



The right CNC leads to new opportunities for Task Force Tips

As fast as the fire department

Does higher efficiency really make premium machines more profitable? “Yes, of course” was the answer given by the team at the US company Task Force Tips Inc. after investing in a high-quality Index turning machine with the Sinumerik 840D sl CNC.

Stewart McMillan, CEO of Task Force Tips (TFT), speaks freely about his former reservations: “I’d never made the link between Index machines and the idea of profitability. Why? Because I thought the Index brand was too expensive and virtually unaffordable.”

Practical experience with an Index C100, however, led to a change of mind for this fire department supplier, although his reservations still seemed to be justified when the project started. The Index machine planned for use in the 15,600 m² production facility in Valparaiso, Indiana, did not initially meet TFT’s expectations. McMillan says: “As a result, we had the machine retrofitted with Sinumerik 840D sl. And after starting parts production, we discovered that production time was around 30 percent. Note that by this I don’t mean an improvement of 30

percent but a reduction to 30 percent of the time we originally needed.”

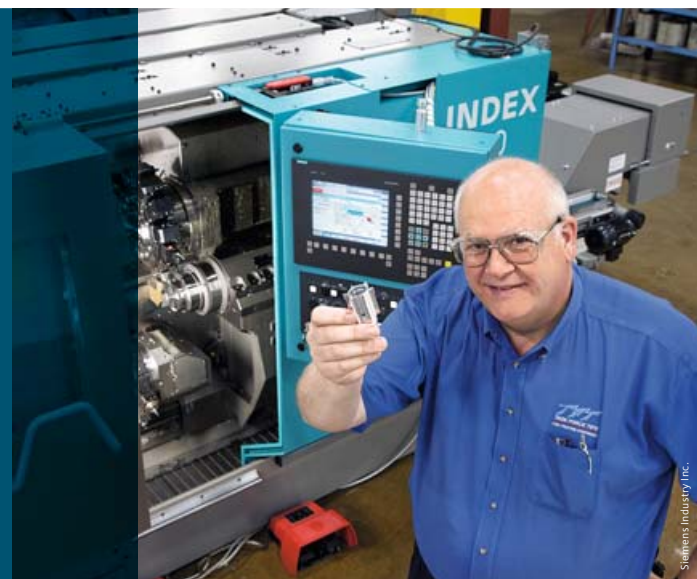
From 0 to a steady 5,000 rpm in one second

The machine’s high-speed design is the reason for this achievement. TFT began to carry out production jobs at 5,000 to 6,000 rpm. The fascinating thing was that the spindles were run up to the set speed and were steady within one second. McMillan reports: “We had never noticed before how much time other machines needed for stabilization at a new set speed. It also turns out that turret indexing is extremely fast. In this case, the various tools are used overlapping on both spindles so as to cut at the same time.”

The automatic remnant recovery function is yet another plus point. McMillan explains: “With other

“With the Index C100 production turning machine and Sinumerik 840D sl, we have reduced our machining time for a workpiece to 30 percent of the time previously required.”

Stewart McMillan, President and CEO, Task Force Tips Inc.





Siemens Industry, Inc.

TFT is able to produce small parts with precise surfaces on the Index C100

machines we have to take the remnant out and feed in new bar material. This step only takes five minutes. In practice, however, a machine can easily be empty for several minutes before anyone notices. These are delays that add up and that used to reduce productivity and efficiency."

New opportunities in programming

Nate Price, head programmer at TFT, sees an improved approach to programming, setting up, and operating the machine with the Sinumerik 840D sl interface: "The Sinumerik CNC makes all the difference, in my opinion. It makes creation of programs and postprocessing faster and easier, which significantly accelerates the set-up of special routines."

The operators are also very satisfied. "The CNC offers a wide range of keyboard commands and a process for displaying messages for the machine operator that was not available with the other CNC. Sinumerik helps keep all the processes under control," says Price. "For example, the machine wants conditions to be fulfilled before it will start a cycle. The previous CNC was not particularly good at telling the operator this. With the Sinumerik CNC, by comparison, if you press the 'Cycle Start' button and the conditions are not fulfilled, the CNC guides you specifically through the required changes and the cycle can be started quickly."

Price mentions tool allocation as a second example: "We tell the CNC via a mini-program which tools are necessary for the job to be set up. The CNC then presents the relevant stations on the turrets and informs the operator which tools have to be loaded.

The operator is guided, which means a huge gain in speed and reliability." Set-up times decreased by 80% overall.

Improved performance per unit area

And finally, the crucial question of profitability. McMillan says: "Now I look at machine investments from an entirely different perspective. I calculate all the acquisition and running costs for setting up a production facility, for constructing the building, for heating and air-conditioning. This results in a certain sum per hour. Then I purchase a machine that costs \$600,000 instead of \$300,000 over 10 years. Our production runs almost 24 hours a day, seven days a week. Bottom line: the difference for us if we buy the \$600,000 machine is approximately \$8 per hour. And for \$8 more per hour, we get three times the production output with the same footprint." So the investment pays for itself. <

You can watch a video accompanying the article at bit.ly/14CsUFg.



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