



THE EQUIPMENT



THE PRIMA POWER PLATINO 2D LASER CUTTING MACHINE

is equipped with lasers developed and produced at Prima Industrie in laser powers ranging from 3000 to 5000 W. The laser cuts a 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-in. focal length in addition to the standard 5 in. and 7.5 in. lenses. The 10-in. 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 easy to operate and quick to program. Its unique stonecast frame reduces vibration and increases stiffness by about four times compared to cast iron and about six times compared to welded frames. Its low heat conductivity results in much higher thermal stability compared to cast or steel frames.

According to Sullivan, other benefits include reduced scrap by almost 70 per cent, and increased production by 30-40 per cent. "With the dual tables, we almost gained two employees worth of time, 80 hours."

"We were at our capacity prior to purchasing the Platino. We would not have been able to meet our current production without it." He adds there is also the "Wow" factor—"it looks great! When we bring customers through the door...their chins drop. We use the Platino as a sales tool for our company. It has put us to the next level with prospective customers who visit our facility. It gives us the look...the knowledge... it is an impressive machine. The Platino allows us to be unlimited in design and manufacturing."

Elevating *Fabrication*

Ontario elevator manufacturer rises to new heights with 2D laser cutting machine

THE PROBLEM ↘

Inflexible and inefficient fabricating process with turret punch press producing excessive waste sheet metal.

THE SOLUTION ↗

A flexible 2D laser cutting system to cut a wider range of parts and reduce scrap.

AVT BECKETT ELEVATOR LTD., Pickering, ON, has a short yet interesting history.

The original Beckett Elevator was founded in 1953 and grew into Canada's largest elevator manufacturer. The company fell on hard times and in 2008 went into receivership. At this time, Darren Sullivan and Barb Buchanan, owners of a newly-formed small manufacturing company, became interested in purchasing Beckett Elevator. The couple researched the company's history, made a business plan, and thought they had sold their ideas and dreams to the bank for financing. That's when things got a little interesting.

"About a week before closing, and after we made the financial commitment, the banks pulled out of the deal," reflects Sullivan with a painful smile. "We were forced to seek financing from personal savings and family and friends to honour our commitment."

What began as an inauspicious beginning has turned out to be a wise investment. "We raised the money and had 30 days to move our old





Darren Sullivan and Barb Buchanan say the new Prima Power 2D laser machine has given the company more design flexibility.

company's equipment into the new facility...and we did it," says Sullivan. And the newly-formed AVT Beckett Elevator never looked back. "We started the process of manufacturing elevators on a larger scale. There were seven employees at that time. Because of the past history, we were able to book orders with the previous company's old customers. We also sold components to other elevator companies throughout North America. Since our first year, we



The laser cuts a range of materials and thicknesses with speed and precision without the need for manual adjustments.

have more than doubled our sales each year."

Today, AVT Beckett is a manufacturer of standard and custom elevator packages and parts for elevator companies across North America. The company is currently housed in two buildings totaling 38,000 sq ft with 39 employees, including seven engineers, and operating 18 hours/day.

Increasing productivity

Although Sullivan had 20 years of experience in the elevator industry, his experience in manufacturing was minimal. "We studied the process of how the previous company manufactured parts...doing piece manufacturing instead of utilizing a full sheet," explains Sullivan. "We kept looking at it and didn't agree with the process...so we began to make changes. We stated running everything in sheet, minimizing costs, and upgrading efficiencies by huge numbers. We soon discovered that when we ran the turret punch press, we had to deburr the parts. We had a lot of waste...a lot of scrap. The finished product was not as potentially good as we wanted it. Although the turret punch press worked, it wasn't efficient for our production."

Sullivan and his engineering team began to search for more efficient production equipment. "We looked at a number of machines online and then went to the CMTS 2011 in Toronto," says Sullivan. "We took six of our employees to the trade show with no plans of buying a machine that day. We never saw the lasers run before. We



www.avtbeckett.com
www.primapower.com

spent four hours in the Prima Power booth asking questions about the Platino 2D laser. By the end of that day we told them we were buying the machine.

“Since this was our first laser, our operators and engineers had a huge learning curve,” says Sullivan. “Prima Power supplied training on machine safety, maintenance, machine operation, and programming. Within two months, we were self-sufficient on the machine. We very rarely have any issues with the Platino that we can’t handle.”

Engineering change

The Platino laser has changed AVT Beckett’s engineering approach. “The way we design...the way we build product now has given us much more capability than what we had prior with just the turret punch press,” states Sullivan. “We are able to achieve any hole, any slot, and any angle now with the Platino. Before, we were stuck at a 90° punching system where we could only do the shapes that we had the proper tooling for. Now we can do any shape or design. The Platino has given us much more design flexibility. There is nothing we can’t do now.”

Imagination

“One of the most important criteria with owning a laser is to have someone on your staff with imagination. If they



AVT Beckett has increased cutting speeds and improved cut quality with the new Platino 2D laser cutting machine.

can imagine it, chances are we can make it on the sheet. With the turret you are just imagining a box. But

on the Platino laser, if you can think about it and you can draw it...you can produce it on a sheet. This has allowed us to design many more products. It has allowed our R&D side not to be limited. Even taking some material out, like slots in plate to eliminate weight is important. In our industry, weight reduction is huge.”

Sullivan adds says the speed of the cut on the Platino is “unbelievable.” And the quality finish is better than what the company could have hoped. “We no longer deburr any product produced on the Platino. The parts come off clean. Before the Platino, we



had a full time employee deburring eight hours a day. This job position has been reassigned to a more productive function. Also, with the laser being self sufficient we have an operator multi-tasking on two jobs—the laser cutting and either assembly or bending parts on the small press brake.”

During the next six months, AVT Beckett Elevator will move to a new facility in the Toronto area with 60,000 sq ft of production space and 10,000 sq ft of office area. SMT

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