



Climbing to the top

Automation: The renaissance of Spyder Manufacturing illustrates how the fate of a shopfloor manufacturer can be tied to its machine tool investment decisions. It is also the story of how this second-generation company stumbled upon a business breakthrough: CNC that is intuitive and empowering.

Originally a manufacturer of lawn and garden parts and accessories, Spyder Manufacturing has been through several transformations. Once employing more than 30 people, Spyder Manufacturing experienced a steep decline when global competition and shrinking profits forced the company to downsize its production and workforce. The company was spending thousands of dollars on outsourced machining, both locally and overseas, especially for more complex parts. Today, the California-based family business designs and manufactures its professional arborist equipment and supplies on CNC machines equipped with a Siemens Sinumerik 840D control.

A fever for change

"There was nothing advanced about our shopfloor," Matt Monnig, design engineer at Spyder Manufacturing and son of company founder and president Gary Monnig, recalls. "So I asked my dad if I could look into how investing in CNC-based machining might revitalize our company, and he immediately agreed." Entirely by coincidence, no more than five minutes later a CNC machine tool dealer walked in the door. Soon, a new Fryer MC40 milling machine featuring the Sinumerik 840D CNC was delivered and installed on the company's shopfloor.

The power of intuitive CNC

After graduating from high school, Matt Monnig had helped his dad run the company, but he had only dabbled in the machining side of things. That is why not long after delivery of the milling machine, Fryer Machine Systems' field service engineer, Trevor Lowe, arrived to begin what was scheduled to be four days of training on its operation. However, almost at the outset, Matt Monnig came down with the flu. "When Matt returned at the end of the week, I realized that we had about four hours of scheduled instruction time left," Lowe recalls. Within only a few hours, Matt Monnig needed to learn how to use a CNC machine for the first time. Not only that, but he would be learning to program complex contour milling directly on the machine while using one of the world's most powerful controls, the Sinumerik 840D CNC.

Lowe summarizes that "when learning to program a Fryer machine, if you can understand the complex processes, then in time you will figure out the simpler steps. So that's what I did. In less than four hours, I showed Matt the most complex programming. Ever since, when customers ask me how much training time is needed on one of our machines, I tell them about Matt — someone who didn't know any-

thing about CNC, but who in less than a day picked up enough CNC know-how to relaunch his business.”

Programming at the machine

Ahead of Lowe’s arrival, Matt Monnig had invested over four thousand dollars in CAD/CAM programming software. He admits: “I never used the software, because Trevor showed me during our short training session that the Sinumerik 840D has something called ‘conversational programming.’ I just found it so much easier to understand and to work with than the complicated offline software.” The ability to program at the control empowers both the operator and the owner to efficiently produce more than they could otherwise. Instead of waiting for a CAD/CAM programmer to download a G-code program to a machine, an operator can quickly set up the next program and keep production rolling.

“Not long after we bought our first Fryer machine, I drew up an improved version of our climber product,” Matt Monnig recalls. The new product design was soon validated by the CAD/CAM capabilities of the Siemens control. Using highly intuitive, graphically-guided functions such as the contour calculator, the shopfloor could easily carry out design work for refining manufacturability directly on the machine. And at the same time, they were establishing the program to produce it. With no G-code language barriers in the way, the shopfloor could plan, design and manufacture a new generation of products.

Optimizing resources

For Gary and Matt Monnig, achieving a greater return on their CNC investments includes taking greater control of their business, while enabling their people and operations to become increasingly efficient. Spyder Manufacturing is able to design next-generation products and bring them to market, thus keeping pace with market demand. This includes top-selling articles such as their arborist equipment that bring together “old world” machinist skills and creative leadership to capitalize on the most intuitive and powerful CNC solution available. Today, Spyder Manufacturing owns three Fryer MC40 milling centers, all equipped with Sinumerik 840D CNCs. Before the company’s investment in Fryer and Siemens, it took their shopfloor a month to manufacture 50 sets of tree climber products. Now they manufacture nearly 500 sets each month. Higher production capacity and efficiency have brought a nearly tenfold increase in sales of the company’s flagship product.

Looking back, Gary Monnig and his son Matt consider themselves fortunate to have stumbled upon the best possible strategy for revitalizing their business. Looking ahead, they plan further investments in Fryer machines equipped with Siemens technology, knowing that anything is possible given the right set of circumstances: the entrepreneurial desire to ask what if, a machinist’s compelling imagination to see the way forward, and the power of intuitive CNC to make it happen. ■

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Top: Matt Monnig (right) and his colleagues strive to continuously improve existing products. Center: Thanks to their CNC investments, Spyder Manufacturing has revitalized its operations. Bottom: The family business manufactures arborist equipment and supplies