



APPLICATION GOAL: The main goal is to reduce the consumption of compressed air. Added benefits would be to lower the noise level and/or reduce the number of nozzles needed.



BEFORE EXAIR: This customer was using compressed air, through a nozzle meant for liquid, to blow a quenching oil off metal sheet as it is processed before going into a coil. The existing machine blowoff was using 10 of these nozzles for a single line, the main process used an additional 40 nozzles. The nozzles were all installed onto header pipes that had been drilled and tapped. These liquid nozzles blew the oil off the metal sheet but the customer was concerned they were using too much air. They were also trying to reduce the noise level without having to slow down the line speed. The liquid nozzle consumption was 17.5 SCFM per nozzle with a noise level of 91.2 dBA.

AFTER EXAIR:

After installing fifty of EXAIR's Model [1122 2" \(51mm\) Flat Super Air Nozzles](#) with (.25mm) thick shim they were able to reduce the air consumption by 2.8 SCFM per nozzle. They were able to maintain the same line processing speed while saving a total of 140 SCFM, this equates to a 35 HP compressor. In addition to the air savings, the noise level was lowered by 16.2 dBA to a level of 75 dBA.



SUMMARY: By installing the [Model 1122 2" \(51mm\) Flat Super Air Nozzle](#), the customer successfully shut down a 30 HP compressor and saved another 5 HP on a second compressor. The total amount of compressed air saved equates to \$16.71 per 8 hour shift, for a total of \$4,177.63 per year. (8 hr./ day, 250 days)