

Battery Combustion Test Machine For Constant Temperature Battery Burning Tests

Item Number: DA07



Introduction

Battery combustion test machine for controlled battery flame-resistance evaluation, featuring PLC touch control, remote automatic ignition, adjustable flame settings, protected observation, and smoke-triggered exhaust. Supports standards-based battery safety testing with robust stainless-steel chamber construction for laboratory qualification and research workflows.

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Application	Description	Key Benefit
Lithium battery cell qualification	Conduct flame-resistance testing on battery cells using a controlled Bunsen flame, adjustable flame height, and configurable flame-application time.	Supports a structured approach to battery safety evaluation against relevant test methods.
Battery pack development	Observe the response of battery assemblies during combustion-related development tests through the protected visible window.	Enables direct visual monitoring while the operator uses remote control outside the immediate test enclosure.
Battery-material research	Evaluate battery-related samples and material configurations where flame exposure is part of the research procedure.	Provides defined burner, cage, mesh, rod, and timing parameters for repeatable laboratory setup.
Quality-control laboratories	Perform routine incoming, development, or qualification checks for battery products requiring flame-resistance test evidence.	Fully automatic process control helps standardize repeated test execution.
Third-party safety inspection	Configure battery combustion testing for laboratories performing testing against UL2054, GB31241, or related internal procedures.	Adjustable flame duration from 0 to 9999 H, M, S accommodates procedure-specific exposure settings.
Battery manufacturing R&D	Investigate battery behavior under controlled flame application during product design, process validation, and failure analysis.	Smoke-triggered exhaust, failed-ignition gas cutoff, and chamber protection support controlled test operations.
Academic electrochemical research	Use the system in university and institutional laboratories studying battery safety, abuse response, and flame-resistance behavior.	Touch-screen control and remote operation provide a practical platform for supervised research workflows.

Parameter	Specification
Site-facing identifier	DA07
Intended use	Battery flame-resistance test; manufactured according to test standards such as UL2054 and GB31241
Burner type	Bunsen burner
Burner nozzle internal diameter	0.375 inch (9.5 mm)
Burner tube length	Approximately 100 mm
Flame application time	0-9999 H, M, S, settable
Flame height	10-75 +/-2 mm, adjustable
Test rod diameter	1/4 inch (6.35 mm) x 14 inch (355.6 mm)
Test rod height	305 mm +/-1 mm

Parameter	Specification
Test cover width	Distance between two parallel sides: 24 inches (610 mm)
Test cover height	14 inches (355.6 mm), octagonal
Octagonal cage upper and lower edge dimensions	12.7 x 12.7 mm (+/-0.5 mm)
Test aluminium mesh diameter	0.010 inch (0.25 mm), 16 mesh x 16 mesh
Octagonal cage stainless-steel mesh cover	Distance between each pair of opposite faces: 2 feet (610 mm); octagonal mesh cover height: 1 foot (305 mm)
Test circular-hole surface diameter	102 mm
Ignition device	Automatic ignition; remote-control operation effective within 10 m
Display method	PLC touch type plus remote control
Control method	Fully automatic control of the test process
Combustion gas requirement	High-purity liquefied petroleum gas, supplied by customer
Bottom configuration	Four universal casters for free movement
Viewing window size	390 x 360 mm; 20 mm thick tempered explosion-proof glass
Observation-window protection	Explosion-proof glass with added steel mesh; double-layer protection
Timer	Four-digit display, 0-9999; hours, minutes, and seconds switchable
Internal chamber material	SUS304 stainless steel
External chamber material	Cold-rolled steel with high-temperature spray coating
Exhaust outlet	Diameter 150 mm; exhaust fan installed at rear of enclosure
Exhaust operation	Exhaust opens automatically on smoke alarm; closes after a delay when smoke is absent
Lighting	Integrated lighting using external reflection
Ignition-failure response	Alarm and simultaneous cutoff of gas source
Machine dimensions	W940 x D780 x H1620 mm; subject to actual equipment
Power supply	AC 220 V, 50 Hz; single phase
Power	2.0 KW
Alarm indicator	One three-color alarm light