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Zimmermann partners with two moldmakers to help them go “big”

Four large FZ40c portal millings machines providing significant changes to business strategy at Commercial Tool & Die and Franchino Mold & Engineering in Michigan

Zimmermann FZ40c milling machines enabled both moldmakers to grow their business in their home markets of automotive injection molds and die cast diework, in a unique partnership for each moldmaker

It began in 2017, when Commercial Tool & Die (CTD), a division of Commercial Tool Group in the Grand Rapids, Michigan area, contacted Zimmermann at a mold show and IMTS. This 68-year-old company, founded by the grandfather of the current president, JD Bouwman, was heavily leveraged in automotive and off-highway injection moldmaking, but was seeking to grow into new markets with larger machining capacity. Meanwhile, over in Lansing, Michigan, Franchino Tool & Engineering was prospering in automotive molds and die cast diework but was seeking to increase their 5-axis machining capability, travel and speed. The short version of this story is that CTD ended up with three new Zimmermann machines, while Franchino bought the first CTD stock machine from Zimmermann, as it fit their needs quite well, according to Franchino President Mike Heatherington.

Commercial Tool & Die Looking To Grow

As Plant Manager Darin Hall explains, “We had reached out to Cornelius Kiesel, president of Zimmermann Inc. in Wixom, Michigan, at a mold show and then again at IMTS. We were impressed with their large CNC 5-axis machines. CTD had four goals we were seeking to accomplish with our new machine capability. Namely, we wanted reliability, efficiency to run unattended, rigidity to hold accuracies across a long travel and surface quality to meet our very high standards for automotive products.” He notes the FZ compact line of Zimmermann appeared to have the essentials they sought at CTD, though some modifications would be needed.

Company President JD Bouwman elaborates. “We found in Zimmermann the combination of a great machine with a flexible team who was willing to expand their horizons and ours. Although the basic version of the FZ40c is an excellent machine, in the end, we made 31 changes that were specific to CTG’s needs, including increased ram, with a goal to purchase

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three machines for our increased production.” Bouwman further comments how this enhanced capability would allow CTD to move into new markets and increase share in their home market of automotive. Today, that process has already yielded positive results, as the company is producing injection molds of much larger size than in the past, thereby opening new segment of automotive, off-highway and commercial building products.

After the initial investigation, the decision was made to lease an FZ40c to trial the machine. This portal mill has a work envelope of 197” W x 118” D x 59” H with a feed rate to 2362 ipm. As the trials proceeded over the one-year lease agreement, according to Darin Hall, “We quickly saw that the machine was very solid and would allow us to strategize differently in our approach to production.” Concurrently, CTD was realizing their market and manufacturing needs would require some significant changes to the machine, especially the ram height, for use on molds in the off-highway, construction equipment and building products market segments CTD was seeking to penetrate.

He continues, “We also realized we had a great partner in Cornelius and the team at Zimmermann, both in Wixom and in Germany, where we visited a number of times, as they did here. These folks were open to our suggestions and worked diligently to affect them.” Hall notes this lease arrangement was the first in the 68-year history of the company. “I guess you could say we knew where we wanted to go but weren’t quite sure of the machine design that would get us there.” The CTD and Zimmermann teams thus began a collaboration that would run nearly three years, culminating in today with three FZ40c gantry mills on the floor at CTD, each with an enhanced rigidity and cast mono-block fork head with unique process cooling for high precision machining, especially on models and molds. The FZ40c has a base x-axis of 236”, giving CTD the additional size they needed. Among the changes made to the machine design was an increased ram.

In the end, JD Bouwman concludes, “We had a big machine concept in mind to get us to our goal and the three modified FZU machines were the answer. Day to day, the machines give us much higher unattended machining numbers, a real testimony to the quality. Zimmermann has allowed CTD to quote new projects, bigger workpieces and enter new markets, exactly where we wanted to go.” He expressed a “big thank-you” to Cornelius Kiesel and the Zimmermann team, citing the dedication on both sides over a three-year period resulted in machines “...that simply allowed us to go to a new level as a company and that’s very exciting.” A future goal between the companies is to build an even bigger machine with increased capacities to reach even higher levels of market participation.

