



APPLICATION GOAL: To remove moisture from a galvanized steel part after roll forming, but before stacking, to prevent white oxidation from forming on the material during storage.



BEFORE EXAIR:

Our customer was using two plastic nozzles, normally used for liquid coolant, on the end of 11 inch (279mm) flexible tubing to blow the water into the air and a vacuum to remove the moisture. Pressure was limited because the nozzles would move out of position, when the air pressure was supplied. The process was hard to use and only removed 35% of the water from the product. This excess moisture caused a white oxidation to form on the galvanized parts, which lead to quality complaints from the customer. This setup used 74 SCFM of compressed air when fed with 80 PSIG.

AFTER EXAIR:

This customer installed two **6" (152mm) Super Air Knives**, one for the top and one for the bottom surface of the galvanized material. The setup was repeatable and prevented readjustment. The EXAIR Super Air Knives were able to remove 80% of the water from the surface of the parts, and their customers were no longer complaining of quality defects. Two 6" (152mm) Super Air Knives use 34.8 SCFM of compressed air when fed with 80 PSIG. This has cut the air use in half and removed the oxidation problem from the process.



SUMMARY: By installing two 6" (152mm) Super Air Knives, the roll former made their process easier to use, more reliable and produced better results. By using an engineered Super Air Knife instead of nozzles designed for liquid coolant, the customer was able to maintain a high quality product through to their customer and to the end user while using less than half of the air of the original blow off station. In an 8 hour shift, the EXAIR solution uses 18,816 fewer standard cubic feet per 8 hour shift and recovers \$1,177.50 per 250 day work year in compressed air savings. A simple ROI of 85 days!