

Environmental Coke Drum Test Machine Metallurgical Coke Mechanical Strength Micum Drum Tester

Item Number: KT-JTD



Introduction

Engineered to measure metallurgical coke shatter strength and abrasion resistance, this environmental coke drum test machine features a fully sealed dust enclosure, automated revolution control, and heavy-duty mechanics to deliver consistent, safe results.

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Application	Description	Key Benefit
Metallurgical Coking Plant Quality Control	Regular monitoring of production coke batches to establish shatter resistance (M40/M25) and abrasion resistance (M10) indices prior to shipment.	Prevents off-spec fuel delivery to blast furnaces, safeguarding thermal efficiency and operational consistency.
Blast Furnace Operations & Burden Management	Assessing the structural breakdown of incoming merchant coke under mechanical tumbling to optimize blast furnace charging matrices.	Preserves gas permeability and molten iron drainage in high-capacity blast furnaces by eliminating fine coke accumulation.
Commercial Inspection & Metallurgical Trade Assay	Third-party inspection and umpire assay of bulk coke consignments at shipping ports, rail terminals, and customs transit depots.	Delivers standardized, auditable mechanical degradation data fully aligned with international purchasing specifications.
Coal Blending & Coking Research	Pilot-scale testing of coked charges derived from novel coal blends, bio-coal additions, or coking additive formulations.	Accelerates formula development by quantifying the direct correlation between coal rank blends and resultant mechanical coke strength.
Refractory & Carbon Material Attrition Testing	Evaluation of non-coke carbon blocks, electrode pastes, and dense refractory aggregates subjected to repetitive tumbling impacts.	Provides actionable comparative data regarding fracture propagation and surface wear rates under mechanical stress.
Environmental Laboratory Modernization	Replacement of antiquated, unsealed drum testers with fully enclosed containment architecture in clean metallurgical research facilities.	Eliminates carcinogenic airborne dust emissions, reducing laboratory ventilation loads and occupational health risks.

Specification Parameter	Standard Variant (KT-JTD)	Semi-Sealed Variant (KT-JTD-A)	Fully Sealed Eco-Friendly (KT-JTD-B)
Model Number	KT-JTD	KT-JTD-A	KT-JTD-B
Enclosure Configuration	Open Frame / Conventional	Semi-Sealed Dust Hood	Fully Enclosed Eco-Friendly Housing
Compliance Standard	GB/T 2006-2008	GB/T 2006-2008	GB/T 2006-2008
Drum Internal Diameter	1000 mm	1000 mm	1000 mm
Drum Internal Length	1000 mm	1000 mm	1000 mm
Drum Rotational Speed	25 r/min	25 r/min	25 r/min
Preset Revolution Count	100 revolutions	100 revolutions	100 revolutions
Preset Cycle Duration	4 min ± 10 s	4 min ± 10 s	4 min ± 10 s
Drive Motor Power	1.5 kW / 2.2 kW	1.5 kW / 2.2 kW	1.5 kW / 2.2 kW
Operating Voltage	380 V (Three-Phase, 50 Hz)	380 V (Three-Phase, 50 Hz)	380 V (Three-Phase, 50 Hz)
Drum Lifter Geometry	Angle steel lifting plates	Angle steel lifting plates	Angle steel lifting plates
Tumbling Drop Angle	> 90° free-fall initiation	> 90° free-fall initiation	> 90° free-fall initiation

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Dust Containment Efficiency	Basic (Ambient Extraction)	Medium (Shielded Containment)	High (Total Hermetic Capture)
Peripheral Compatibility	Pre/Post Mechanical & Manual Sieves	Pre/Post Mechanical & Manual Sieves	Pre/Post Mechanical & Manual Sieves