



Production In Work Cell Increases With Help Of Easy Arm®

Industry Group: Ergonomic Assist
Systems and Equipment (EASE)



A components supplier of commercial lawn mowing equipment installed a new press brake for forming sheet metal into the decks for large mowers. The brake bends the ends of pre-cut sheet metal and forms deck plates that measure 42-72 inches. The metal sheets are 7 to 10 gauge, and range in weight from about 40-125 pounds.

When the new brake was installed, two operators would manually lift and hold the sheets while being formed. The piece had three bends, which required the sheet to be loaded, then turned 180 degrees to be folded the second time, and then repositioned for a third bend. The operation was slow, and positioning the metal properly into the press brake with two people pushing and pulling was very difficult. The process took about six minutes to make the three bends, and was a major drain on labor expenses.

After completing the prototype work for the new application, the company began investigating a better process for forming the mower decks.

After looking into robotics, the company determined that the expense was too high, and didn't give enough control of the part. The solution was a freestanding 330 pound capacity Easy Arm™ Q model with an 14 foot span and 10 foot height under boom. Customized magnetic tooling from Industrial Magnetics coupled with a remote mount handle, now allow just one worker to pick up the sheet

metal, engage float mode, and easily position the sheet into the press brake. The G360™ collector on the handle even allows the sheet metal to be spun and positioned so that all three bends can be completed without setting the load down.

“Float Mode makes this all possible,” said the Senior Manufacturing Engineer. “When we tried doing this manually, we could only get a few done per hour, and our people were exhausted. Now we can do 15-20 pieces per hour with just one operator who doesn’t get exhausted at all.”

Not only was the process cut from six minutes down to two, the extra worker was moved to another application to further increase company productivity.

“We had some people who didn’t want us to bring this process to our facility. Now, everyone involved is very happy with the Easy Arm™ and the new process.”



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