

METAL FABRICATING

NEWS

Play Events Are Serious Business For Landscape Structures



**Playground equipment manufactured at
Landscape Structures for worldwide distribution.**

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The 1524 CNC adds corner radiuses to 75 percent of the parts run on the machine. A standard tool from W.A. Whitney is used to produce the corners.

Landscape Structures, located in the picturesque city of Delano, Minnesota, designs and manufactures playground equipment for worldwide distribution. The company began operation in 1971 under the direction of Steve King. Soon his wife Barbara got involved in the company. Steve is a registered landscape architect and was operating his own site planning firm when he started Landscape Structures, Inc.

The company has seen successful growth through the years. They employ 275 employees and are now one of the largest makers of playground equipment. They recently purchased a W.A. Whitney 1524 CNC Fabricator to manufacture their mounting plates for the playground equipment. Jeff Revier, manufacturing engineer, is elated with the procurement.

Before the 1524 CNC Fabricator, they were setting up press brakes with unipunch style tooling and using an ironworker for shearing and punching. If they put more than two holes in a part they would use the unitized tooling. This was a labor intensive way of making parts. Setup time was enormous.

Jeff began looking for an ironworker with a CNC table, but didn't find one. After discussing the application with a representative at Gladwin Machinery in Minneapolis, Minnesota, Jeff learned that there was equipment to fit the need. They talked about a single station punch machine.

Jeff says, "I hadn't really had any experience with punch presses before I started working at Landscape Structures."

Gladwin told Jeff that W.A. Whitney was introducing an economical single station punch machine. A machine designed for companies that had ironworkers, but were looking for a more efficient and productive way to punch holes.

FABTECH International was just around the corner, so Jeff and his crew decided to

visit the exposition and look at the machine. The machine was the 1524 CNC Fabricator.

"We operated the machine. It did what we expected and had quick setups. Once we found what we wanted, we began doing some time studies on our ironworker and unipunch setups on our press brakes. We found that an average setup was taking approximately twenty-five minutes with unitized tooling on a press brake, and fifteen minutes on the ironworkers. The ironworkers were less because we were only setting up to punch two holes," Jeff stated.

Setup for both the ironworker and press brakes require forty-five percent of the processing time per job. Approximately seven setups are made each day on the press brakes and nine setups on the ironworkers. This equated to a little less than three hours per day to setup press brakes and two and a quarter hours setting up the ironworkers. "At the FABTECH show we found we could set up the 1524 CNC in less than two minutes," says Jeff. The reduction in setup time justified the purchase of the machine.

Justification

Jeff said, "In setup alone we saved over 1,000 hours per year." There are approximately sixteen setups on the 1524 CNC a



The products produced on the 1524 CNC are plates used to bolt play events onto the decks of the playground structures. These mounting plates keep the whole structure together.



Jeff Revier, project engineer, displays a part fabricated on the Whitney 1524 CNC.

day. It takes less than two minutes to setup the machine. Sixteen setups times two equals thirty-two minutes. It previously took thirty minutes to set up unitized tooling on a press brake for a single job. Pretty good savings!

Jeff remarks, "In just over a year we will have the machine paid for. Anytime I can justify anything under a couple of years—it is basically a go."

Corner Radius

One of the advantages of the 1524 CNC was that it could do corner radiuses.

"We had difficulty doing this operation on our present equipment," Jeff says. "The processing of the part was that the holes were punched on an ironworker or a press brake using unitized tooling." It was then transferred onto a pallet and taken to another machine where they did the corner radiuses. With the 1524 CNC they can now put corner radiuses on the part using a standard tool ordered from Whitney's catalog. This has eliminated a lot of material handling.

"Seventy-five percent of the plate we have gets a corner radius on it, and we put a radius on all four corners. We probably put more strokes on the machine for corner radiusing than punching holes."

Jeff's goal is to run as many operations as he can at one work station. "We want to eliminate traffic across the fabrication shop and increase throughput," he says.

Cell Concept

Jeff wants to use one person to operate the ironworker for shearing, a deburring machine and the 1524 CNC. It will be a true cell from the point where the raw material goes directly to the cell, is then processed to be zinc plated and returned to be part of a weldment.

The 1524 CNC was a perfect addition to cellular manufacturing. The products produced on the 1524 CNC are plates used to bolt play events onto the decks of the playground structures. These mounting plates keep the whole structure together. The plates are also used to bolt slides to footings in the ground.

Jeff comments, "Our playgrounds are designed on the concept of continual play. That means that all the play events are connected. It's all implemented into one continuous playground. You can understand why we need lots of brackets."

"You can see," Jeff explains, "that the 1524 CNC has lots of flexibility for us. Now we can setup and run ten parts as economically as a hundred parts. It's a way of driving your inventory down and your profits up."

Fifteen percent of the operations processed on the 1524 CNC consist of channels and angle iron shapes. This was very important to Jeff when he was looking for a machine. There was lots of competition for Whitney if doing only flat plate, but when you needed to produce angle and channels, there wasn't any competition.

The acquisition of the 1524 CNC for channel and angle iron was important. It eliminated one piece of equipment. It also eliminated setting up unitized tooling on press brakes for these operations.

Jeff says, "I think it is amazing that you can get a machine to run a part in under two minutes. The quality of parts is also better. The repeatability is great with the 1524 CNC. It just wasn't there with the ironworkers."

The machine is excellent for custom jobs. Landscape can do prototype pieces that they may never do again. "The company across the street asked us to prototype a part for them. We programmed the part and ran it in fifteen minutes. The machine has solved a lot of our problems. It's great," Jeff says.

Landscape Structures is an ISO 9001 and ISO 14001 certified company and takes pride in building quality playgrounds. They are creative, honest and their customers are satisfied. ♦



Various parts manufactured on the Whitney 1524 CNC at Landscape Structures. Most of these parts have resulted in substantial savings.

Esterline *Whitney*

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