

In Use – 9

Ion Air Amplifiers Improve Finishes in Automotive Applications

Fewer rejects and less rework. That's the result of the new lineup of alpha energy static eliminators being used at a Ford Motor Company Plant. The Michigan-based plant produces plastic components for the automotive industry, including interior and exterior parts for use by Ford and Other manufacturers. Operations encompass all areas of plastics processing and converting, including extruding, molding, thermoforming and blow molding.

Having used a number of different ionizer types for static control, the plant was generally dissatisfied with both their performance and reliability. The decision was reached to try a different technology – alpha energy ionizers – for a particularly difficult application.

The application involved blowing off large molded parts as they traveled down an overhead conveyor line to an in-line paint station. The general plant environment was not very clean, and parts picked up dust and dirt during the conveying process, resulting in poor finish quality.

P-2035 and 4165 to the rescue.

To solve the problem, Ford installed an array of nine model P-2035 Ion Air Source units with Model 4165 Air Flow Amplifiers. A frame was

designed to support the system and installed over the conveyor line just before parts entered the paint station. The ionizer units were then mounted on 18" centers around the frame so they could blow ionized, compressed air from three directions onto the parts. The ionizers remove any static charge on the parts while blowing of particles that might cause poor quality in the final finish. By eliminating the static charge, more particles can be removed than by blowing with simple compressed air. In addition, particles are not re-attracted to parts, so they stay cleaner.

The Model 4165 Air Flow Amplifiers deliver up to 15 times the amount of compressed air consumed, by drawing in air from the surrounding area. This reduces the demand on the plant's compressor system, while delivering a large volume of air for the project.

A monitoring program made Ford engineers realize that electrical ionizer performance varied almost daily. With that variation, results fluctuated from acceptable to unacceptable. Since installing the alpha energy systems, these engineers have been impressed with the ability to deliver reliable, consistent results, day after day – with no maintenance.

Installing Ion Air Amplifiers on Automotive Paint Line

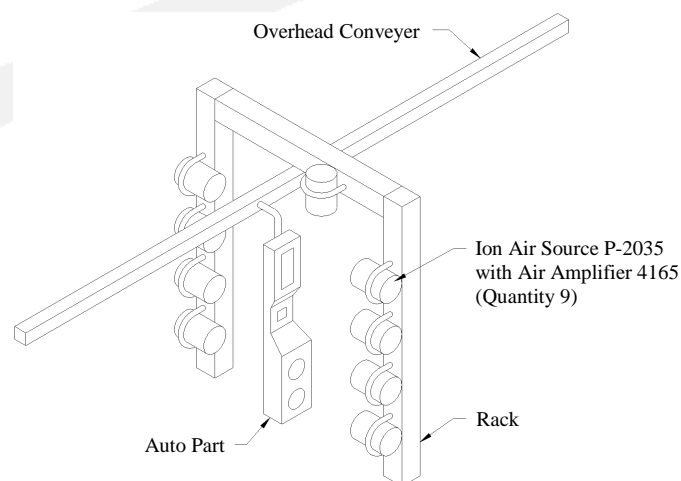


Figure 1



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