

Manufacturing Case Study—



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Laser Systems Lower Labor Costs



In 1994, Randy Hallman, president of Precision Laser Processing, Sandy, UT, bought his first laser machine. Seventeen years, and seven lasers later, the company has earned the reputation as a leader in precision cutting services.

“We have created a niche in the state of Utah,” Hallman explains. “We don’t weld or bend. . . laser cutting is all we do. A number of our customers are fabricators who don’t have lasers. From prototypes to production runs, we are dedicated to providing laser processing solutions for our customers.”

Precision Laser Processing has adjusted its customer list to the volatile economy.

“We’ve adapted to the flow of the marketplace,” says Hallman. “Fluctuation in consumer discretionary spending has affected a number of our customers. As a result, today we have a very diverse customer list which includes OEMs in agriculture, automotive aftermarket, natural gas exploration, medical equipment, sign companies, etc.”

While Hallman has purchased several different models of lasers over the years, the two main lasers in use today are the Platino 2D Laser Systems from Prima Power. The Platino is equipped with lasers developed and produced at Prima Industrie in laser powers ranging from 3000 to 5000 watts. The laser cuts a broad range of materials and thicknesses with speed and precision without the need for manual adjustments. Platino’s laser cutting head gives users a choice of a 10-inch focal length in addition to the standard 5-inch and

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Randy Hallman, owner, (left) and Steve Williams, quality assurance manager/ ISO coordinator, show off parts they have made on their Platinos.



7.5-inch lenses. The 10” lens enhances the application flexibility by increasing the depth of focus and enlarging the spot diameter for high and uniform cut quality of thick stainless (5/8 in), thick aluminum (1/2 in) and thick mild steel (1 in).

Offering a compact footprint along with a Cartesian Cantilever structure that provides three-sided access, Platino is a cost-effective machine that is easy to operate and quick to program. Its unique stonecast frame reduces vibration and increases stiffness by about 4 times compared to cast iron and about 6 times compared to welded frames. Its low heat conductivity results in much higher thermal stability compared to traditional cast or steel frames.

Flexible Automation

Hallman purchased his first Platino 2D Laser System with the 10-shelf TowerServer automated work handling system in 2006. Prima’s 10-shelf TowerServer allows easy loading/unloading for blanks and processed sheets. It has an elevator for loading and unloading the pallets on and off the tower, and features single sheet separating, control systems, and sheet reference.

“We were running three shifts and working around the clock, six or seven days a week,” says Hallman. “At first, I had to remind our operators to leave the Platino running when they went home. Finally the new mindset evolved. Today we run it 24/7.”

Precision Laser Processing bought its second Platino with a compact server about nine months later. The second Platino is used for thicker material and shorter run jobs.

Prior to purchasing the Platino lasers from Prima Power, Precision Laser Processing had used five other lasers.

“We’ve had excellent performance from the Platino lasers,” Hallman says. “Once we bought the Prima Power lasers we never looked back. The most impressive feature is their incredible uptime. The Platino takes a lot less operator input. They just work every time—all the time. They love to run. With the other machines we spent a lot of time tweaking the cutting parameters. The Prima laser machines are far more consistent. They work the same every day. We’ve had the two machines for five years and they are just as consistent today as the day we bought them.”

According to Steve Williams, quality assurance manager/ ISO coordinator, the Platino laser and the Tower Server are both user friendly. “The tower is easy to program and run,” says Williams. “It took me less than three hours to learn how to operate it and requires very little maintenance. The maintenance intervals for the Platinos are longer than the other lasers we’ve purchased, resulting in higher productivity. And if we do need service, we can almost always expect it within a day.”

