Horizontal Reciprocating Mechanical Sieve Shaker For Iron Ore Sinter And Pellets

Item Number: KT-QT

Introduction

Engineered for metallurgy and quality inspection, this horizontal reciprocating mechanical sieve delivers standardized dry sizing for iron ore, sinter, and pellets with stepless stroke adjustments, digital timing, and high-capacity multi-layer frames for reproducible particle analysis.

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Application	Description	Key Benefit
Iron Ore Sinter Sizing Analysis	Sizing cold-screened sinter product prior to blast furnace charging in metallurgical quality laboratories.	Ensures exact compliance with blast furnace permeability standards by isolating sub-5 mm fines and oversize lumps.
Iron Ore Pellet Degradation Testing	Determining the size distribution and tumble abrasion index of fired green or fluxed pellets after mechanical stress testing.	Delivers repeatable fractional data to evaluate compression strength and decrepitation susceptibility during transport.
Run-of-Mine Coal Classification	Mechanical fractioning of raw and washed coal samples into defined dimensional classes for thermal and coking analysis.	Provides clean separation without blinding, handling heavy batch charges up to 50 kg per cycle with high repeatability.
Coke and Semicoke Friability Profiling	Classifying metallurgical coke and breeze specimens following shatter tests to determine structural resilience under burden load.	Eliminates human handling variance, establishing standard kinetic separation parameters across all specimen runs.
Quarry Aggregate and Ballast Sizing	Grading crushed stone, rail ballast, and heavy construction aggregate for civil engineering and infrastructure projects.	Accommodates large-aperture perforated plates up to 40 mm to verify compliance with geometric particle specifications.
Mineral Processing Pilot Plants	Validating crushing and screening circuit efficiencies through multi-deck fractional screening of circuit discharge.	Enables fast five-tier separation in one automated cycle, reducing pilot plant sample preparation bottlenecks significantly.
Port and Terminal Cargo Inspection	Conducting mandatory commercial sampling and size verification on bulk cargo carriers during loading and discharge.	Rugged, high-capacity design allows rapid turnaround for moisture, fines percentage, and invoice specification checks.

Specification Parameter	Value / Range
Equipment Item Number	KT-QT
Screen Outer Frame Dimensions (L × W)	800 mm × 500 mm
Number of Screen Decks	1 to 5 Layers (Configurable)
Standard Screen Aperture Sizes	40×40 mm, 25×25 mm, 16×16 mm, 10×10 mm, 6.3×6.3 mm, 5×5 mm
Reciprocating Stroke Adjustment Range	160 mm – 280 mm
Operational Stroke Amplitudes	40 mm, 160 mm, 200 mm, 240 mm, 280 mm
Operating Reciprocating Frequency	240 cycles/min (rpm)
Batch Sample Capacity	Up to 50 kg / batch
Motor Power Rating	1.5 kW
Drive Transmission Type	Electric motor with V-belt pulley and eccentric crankshaft guide
Control Box Configuration	Integrated solid-state electrical enclosure with digital time relay

Specification Parameter	Value / Range
Cycle Timing Setting Range	Standard preset: 12 minutes (Fully adjustable via digital timer)
Display Mode	Digital visual display with automated countdown termination
Overall Machine Dimensions (L × W × H)	2500 mm × 750 mm × 1250 mm
Control Console Housing Dimensions (L × W × H)	470 mm × 285 mm × 290 mm
Applicable Specimen Types	Metallurgical iron ore, sinter, oxidized pellets, coking coal, crushed minerals
Operational Environmental Compliance	Suitable for ambient testing laboratories and industrial plant environments