

Granular Activated Carbon Compressive Strength Tester Desulfurization Denitrification Resistance Testing Instrument

Item Number: KT-JTU



Introduction

Evaluate granular coal-based activated carbon mechanical endurance using our high-precision compressive strength testing instrument built to GB/T 30202.3 standards with 0-10kN force range, 0.1N resolution, overload protection, and automated electrical control systems for demanding industrial quality assurance requirements.

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Application	Description	Key Benefit
Desulfurization & Denitrification Carbon QA	Testing crushed activated carbon granules intended for flue gas cleanup towers in coal-fired power stations and steel plants.	Ensures carbon pellets withstand mechanical compaction and fluidization without crumbling into fine dust.
Coal Chemical Manufacturing	Evaluating batch-to-batch structural integrity of extruded and spherical coal-based activated carbons during production.	Provides real-time quality feedback to optimize extrusion pressures, binder content, and activation temperatures.
Thermal Power Plant Fuel & Emission Labs	Quality audit of incoming bulk desulfurization adsorbents prior to charging fixed or moving reactor beds.	Prevents operational blockages and pressure drop spikes caused by low-strength adsorbent degradation.
Catalyst & Adsorbent R&D	Researching novel impregnated carbons, carbon molecular sieves, and heavy-metal capture adsorbents.	Provides precise force-deformation curves to benchmark mechanical improvements in experimental formulations.
Third-Party Material Testing	Executing standardized compliance testing and dispute resolution for commercial carbon suppliers and consumers.	Delivers fully traceable, standard-compliant test data suitable for formal certification and audit reports.
Solvent Recovery & Gas Treatment	Testing heavy-duty granular activated carbons used in high-flow organic solvent vapor recovery vessels.	Guarantees long service life under cyclic thermal and pressure loading in demanding gas-phase operations.

Parameter	Technical Specification (Model: KT-JTU)	Standard & Operational Details
Product Identification	KT-JTU	Granular Activated Carbon Compressive Strength Tester
Standard Compliance	GB/T 30202.3-2013	Test Method for Granular Coal-Based Activated Carbon for Desulfurization and Denitrification (Compressive Strength)
Force Measuring Range	0 – 10 kN	Broad dynamic range for granular, extruded, and pelleted carbon samples
Measurement Accuracy	±1%	Full-scale precision ensured through calibrated digital load cell processing
Force Resolution	0.1 N	Fine resolution for accurate detection of initial fracture and yield loads
Testing Speed Range	0 – 500 mm/min	Fully adjustable stepless speed control for versatile testing regimes
Displacement Resolution	0.01 mm	Linear displacement precision for exact deformation measurement
Input Voltage	220 V AC	Standard single-phase electrical supply requirement
Voltage Frequency	50 Hz	Universal industrial grid frequency compatibility
System Completeness	Fully Compliant	Integrated complete system including load frame, drive unit, and electrical controls

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Safety Protection	Automatic Overload Safeguard	Hardware and software load-limiting protection for cell safety