

Automation and Single-Source Design and Machining Software Help Toolmaker Cope with Overseas Competition

Rezmin Tool and Die, a Canadian specialist in progressive dies for the automotive industry, has been challenged by low-cost competition from overseas. This constant cost pressure, plus a lack of accurate estimation tools, has made quoting more challenging, too. Co-owner Zelko Rezler spends

5-axis machines that are employed primarily for boring, drilling and tapping holes on multiple compound pockets. According to Rezler, using these machines has shortened by as much as two-thirds the setup and machining time previously required for such applications.

“laying out screw holes, transferring screw holes, spring pockets, dowels, keys. Now, with Cimatron, this is all designed into the solid model and programmed directly to the CNC machine.” Manual machining labour has been cut to a minimum.

Rezmin’s programmers employ the CimatronE auto drill function to define sequences for various types of holes and pockets. Being able to define templates for cutting procedures has saved a lot of time.

Driving to get the highest productivity out of its machines, Rezmin runs two shifts during the day and a lights-out operation at night. “Cimatron is able to define the tools as well as the holders and spindles, so tool changes can be done without operator intervention,” says Rezler. “Thanks to the automatic gouge-gap checking, cutter paths are guaranteed not to crash.”

One Supplier

Using the same software for design and machining is another big timesaver for Rezmin. “We don’t need to go through the cumbersome process of translation,” says Rezler. “It has eliminated all issues of miscommunication and of missing or corrupt information. The CNC operators pull their data right from the design. Whenever there is a design change, they always have the most up-to-date information.”

Cimatron Viewer provide machine operators with direct access to part data, so they can pull sizes and dimensions directly from the 3D assembly. As a result, detail prints are no longer needed for most parts and components, which makes Rezmin’s shop floor operation greener and leaner.

“Overall, we are about 25 to 30% more efficient now,” concludes Rezler.

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about five hours a day on quotes. He says that, if the part will be difficult to form, he and partner Alan Minello have tended to protect themselves by overquoting. Both owners knew that, to be more competitive, they would have to use more automation, so they have invested in CNC equipment to eliminate a lot of handwork. And, they use **CimatronE software** for designing and building die sets, performing NC programming, and running the new machines.

Using the new CNC machines and the software from **Cimatron**, Rezmin has been able to stop outsourcing die sets. It produces them efficiently in-house at cost savings up to 50%.

The Installation

Rezmin has installed four seats of CimatronE Die Design in engineering and three seats of Cimatron NC (including 5-axis) on the shop floor. Two additional seats of Cimatron Viewer are used by die makers in the shop.

Rezmin also uses Cimatron Fikus software to carry out wire-EDM programming directly from the 3D design data. “Eliminating the need to translate the data has simplified the data flow. It makes wire programming less labour-intensive and more accurate,” says Rezler.

To further increase efficiency and speed, Rezmin recently added 4- and

“Cimatron makes 4-axis and 5-axis programming really easy,” comments Rezler. “This is a relatively new thing for us, but I was surprised how quickly we were able to get up to speed.”

Advantages Gained

Cimatron has helped Rezmin become more efficient, reduce its dependence on manual labour, and get all of its design and manufacturing work done more quickly. Using Cimatron Die Design for blank development and the strip layout, Rezmin has significantly cut down design time. “Complex strips that used to take us three to four days to lay out now take three to four hours,” Rezler reports. “Simpler strips can take as little as 10 to 15 minutes.”

According to Rezler, the benefits of Cimatron’s quick blank-development and forming-analysis capabilities pay off big in quoting. “Cimatron’s forming analysis highlights hot spots, wrinkling, splits and other areas of potential difficulties,” he says. “It saves a lot of time and eliminates the guesswork. Most importantly, it gives me the confidence to quote exactly what needs to be done rather than overquote to protect against the unexpected.”

On the shop floor, Rezmin has eliminated much of its time-consuming and expensive manual plate work. “We used to do a lot of work with manual radial drills,” explains Rezler,