------------------------------------|
| Model Identifier               | KT-TE18                                                                                   |
| Working Revolutions            | 60 ± 1/4 r (60 ± 0.25 revolutions)                                                        |
| Spindle Rotational Speed       | 20 ± 1 r/min                                                                              |
| Grinding Load Force            | 284 ± 2 N                                                                                 |
| Main Drive Motor Power         | 200 W                                                                                     |
| Auxiliary Actuator Motor Power | 25 W                                                                                      |
| Total System Power             | 225 W                                                                                     |
| Power Supply Compatibility     | 220 V AC ± 10%, 50 Hz                                                                     |
| Operational Control Mode       | Microcomputer-controlled automatic cycle (one-key start)                                  |
| Loading and Lifting Mechanism  | Fully motorized automatic mortar positioning and vertical top-pressure loading            |
| Count Termination              | Automatic stop at target revolution count with non-volatile cumulative resumption         |
| Safety and Interlock Features  | Dedicated emergency stop switch, drive overload protection, fault diagnostics             |
| Construction and Finish        | Heavy-duty industrial structural steel housing with protective chemical-resistant coating |