EXAIR® Case Study

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APPLICATION GOAL: Reduce sound level & maintain blow off performance of handheld devices.

BEFORE EXAIR: A manufacturer of medical devices used hand held air guns for blow off & cleaning of their products at various stages of manufacturing and assembly processes. They were supplied with compressed air at 90 psig through a ¼" diameter air hose. The air guns worked satisfactorily, but were quite loud, and they wanted a blow off solution that could be installed in a fixed position. This air gun's sound level is rated by the manufacturer at 91 dBA, blowing into open air. Actual sound level measurement by the user was 103.4 dBA, which includes impingement noise associated with the blow off. 91 dBA exceeds OSHA Standard 1910.95(a) limits for 8 hour exposure, and103.4dBA exceeds the limit for 2 hour exposure. The operator receives four parts at a time, and those parts need to be blown off & sent to the next assembly station within four minutes.

AFTER EXAIR: The handheld devices were replaced with two **Model 110006 6" Aluminum Super Air Knives**, actuated with a foot pedal valve in the air supply line. Operators manually pass the products through the two converging air curtains. Sound level during blow off was reduced to 80.4 dBA, which is well within OSHA limits for maximum allowable noise exposure. Operators are still able to blow off four parts and send them to the next assembly station within the required four minutes, and prefer the 'hands free' operation provided by the fixed mounting of the Super Air Knives and foot pedal valve operation.

SUMMARY: This customer's goal of reducing sound levels was met dramatically, while maintaining the required throughput in the product assembly process.

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