

L SPARK

ELECTROSTATIC SPARK SENSITIVITY TESTER

The L SPARK™ is the newest member of the family of instruments dedicated to the testing of ESD sensitivity of energetic materials. The L SPARK test instrument is designed for the testing of bare energetic materials (pyrotechnic compositions, primary and secondary explosives and propellants) in the granular bed form.

design by Jan ERMIS



For testing energetic substances the L SPARK employs the comparative method concept – the response of the tested material is compared with the reference material along with the known ESD behavior under the given discharge conditions. The L SPARK provides the user with basic information about the risk associated with the ESD event of the tested substance within the least time and at minimum costs. This principle of operation does not require any further energy evaluation or discharge diagnostics of the discharge.

APPLICATIONS

The L SPARK is suitable for applications where only a basic screening of the risk associated with granular energetic materials is required along with impact and friction sensitivity data. The L SPARK's simple operation and low running costs allow for the testing of a large count of samples in a short period of time with minimal running costs. This feature makes the L SPARK ideally suited for production facilities (e.g. for periodic production tests, or for the quick assessments of new materials/components used in the manufacturing processes).

ADVANTAGES & FEATURES

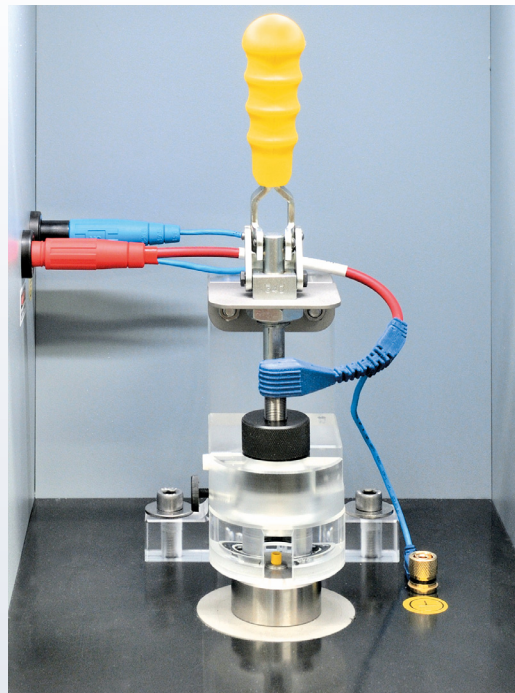
- ▶ Compact design
- ▶ Low running costs
- ▶ Suitable for a quick basic screening of the risks associated with all types of granular explosives
- ▶ The versatility of the spark gap geometry allows for the easy modification of the spark gap geometry



Resistor calibrating target

COMPLIANCE

- EN 13938-2 Explosives for civil uses – Propellants and rocket propellants, Part 2: Determination of resistance to electrostatic energy



Manually operated test stand



Capacitor selector switchboard

L SPARK™ vs. X SPARK™ Comparison of Technical Parameters

	L SPARK	X SPARK
Direct discharge energy evaluation	—	●
Automatic test stand function	—	●
Static electrode test stand	●	●
Moving electrode test stand	—	●
Working voltage up to 10 kV	●	●
Set of external and built-in capacitors	●	●
Application of statistical testing procedures	—	●

● Supported — Not supported

L SPARK™ vs. X SPARK™ Comparison of Applications

	L SPARK	X SPARK
Explosives, Propellants and Pyrotechnics	●	●
Research & Development	○	●
Service Qualification	●	●
Product Quality Control	●	○
In-service Surveillance	●	○
Storage & Transport Safety (Risk)	○	●
Ammunition Demilitarization	●	●

● Applicable ○ Limited use



Accessories

Other available version of spark testers

ESD LS30™

Large-scale electrostatic discharge sensitivity tester



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