



Hypertherm®

ProNest® supports creativity and willingness to meet any challenge

Industry: Manufacturing

Equipment: ProNest®, HyPerformance® Plasma, HPR400XD®, EDGE® Pro, ArcGlide®



The company and products

Craig Manufacturing of Hartland, New Brunswick, Canada is the largest privately owned attachment manufacturer in North America. The company has humble beginnings dating back to 1946 when Woodford “Woodie” Craig and his father, Washington G. Craig, worked together selling cars, machinery and metal parts. The hallmark Craig spirit of creativity and willingness to meet any challenge has helped the company do just that throughout the years as it has grown, including rebuilding after a 2005 fire that completely destroyed the manufacturing facility. Today the company operates out of a new state of the art 71,000 sq. ft. facility in Hartland’s Industrial Park and it has also added a 15,000 sq. ft. facility in Cambridge, Ontario for distribution and specialty manufacturing.



Sales growth drives search for improved cutting capabilities

As business increased at Craig Manufacturing, the need arose for more cutting capacity. Operations manager Colden Wetmore, production manager Chris McCartney and project engineer Brad Hallett began looking into the problem, working with senior management to address the issue. “Our existing nesting software program had its limitations; creating nests was often a time-consuming process. Every hour spent nesting would only produce about one hour’s worth of cutting. The software didn’t have much in the way of automated features so we ended up with a bottleneck right at the beginning of the process,” said Wetmore. As they began their research in earnest, Wetmore and McCartney were guided by their local cutting products reseller, Gary Jamieson of Linde Canada, to look at the latest Hypertherm solutions, including ProNest CAD/CAM software. “We had a lot of specific questions about the software. We reviewed our SOLIDWORKS 3D CAD

import needs and the ability of ProNest to fit into our specific workflow. We also were seeking to improve hole quality and since ProNest supports Hypertherm’s True Hole® technology that was an added bonus. In addition to learning about the software, our local reseller took us to meet with the Canadian machine builder EBF, Inc in Victoriaville, Quebec where we discussed the latest cutting table technology that could deliver the results we wanted,” said McCartney.

It wasn’t long before Craig Manufacturing’s new EBF plasma table arrived. Equipped with an HPR400XD, EDGE Pro CNC, ArcGlide THC, and programmed by ProNest, the Integrated Cutting System also included support for True Hole® and Rapid Part™ technologies.

Improvements provided by the new cutting system include the following:

- Nineteen hours of cutting from every hour of nesting (19 times nesting productivity improvement)
- Improved part production
- Better material utilization
- Improved hole accuracy and quality leading to a significant reduction in secondary grinding operations
- Repeatability and confidence in the process

Commenting on the improvements they’ve experienced from the Hypertherm-equipped EBF cutting machine and ProNest software, Wetmore and McCartney had the following to say:

Wetmore: “The True Hole performance application is big for us. We needed software to help us program more quickly but we needed good hole tolerances on our parts even more. Our old machine was good for general cutting but we needed a machine for precision cutting applications. Gary Jamieson of Linde Canada sold us on the value proposition of the True Hole



machine and now we're not grinding holes any more. Do you know that we previously had our draftsman enlarge holes so bolts could fit through them? Now, we're finding those holes are too loose and we're re-dimensioning them back to the original specification. We also cut a lot of square holes in plate that is 1" and under, for use with scraper blade bolts, and ProNest® with True Hole® does great on those too."

McCartney: "With our prior software and machine we had to set up all of our cutting parameters. For six years, we tweaked and massaged those parameters and never got where we wanted to be. For example, after the hafnium wore out in the electrode, the torch standoff height was off. Then here comes ProNest with all of the parameters built in. The only thing we really changed were a few part separation values for thick material (2" and above) where we felt we could increase material utilization without compromising part quality. We really love the fact that Hypertherm put money into engineering to research this. Actually, we've barely changed anything in the parameters yet and have really reduced secondary cleanup requirements on our parts. Our weld supervisor has high standards for fit-up and since we introduced the new system, he says if part fit-up is not perfect he knows something is wrong. The out-of-the-box parameters took all of the debate away from those folks who would try to point fingers at the cut process. That is now over with. When we get bad parts, we know it is a hardware issue, like a worn out consumable. We now have a standard that we use ... and that is the Hypertherm parameter settings."

Wetmore: "We have one operator with 20 years of plasma and laser experience. Since we installed the new table, which includes Rapid Part™ technology, that operator couldn't keep up with the increased plate loading and unloading

requirements so we had to change our flow to keep up with the way (speed) the machine cuts. Some people, when they look at the data, view it as only a couple of seconds saved here and there but when you cut as much as we do it saves us a lot (of time). We would not be happy if you took it (Rapid Part) away from us now."

McCartney: "ProNest has been really easy to learn and use. For the past seven years I've sat beside the person who has done our nesting. It seemed complicated and because of that we only had one trained nesting programmer, which was stressful because there's always a period when that person is away from work, such as vacation. Four years ago, we tried to train someone else but it was difficult. When we went live with ProNest we had the original programmer trained plus one other person and then we trained two more. Now we are training a night shift employee and his supervisor as well. With ProNest there are no smoke and mirrors any more. In two months, we've trained four people to use it – two are already very well-trained and the two others can use it well."

Wetmore: "The mystery for me before ProNest was plate management. We had a large volume of remnants and reconciling inventories was impossible. Now using ProNest and its Plate Inventory module, we are consuming more remnants from the floor. We've reduced our raw material inventory by half. In fact, now we have a meeting each Thursday where we review remnants and how to manage them. Before ProNest, there were too many uncataloged remnants on the floor to even consider that; we never had time to manage one of the most significant costs to the company. Today, because of ProNest our management is happier because cash tied up in plates has been reduced without sacrificing delivery".

For a location near you, visit:
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One of Hypertherm's long-standing core values is a focus on minimizing our impact on the environment. Doing so is critical to our, and our customers' success. We are always striving to become better environmental stewards; it is a process we care deeply about.

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