Aalbers Tool & Mold Achieves Zero Crashes and 10 Times Faster Programming with Tebis

CAD/CAM MES
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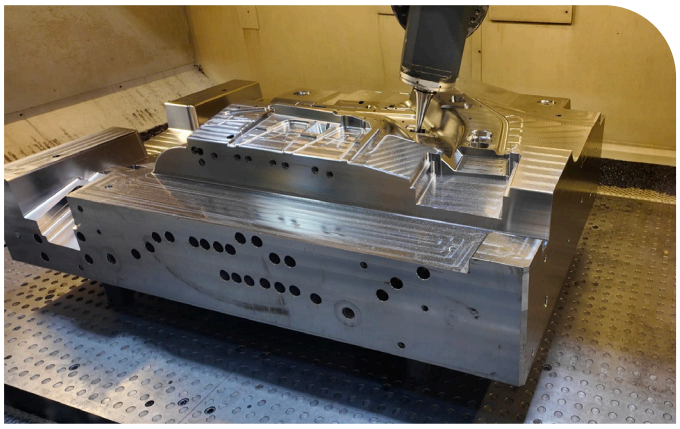
Situation

For more than 20 years, Aalbers Tool & Mold relied on the same CAM software to support daily machining operations. As part complexity increased, limitations in their programming environment began creating operational risk.

Virtual simulations did not accurately reflect real-world machine behavior. Programs that appeared safe on screen occasionally resulted in machine crashes during execution, causing downtime, repair costs, and lost production time.

Programming speed also became a bottleneck. Roughing calculations for larger jobs could take up to 90 minutes to process, leaving machines idle and preventing programmers from staying ahead of production.

Aalbers needed a solution that would improve reliability, reduce risk, and increase throughput, without increasing headcount.



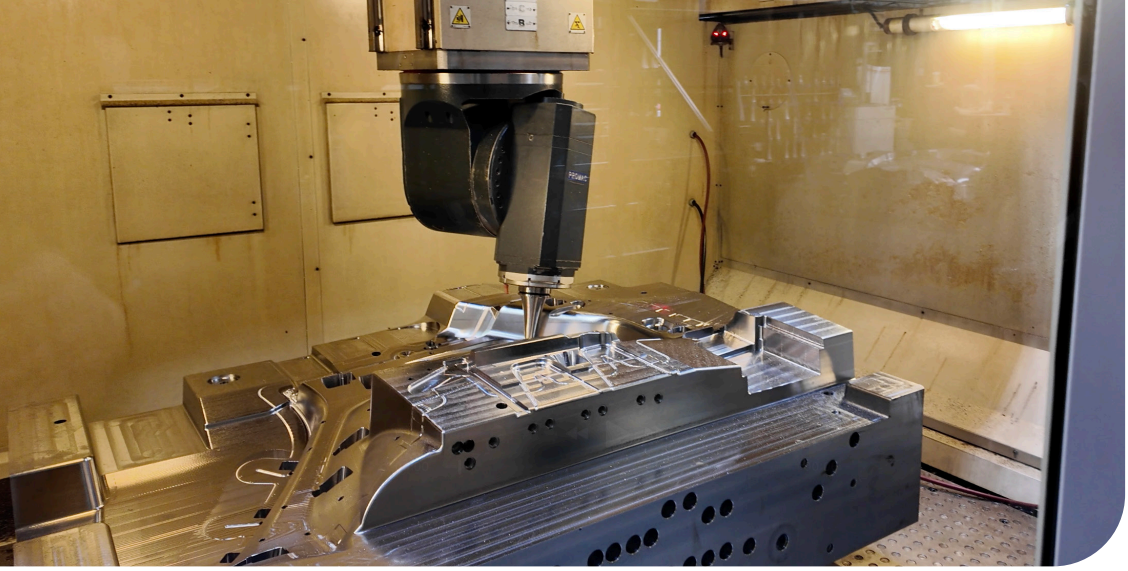
Solution

Aalbers made the decision to standardize on Tebis to create a safer, more predictable, and more efficient programming process, including:

- Exact machine kinematics
- Complete tooling and holder libraries
- Fixtures and setups
- Accurate collision checking and virtual machine simulation

This true digital twin ensured that programs validated virtually will run safely on the physical machine, while standardized libraries and integrated workflows reduced manual adjustments and significantly shortened calculation times.

In addition, Tebis' training and responsive technical support enabled the team to quickly adopt the system and optimize performance.



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AALBERS TOOL & MOLD INC.
PRECISION MOLD SPECIALISTS

Results

Aalbers has seen impressive results in speed, reliability, and quality:

- **Zero machine crashes**
  Since implementing Tebis in 2022, Aalbers has not experienced a single programming-related crash, eliminating downtime and repair expenses.
- **Over 10 times faster programming**
  Calculation times dropped from 90 minutes to just 8 minutes, allowing programmers to consistently stay ahead of production.
- **Lights-out manufacturing**
  With confidence in program safety, Aalbers now runs machines overnight and through weekends, increasing spindle utilization without adding staff.
- **Improved part quality**
  True surface-based machining delivers consistent finishes and reduces benching and manual rework.
- **More predictable operations**
  Accurate machining times enable more precise quoting, improved scheduling, and reliable on-time delivery.

In addition, by eliminating crashes, reducing programming time, and enabling unattended machining, Aalbers has increased overall shop capacity without additional labor or equipment investment. What was previously reactive is now standardized and repeatable.

And, with a stable programming foundation in place, Aalbers was able to expand into more complex and higher-value work, including aerospace and defense components. In one example, a complex 5-axis process that previously required nearly two hours was reduced to just 12 minutes.

Beyond the technology itself, Aalbers credits Tebis' responsive support team for ongoing success. Fast assistance and hands-on guidance ensure continuous improvement and minimal disruption to production.

Conclusion

By standardizing on Tebis, Aalbers transformed operations from risk-prone and reactive to predictable and efficient.