

Industrial Coke Ball Grinding Machine For Metallurgical Sample Preparation

Item Number: KT-ZQX



Introduction

Optimize metallurgical sample preparation with our high-efficiency coke ball grinding machine. Designed to shape irregular coke lumps into uniform 23-25 mm spheres, this durable 3.3 kW system maximizes specimen yield.

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Application	Description	Key Benefit
Coke Reactivity Index (CRI) Preparation	Refining pre-crushed coke fragments into standardized spheres for evaluation under high-temperature carbon dioxide reaction conditions.	Ensures uniform reactive surface area across all specimens, eliminating geometry-induced testing deviations.
Coke Strength After Reaction (CSR) Testing	Producing dimensionally accurate spherical samples for post-reaction mechanical tumbling and degradation resistance evaluations.	Guarantees consistent packing density and physical contact in test retorts for reproducible index scores.
Blast Furnace Coke Quality Control	Preparing daily operational samples at steelworks coking plants to assess batch-to-batch coke mechanical integrity and stability.	Dramatically boosts usable sample yield from primary crushers, lowering sample preparation cycle time.
Commercial Testing and Inspection Assays	Preparing high-precision reference spheres for third-party metallurgical inspection agencies certifying commercial coke consignments.	Delivers certified dimensional accuracy between 23 mm and 25 mm, matching international contractual standards.
Metallurgical Research and Development	Grinding experimental coking coal blends and novel bio-coke formulations into consistent spherical geometries for comparative trials.	Provides dependable geometric baselines to isolate chemical and physical variables in new carbon materials.
Refractory and Carbon Material Milling	Secondary spherical grinding of abrasive non-metallic mineral lumps and carbon blocks requiring controlled particulate spherical forms.	Demonstrates broad processing flexibility across hard, abrasive carbonaceous and mineral aggregates.

Parameter	Specification	Engineering Details
Equipment Identifier	KT-ZQX	Industrial Coke Ball Grinding Auxiliary Unit
Charge Mass Capacity	< 5,000 g per batch	High-capacity chamber handling up to 5 kg of coke feed per cycle
Feed Particle Size	≥ 23 mm	Accepts coarse, irregular coke pieces from primary crushers
Discharge Particle Size	23 mm - 25 mm	Finely calibrated spherical output matching standard test protocols
Finished Specimen Geometry	Spherical (球状)	Uniform rounded geometry without sharp angular edges
Motor Rated Power	3.3 kW	Continuous-duty industrial motor with high starting torque
Electrical Supply	AC 380V / 50Hz	Three-phase industrial laboratory power configuration
Functional Role	Auxiliary yield enhancement	Refines non-compliant crushed lumps into qualified test spheres
Target Material	Metallurgical coke & carbon	Hard, abrasive, high-carbon structured materials
Operating Mode	Batch mechanical grinding	Impact and frictional abrasion shaping mechanism