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**Single Unit
Production
Profitable
With Robots**

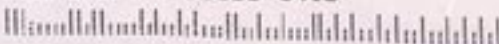
**No 'Business As Usual'
At Small, Productive Shop**

**Two-Machine Solution
On A One-Machine Budget**

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Special Section:
FABTECH Products

Gambling, Speed, Alcohol Fuel Start-Up's Growth

Putting his money and faith in high technology equipment, an entrepreneur grows a closet-sized sign shop into a respected custom manufacturer for the architectural market.

After six years of working for a manufacturer of electrical controls, Trevor Welson left that company with nothing more than an understanding of the industry and a desire to do things differently. In 1993, he launched his own venture with a single engraving machine and 150 sq.-ft. of shop space in Greenville, WI, where he produced identification tags for machinery.

Two years later, Welson acquired a local sign shop and set his sights on penetrating the architectural signage market. But, in 1999, Welson made the decision to procure a high-speed CNC router; that decision ignited a growth spurt that continues. "It was a big leap, a big gamble for me, but within six months, we were running it eight hours a day," Welson said.

Winning Gamble

It wasn't just the capital expenditure that seemed like a gamble. Welson also had to grapple with the risk of becoming only the third U.S. customer to own a Datron high-speed CNC router. He advises that he was con-

vinced by the quality of the product and the fact that Datron had maintained a 30-year track record of success in European manufacturing. The "gamble" quickly paid off and soon he added another Datron machine. "After purchasing the Datron machines, our productivity increased by 60%, and jobs that used to take a week to complete were finished in two days. Most importantly, the Datron has been pivotal in allowing us to expand the scope of the jobs we pursue."

Later in 1999, Welson bought the engraving division of a local graphics company and turned his attention to securing larger contracts where he could leverage his capabilities. Soon IntellCAM, Welson's company, became one of just two companies identified in a national search to compete for a chunk of a \$45 million Fox Cities Performing Arts Center (PAC) project. Commenting on IntellCAM's selection, a competitor acknowledged: "He has state-of-the-art equipment and is able to make very high-precision parts more efficiently than we can."

"He...is able to make very high-precision parts more efficiently than we can."

Breakthrough Job

"We started with a budget and references for two national firms (to produce signage), but IntellCAM did a better job and gave us a total concept package," said John Bergstrom, chairman of the PAC board. Bergstrom recalled agreeing with PAC's Kathi Seifert, who made the final decision on vendors. "Kathi said, 'The quality of work that IntellCAM does is in line with the quality of the facility we're trying to build.'"

IntellCAM had just two months to complete the project that included 29 engraved zinc panels for the building's exterior signage; the "Founder's Wall," a 16' x 8' zinc panel; nearly 400 way-finding signs that appear throughout the structure, and smaller donor plaques. To get the job done, IntellCAM went to two eight-hour shifts keeping the two CNC routers running for a combined 32 hours a day.

In addition to the CNC router's speed and cooling system, the machine's large bed allows parts as large as this 16' x 8' zinc panel.



The largest and most prominent part of the project, the Founder's Wall, was designed through a combination of the Datron controller and Type 3 software. Type 3 is designed to reproduce texts and patterns on industrial parts with the help of a standard PC and scanner. Ultimately, the machining process called for a 6mm shank, 0.030" micro-grain, carbide engraving tool with a 30° half angle, running at 35,000 rpm and feed rates of 40 fpm. A second pass was made with a 0.005" engraving tool to sharpen the corners of the lettering. Both passes were cooled with Datron's ethanol-mist coolant, which evaporates and eliminates the need to degrease the final part.

Following the completion of this project, Welton sought ways to leverage the versatility of the Datron machines as a means of entering



Running at 35,000 rpm with cleanly evaporating alcohol coolant, IntelliCAM avoids the costs of secondary degreasing operations.

other vertical markets. One logical direction was to delve further into the production of control panels. "We were already doing panels, but the Datron machines make production seamless ... they rout them, automatically change tools and engrave them and the alcohol coolant they use eliminates secondary operations like degreasing."

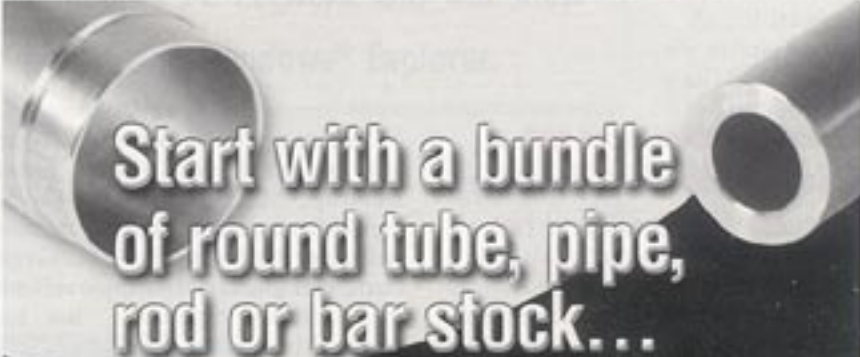
Because of this project and successful applications of the Datron machine in operations as diverse as

production of EDM electrodes, rapid prototyping, and 3D precision engraving, IntelliCAM added a third Datron router.

Healthy Growth

Today, IntelliCAM occupies an 8,000 sq.-ft. building in Greenville, and has reached beyond the local market to establish itself as a solid source for identification products on a national level. *Datron Technology*

www.rsleads.com/410mn-205 or **Circle 205** for more information ■



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