

LEC RESPONDS TO MARKET DEMAND FOR A LOW COST IONIZER

SPLINE BALL IONIZER[®] **(SBI[®])**

A COST OPTIMIZED LIGHTNING PROTECTION MODULE
BASED ON POINT DISCHARGE TECHNOLOGY



INTRODUCING THE SBI[®]

Based on over 25 years of research and development, the Spline Ball Ionizer embodies features of the Dissipation Array[®] System (DAS[®]), reduced in size to reduce cost, but minimizing the risk and the secondary effects of lightning activity.

- Prevents most strikes.
- Collects all other strikes.
- Minimizes damage potential.
- Building block toward total prevention.
- Light weight.
- Low wind profile.
- Easy to install.
- All stainless steel construction.
- UL Listed.
- Now available in clusters.



PROTECTION CONCEPTS AND CONSIDERATIONS

There are THREE classes of Lightning Protection Systems:

STROKE COLLECTOR

This is a form of lightning rod system with a stroke collector, a current diverter and grounding.

STRIKE PREVENTER

The Dissipation Array System (DAS) is the only true strike prevention system. It prevents the strike by collecting and slowly dissipating the storm induced charge in the area of concern through point discharge or ionization. The DAS is an engineered system.

HYBRID CONCEPT

The Hybrid dissipator is an assembly (not a system) designed to provide some ionization capability, similar to the DAS. However, in contrast to the DAS, the Hybrid's limited ionization capability reduces its ability to prevent strikes. Under intense storms, the Hybrid fails to prevent the strike and is then the recipient of that strike. Its range of effectiveness varies significantly with the manufacturer. Figure 1 illustrates the contrast in effectiveness between the three concepts.

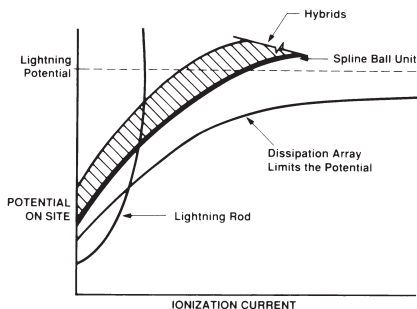


Figure 1

THE SPLINE BALL IONIZER (SBI)

In response to market demands, LEC has elected to make available a lower cost lightning prevention type system. The result is our Spline Ball Ionizer (SBI).

The SBI embodies the parameters found to be optimum for charge dissipation from a small, low-cost ionizer.

The essential difference between LEC's SBI and the wire brush concepts is in their use and performance. Although the SBI may collect an occasional strike, it will dissipate the storm charge, and thus prevent most strikes. The SBI's superior performance is the result of its ideal shape, length of points, and spacing between points.

The SBI is considered a hybrid protector. Although it will prevent most strikes to the protected facility, it is not expected to prevent all strikes. In contrast to the wire brush hybrids, the SBI will continue to dissipate under much stronger electrostatic fields further reducing the strike potential.

IMPROVING SBI PERFORMANCE WITH THE CHEM-ROD®

When installing an SBI, it is recommended that the customer install at least one Chem-Rod, a low DC surge impedance and low resistance grounding electrode. It will improve the performance of the SBI in both the charge collection function and in the stroke diversion function.

WARRANTY

The SBI is warranted to perform as specified herein. If the customer is not fully satisfied with the performance, the purchase price may be applied towards the purchase of a Dissipation Array System which will prevent all strikes.

SPLINE BALL CLUSTERS™ (SBC™)

The SBC concept provides a modular approach toward building DAS capability where engineering constraints limit or prevent achieving the desired results. These constraints may include wind load, interference with antennas, physical clearances or greater ionization in a smaller area. In some configurations, the SBC concept actually exceeds the DAS in ionization capabilities at less cost.



Engineering Solutions to Lightning, Grounding and Surge Problems
Worldwide since 1971

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