Sinter And Pellet Drum Testing Machine Sinter Ore Tumbler Test Equipment

Item Number: KT-JTM

Introduction

Engineered to YB/T 5166 standards, this sinter and pellet drum testing machine accurately evaluates tumbler and abrasion indices. Featuring robust gear drives, automated revolution counting, and integrated screening units, it delivers repeatable results for rigorous metallurgical quality control environments.

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Application	Description	Key Benefit
Blast Furnace Quality Assurance	Evaluates the mechanical strength of sinter and pellet batches prior to furnace burden charging.	Prevents blast furnace shaft permeability loss by detecting weak agglomerates before they generate excessive burden fines.
Sintering Plant Process Tuning	Continuously monitors the tumble index and abrasion index to evaluate fuel mix ratios, bed depth, and ignition settings.	Delivers immediate empirical feedback to optimize sintering furnace thermal profiles and raw mixture basicity.
Pelletizing Plant Quality Verification	Assesses cold crushing resilience and resistance to degradation during transport for green and fired iron ore pellets.	Ensures pellet binders and induration firing temperatures achieve the mechanical hardness required for bulk distribution.
Commercial Metallurgical Inspection	Serves third-party analytical and inspection laboratories conducting contractual acceptance testing for ore shipments.	Provides audit-compliant test methodology that matches binding commercial specifications and commodity trading contracts.
Pyrometallurgical Research	Allows university and institutional research facilities to measure the mechanical properties of alternative fluxed ores and low-carbon agglomerates.	Yields high-precision comparative data on experimental binders, hydrogen-reduced sinters, and biochar-infused iron burdens.
Bulk Port Material Handling	Assesses aggregate degradation risks across transfer chutes, stacker-reclaimers, and ship loading conveyors.	Establishes realistic handling limits and degradation allowances for maritime and rail ore transit networks.

Subsystem	Parameter	Specification (KT-JTM Standard)	Specification (KT-JTM-E Environmental)
General	Compliance Standard	YB/T 5166-1993(2005)	YB/T 5166-1993(2005)
	Enclosure Type	Open Heavy-Duty Chassis	Sealed Dust-Containment Hood
Tumbling Drum	Drum Inner Diameter	1000 mm	1000 mm
	Drum Inner Length	500 mm	500 mm
	Rotational Speed	25 rpm	25 rpm
	Preset Revolution Count	200 Revolutions	200 Revolutions
	Drum Motor Power	1.5 kW	1.5 kW
	Electrical Supply	380V / 50Hz, 3-Phase	380V / 50Hz, 3-Phase
	Revolution Counter	STS-3 Digital Display Counter	STS-3 Digital Display Counter
Pre-Drum Sieve	Deck Surface Area	1600 × 500 mm	1600 × 500 mm
	Deck Layers	2 Layers	2 Layers
	Primary Screen Apertures	40 × 40 mm, 25 × 25 mm	40 × 40 mm, 25 × 25 mm

Subsystem	Parameter	Specification (KT-JTM Standard)	Specification (KT-JTM-E Environmental)
	Secondary Screen Apertures	16 × 16 mm, 10 × 10 mm	16 × 16 mm, 10 × 10 mm
	Deck Inclination Angle	10° – 11.5°	10° – 11.5°
	Vibration Amplitude	6 – 8 mm	6 – 8 mm
	Sieve Motor Power	2.2 kW	2.2 kW
Post-Drum Sieve	Deck Surface Area	800 × 500 mm	800 × 500 mm
	Swing Angle	45°	45°
	Standard Screening Cycle	1.5 min per batch	1.5 min per batch
	Screen Plate Dimensions	800 × 500 mm	800 × 500 mm
	Screen Aperture Sizes	6.3 × 6.3 mm (or 5.0 × 5.0 mm)	6.3 × 6.3 mm (or 5.0 × 5.0 mm)
	Sieve Motor Power	1.1 kW	1.1 kW