Wide Variety of Materials

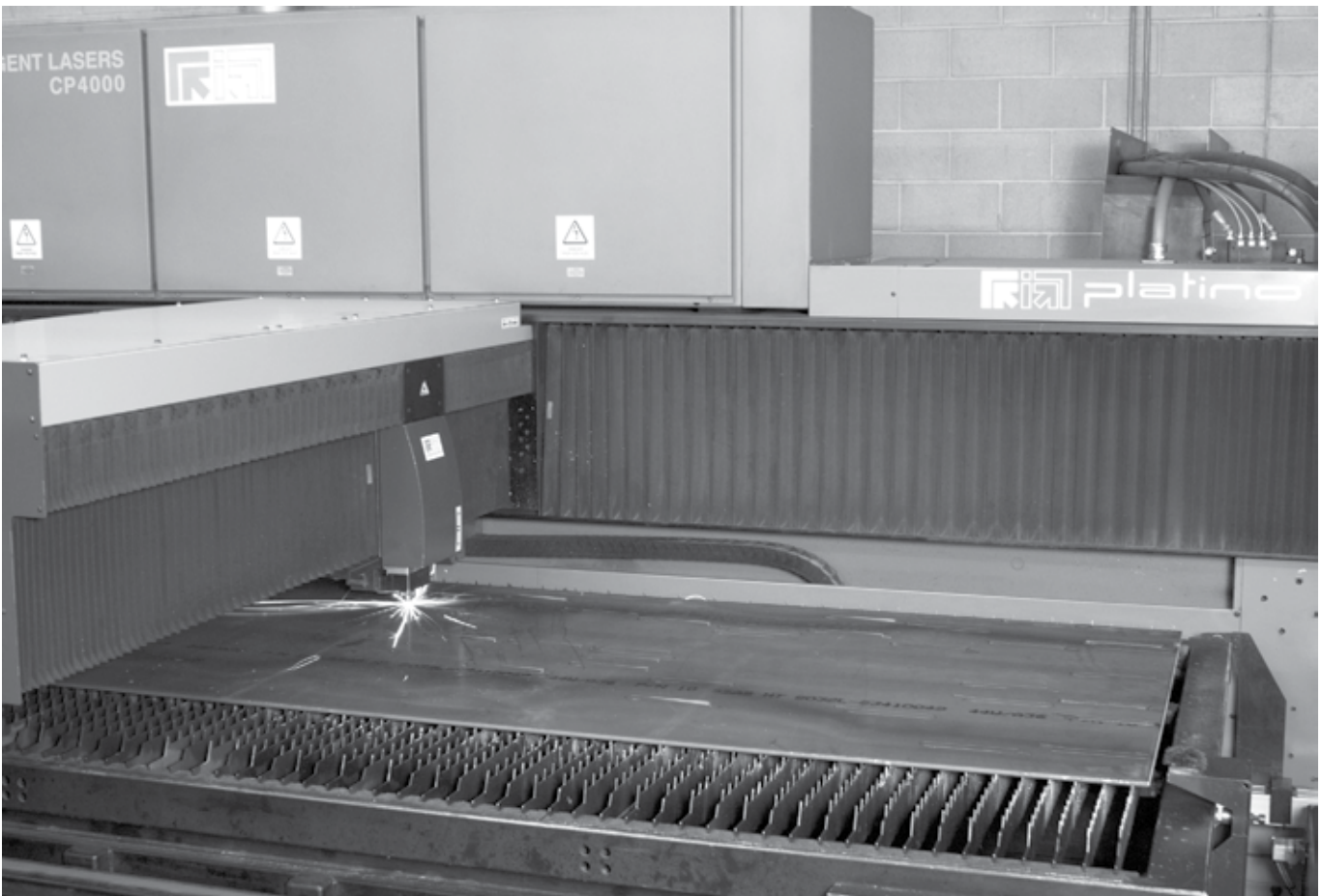
Precision Laser Processing uses the Platino lasers for all material from .001 to 1 inch mild steel plate. The Platino with the Compact Server is used for heavier material: stainless, aluminum, carbon steel, 3/16 and ¼ inch. The company also cuts acrylic, plastic, and ceramic tiles on the Platino.

“The Platino lasers have helped us expand our business,” says Williams. “They have great dust collection systems that allow us to cut things we haven’t cut before because of the fumes. We have one plastic job that used to take about 20 hours on our old laser, that now takes eight hours on the Platino with the automated load/unload.”



A second view of a Platino at work.

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Precision laser processing uses the two Platino lasers to cut all material from .001 to 1-inch mild steel plate.

Reduced Labor

According to Hallman, the Platino lasers have helped simplify the cutting operation at his company. "The two Platinos have changed the way we do things in the shop," says Hallman. "The old lasers needed a lot more of operator input. Today, most things are done off line because at one point both of my engineers were laser operators. We think that they make the best programmers because of their shop experience. With the Platinos, there is a much lower operator skill level that is required. It used to take a higher operator skill level with the older equipment because so much was in the hands of the operators. Now, the operators are spending less time operating the machine...and more time getting parts out the door."

More Green Time = Higher Productivity

According to Hallman, his company is very pleased with the Platino lasers reliability. "When the laser beam is on we are making parts, and that's how we generate our income," concludes Hallman. "The Platino lasers allow us to make a lot more parts per day. The Compact Server and TowerServer have helped us be more

competitive because we are making parts lights out. We've gone from three shifts to two shifts. And we often run parts on the weekend. This has raised our productivity. We had 21 employees, we now have 11, and we are making more parts with the two Platino lasers with loaders than we did with five stand alone lasers." ■



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