

Activated Carbon Ignition Temperature Tester Automated Ignition Point Apparatus

Item Number: KT-TZ



Introduction

Engineered for compliance with national standards this automated activated carbon ignition temperature tester delivers bidirectional digital monitoring precision quartz combustion heating and dual curve differential temperature tracking for uncompromising laboratory accuracy and testing safety.

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Application	Description	Key Benefit
Granular Activated Carbon Manufacturing	Routine batch quality control and production verification testing according to standardized self-ignition criteria.	Prevents non-compliant carbon batches from entering commercial supply chains by validating exact ignition resistance thresholds.
Volatile Organic Compound (VOC) Recovery	Assessment of activated carbon adsorption bed safety under high-temperature solvent concentration and stripping operations.	Mitigates industrial fire risks in solvent recovery units by verifying safe operating margins beneath spontaneous combustion points.
Flue Gas & Thermal Power Desulfurization	Thermal stability screening of carbon-based sorbents utilized in hot flue gas purification and acid gas scrubbing installations.	Ensures continuous sorbent functionality and fire hazard prevention within industrial ductwork under varying thermal loads.
Coal Processing & Petrochemical Quality Assurance	Characterization of autoignition behavior in specialty activated charcoals, petroleum coke, and carbon catalysts under forced air.	Delivers certified thermal metrics required to comply with mandatory occupational safety and material storage regulations.
Environmental Monitoring & Air Filtration	Validation of impregnated and virgin activated carbons deployed in industrial air handling and hazardous gas containment filters.	Guarantees that filter media do not self-ignite under unexpected exothermic adsorption conditions or elevated ambient heat.
University & Academic Research Laboratories	Investigation of surface chemistry, porous matrix oxidation kinetics, and activation degree influences on carbon reactivity.	Produces high-resolution thermal curve data with complete digital audit trails for peer-reviewed research and kinetic modeling.
Third-Party Inspection & Technical Supervision	Official standard compliance testing for metrology institutes, export inspection bureaus, and commercial certification agencies.	Delivers repeatable, tamper-proof automated reporting matching the technical demands of national and international testing standards.

Specification Parameter	Technical Detail (Item Number: KT-TZ)
Test Standard Compliance	GB/T 7702.9-2008, GB/T 20450-2005
Primary Application	Determination of ignition temperature of granular activated carbon
System Architecture	Bidirectional automated communication (PC to controller) with full process automation
Control System	Programmable Logic Controller (PLC) with automated heating rate program control
Airflow Measurement Range	0 to 20 L/min (Integrated adjustable gas flowmeter)
Temperature Sensing Configuration	Dual K-Type Thermocouples (Class II Precision)
Furnace Temperature Monitoring	Automated closed-loop sensing, digital PID control, and continuous display
Sample Temperature Monitoring	Automated real-time core sample temperature detection and dynamic tracking
Graphic Visualization Output	Real-time dual curve generation (Furnace Temperature vs. Time; Sample-to-Furnace ΔT vs. Time)
Data Processing Mode	Automated calculation of ignition point, result storage, query recall, and automated report printing
Reaction Vessel Component	Specially designed high-purity quartz combustion tube

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Thermal Homogenization Media	High-purity quartz thermal equalization beads
Testing Environment	Forced air circulation with programmable thermal escalation
Target Specimen Forms	Granular activated carbon, extruded pellets, crushed coal-based, wood-based, and shell-based carbons