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“Our relationship with Zimmermann is based on true collaboration and we’re mutually assisting the other to accomplish our goals. That’s as good as a business partnership can be,” concludes Bouwman.

One additional change to the FZ40c as requested, according to Cornelius Kiesel, and it presented a unique challenge to Zimmermann, he jokes. “The CTD company color is gold and they requested we paint the machine heads that color for them. We are machine tool engineers and builders but we took up the challenge and found the right paint for this challenging application. Looks nice, doesn’t it?”

Franchino -- right place at the right time

That’s an old expression but it’s true in this case. About an hour east of CTD sits Franchino Mold & Engineering in Lansing, Michigan. According to company President Mike Hetherington, “Our business is currently about half in automotive injection molds and half in die cast diework for a variety of industries, including construction, stormwater and septic management. During this recent period in business, with all its challenges, we’ve been flexible in seeking new jobs in various industries and it’s paid off, resulting in a sizable increase in our sales volume.”

The connection between Franchino and CTD requires a bit of explanation, as Hetherington notes. “We were on a business trip to Germany, seeking new machine concepts. We had occasion to tour the Zimmermann factory and, while there, we saw the FZ40C portal milling machine being built for Commercial. We were looking for that type of machine and had our checklist. The FZ40C began to check off the boxes and we knew it was the machine for us. As it happened, we learned the machine was being leased to Commercial down the road from us in the Grand Rapids area and we’d known them for years. We don’t often directly compete, so we made some contacts and decided to wait for their lease to expire, then we purchased their machine and it was shipped to our facility in Lansing.” He also mentions several particulars. The machine needed to work both steel and aluminum molds, be a true 5-axis mill, be able to efficiently rough, semi and finish all in one setup, have an HSK spindle, run 1400 ipm and be up for two shifts reliably. The FZ40c was found suitable on all these points, according to Hetherington.

On one job, he notes with a smile, the shop took a roughing cycle from 16 hours to 3 hours, due to the machine’s rigidity, speed and accuracy. As a bonus, the Heidenhain CNC

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onboard the Zimmermann machine provided a monitoring capability that enabled the Franchino Machining Supervisor, Chris Cook, to learn the status of the machine remotely.

Cook cites another example of the company's use of the Zimmermann FZ40c. "We run molds for huge septic tanks and the Zimmermann is currently at 3000 hours of run time at 2000 ipm with no issues."

Hetherington adds the machine purchased from CTD recently ran for two months solid at 90% capacity. "Looking back, I'd say we were definitely in the right place at the right time, discovering this machine on our trip to Germany. It's been a very valuable investment for Franchino, providing reliable production on big workpieces. It will open up more opportunities for our company in various existing and new markets." Hetherington has been president at the company since December, 2020, having gone, as he says, "...from mowing the lawn as a school kid to coming to work here with my engineering degree to engineering manager to VP of operations and now president."

Franchino Mold & Engineering was founded in Lansing in 1955 by Richard Franchino, whose son and recently retired president Bob began as the first employee, sweeping the floor for \$0.25 an hour. Mike Hetherington is currently working on the construction of an additional 60,000-square foot facility with an 80-ton overhead crane to handle the massive workpieces produced at this shop, which produces molds & dies plus does considerable repair work for its customers nationwide.

For a video link to this story, please visit: <https://youtu.be/TvtZYiNN6al>

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About the company

Zimmermann is based in Swabia (Germany) and is a leading global high-tech supplier of portal milling machines. These are characterized by huge workspaces, substantial machining dynamics and cutting performance. The company, founded in 1933 by Friedrich Zimmermann, now has over 200 employees worldwide. With its product range, our innovative company has one goal above all: to offer the right solution for our customers and thus to be able to guarantee high economic efficiency. "Quality made in Germany and supported locally" is our motto. The company's special machines are used worldwide in the automotive, aerospace, moldmaking and mechanical engineering sectors. The company has its North American headquarters in Wixom, Michigan, near Detroit, where it operates a full tech center offering engineering assistance, commissioning, parts and retrofit services, as well as multiple machines for demonstration purposes. Zimmermann Inc. is headed by President Cornelius Kiesel.

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