



Tsugami B0325 & M08SY Implementation Increases Throughput 7x





Smith Precision Products is a well-known manufacturer of high-performance automotive components for racing vehicles, including brakes, rotors, nuts, bolts, fasteners, chassis components, and more. Company owner Stevie Smith spent over 30 years as a 410 sprint car driver amassing over 80 World of Outlaws wins and in 2019 was inducted into the National Sprint Car Hall-of-Fame. It was during his driving career that he discovered titanium bolts typically used for aerospace applications made his cars lighter and faster. He began modifying aircraft bolts and selling them to race car dealers and eventually directly to racers.

As Stevie's career evolved, he acquired a small aerospace manufacturing company and started investing in his operation with CNC, screw machine, and thread rolling capabilities to bring titanium components to a wider market of racers. Today, Smith Precision Products supplies parts to a diverse range of racing vehicles including sprint cars, dirt midgets, dirt late models, modifieds, micro-sprints, trucks, funny cars and drag cars.



Increased Demand, Increased Pressure

As the racing market became more educated on the benefits of titanium components, Smith's company began to grow. As a smaller shop, Smith found that the demand for his products began to outpace the production capabilities of his operation. While he was able to satisfy customers by outsourcing a portion of

production, he wanted to increase throughput potential under his own roof.

Smith was curious if an investment in new machine technology was the answer. He attended an open house event at the Hartwig office in Tulsa, where he learned more about the capabilities of Swiss style lathes.

“I was interested in Swiss right away, but not ready to buy at that time,” Smith recalled. “The guys at Hartwig still treated me just the same as if I had come in and bought ten machines. So when I was finally ready to buy, that’s why I chose to work with Hartwig.”

Punching Up

For Smith's applications, precision, strength, and looks were all important. Racers not only want to win, but they want to look good doing it. He needed machines that could keep up with demand and also yield a great finish on the fasteners.

To address these concerns, Smith purchased a Tsugami M08SY and a Tsugami B0325. “Hartwig took care of changing out some of the tooling on the machines to suit our applications,” Smith said. “Both machines were delivered and set up quickly.”

Smith's team faced a learning curve when getting the Swiss lathe up and running, so Tsugami sent representatives to Smith's shop to help them learn how to operate it.

Once the B0325 and the M08 were up and running, Smith saw an enormous surge in the amount of parts the shop was able to produce.



The B0325's ability to machine both sides of the fastener simultaneously was the primary reason for the speed increase.

Traditional CNC machines can only work on one side of a part at a time.

The M08's versatility and sturdiness also began to provide benefits. "We like the heaviness of the M08, it's our go-to machine because we can take a big part and run 50 pieces, or run a prototype and then go right back into running production," Smith said.

The Results

The combination of the B0325 and the M08 allowed Smith Precision Products to go from making 500 parts per week in house to over 3,500 parts per week—a 7x increase in throughput without adding additional operators to the team.

"Swiss lathes are made for doing thousands of pieces but that's not really necessary," Smith said. "We run 200-300 pieces and it's good for that too. You don't have to run thousands of parts to get a return on investment on that machine."

7x
INCREASE IN
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The increase in throughput allowed Smith to limit the amount of outsourcing necessary to fulfill his commitments to customers. Running more production in house increased profitability on more parts, and also gave his team more control over the quality of its products. Smith's eventual goal is to bring all production in house to further enhance these results.

Smith remains optimistic about the growth potential of his company. "We're looking forward to adding another Swiss lathe to our operation," Smith said. "Machining is like racing—once you get a new machine, everyone wants to stop by to see it."

The M08 also allowed Smith's team to run Fette tools, which are top-of-the-line components for thread rolling. "On the M08, we can thread roll on both the main spindle and the sub spindle with 4.5-inch diameter thread rolling heads," Smith said. "It's not a huge machine, but it's a darn good machine."

