



# The Point Ionizer™ for Conformal Coating Removal & ESD Control

The limitation of conventional systems to effectively neutralize the Electro-Static Discharge (ESD) during micro sandblasting has generated concerns within various industries where applications are sensitive to ESD damage. Such applications include Conformal Coating Removal, Component Demarking, Component De-flashing, and more.

Various methods are used to limit ESD such as grounding mats, ionizer bars and anti-static coating on the abrasive powder. However, the results have been less than desirable. Grounding mats only allow external grounding of the work piece. With non-conductive conformal coatings, the mats do not effectively eliminate static charges from within the work piece where damage may occur. Ionizer bars help eliminate ESD buildup within the work chamber and on the surface of the work piece. Yet ionizing the atmosphere does not necessarily prevent ESD damage from occurring inside the work piece. Anti-static abrasive powders that generate low ESD may be too aggressive thus causing mechanical damage to the work piece.

For the foregoing reasons, Crystal Mark, Inc. developed the **Point Ionizer™** to effectively reduce the ESD from reaching levels that could potentially cause damage to ESD sensitive components.

The **Point Ionizer™** introduces a balanced flow of positive and negative ions into the abrasive pathway at the exit point of the abrasive nozzle tip. With this introduction, the abrasive powder maintains a much lower ESD level upon contact with the work piece therefore essentially eliminating the potential of ESD damage.

The hand piece combines the abrasive nozzle and the ionization source. A simple grounding point for the nozzle within the hand piece further neutralizes the abrasive pathway. The nozzle is positioned at a fixed angle to the ionization source.

The effectiveness of the **Point Ionizer™** was proven during several studies for conformal coating removal. Using the **Carbo Blast™**, **Soda Bicarbonate** and **Plastic Blast** as the abrasive media with the **Point Ionizer™**, the conformal coating was selectively removed while safely maintaining ESD readings below 30 volts (tests were conducted by blasting an electrostatic field meter).



With the Point Ionizer



Without the Point Ionizer

Without the **Point Ionizer™**, ESD charges of 3,000 volts and higher were realized.

In addition to reducing the ESD levels, the Point Ionizer also improves the cleanliness on surfaces where static charges generate an electromagnetic field which cause the abrasive particles to cling more tenaciously to the work piece being blasted.

*The **Point Ionizer™** is the solution to your ESD and cleanliness concerns.*



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