



APPLICATION GOAL: Reduce defects from dust and particulate during a PVC substrate printing and laminating process.

BEFORE EXAIR:

A manufacturer prints custom logos on PVC substrate cards before they are laminated. Between printing and laminating static electricity causes dust and dirt to adhere to the substrate. The company scrapped an average of 200 cards per 1,000 card lots during the winter months due to blemishes. With EXAIR's [Model 7905 Static Meter](#), the substrate's static charge measured 19 kV/inch. Operators tried to wipe the material off with soft fabric, but the wiping only increased the static while moving the dust around, not off, the laminate.

**AFTER EXAIR:**

The customer put in a [Model 112236PKI 36" \(914mm\) Super Ion Air Knife Kit with Plumbing Kit Installed](#). Once installed, only 30 cards were lost out of 1,000 cards. This is an 85% reduction in defects from blemishes. Also, operators no longer needed to wipe off the debris, which made their job faster and eased their burden on preventing defects from dust. The Super Ion Air Knife lowered the static charge on the substrate from 19 kV/inch to 1.3 kV/inch in a single pass.

SUMMARY: The Super Ion Air Knife eliminated 85% of the card waste, reduced static on the substrate to 1.3 kV/inch, and lowered the time it took to make each product. These improvements allowed the company to increase production and shipments, which has increased the number of customers they are able to satisfy.