CASE STUDY

1561

APPLICATION GOAL

To lower compressed air consumption and noise levels associated with crimped-end copper line blow offs installed on machine tools.

BEFORE EXAIR

A major producer of high tech plastic products operates (10) machines that used compressed air blow offs to remove chips and shavings from manufactured parts. These blow offs consisted of ¼" open ended copper tubing that had been crimped on the end. This was effective, but loud, inefficient, and not compliant with OSHA safety or sound level standards. They operate these blow offs continuously, with a supply pressure of 100 PSIG, ten hours a day, four days a week.

¼" Copper Tube, Type L, crimped

Opening Size	Compressed Air Consumption @100 PSIG	Sound Level @3ft Distance
1/16" X 3/16"	19.6 SCFM	96 dBA

AFTER EXAIR

Using standard compression fitting adapters, they were able to quickly and easily install **Model 1100 ¼ NPT Super Air Nozzles** after simply cutting the crimped ends off the tubing. These effectively blow off the parts and at a fraction of the compressed air consumption and sound level of the copper tubing:

	Compressed Air Consumption @100PSIG	Sound Level @3ft Distance
Model 1100	16.9 SCFM	76 dBA
Reduction (per Nozzle)	2.7 SCFM	20 dBA

*Per Nozzle

SUMMARY:

The considerable reduction in sound level was noticed immediately upon installation of the Super Air Nozzles on just a few machines on the first day. Once they were all outfitted, the sound level change throughout the shop was remarkable.

Based on an average compressed air cost of $0.25 per 1,000 SCF, and (10) machines running (40) hours a week, 52 weeks per year, this user is enjoying annual savings of $842.40, as well as the greatly reduced noise levels and compliance with OSHA standards for compressed air use for cleaning [1910.242(b)] and occupational noise exposure [1910.95].

EXAIR LLC • 11510 GOLDCOAST DR • CINCINNATI, OH 45249

(513) 671-3322 • (800) 903-9247 • TECHELP@EXAIR.COM • EXAIR.COM