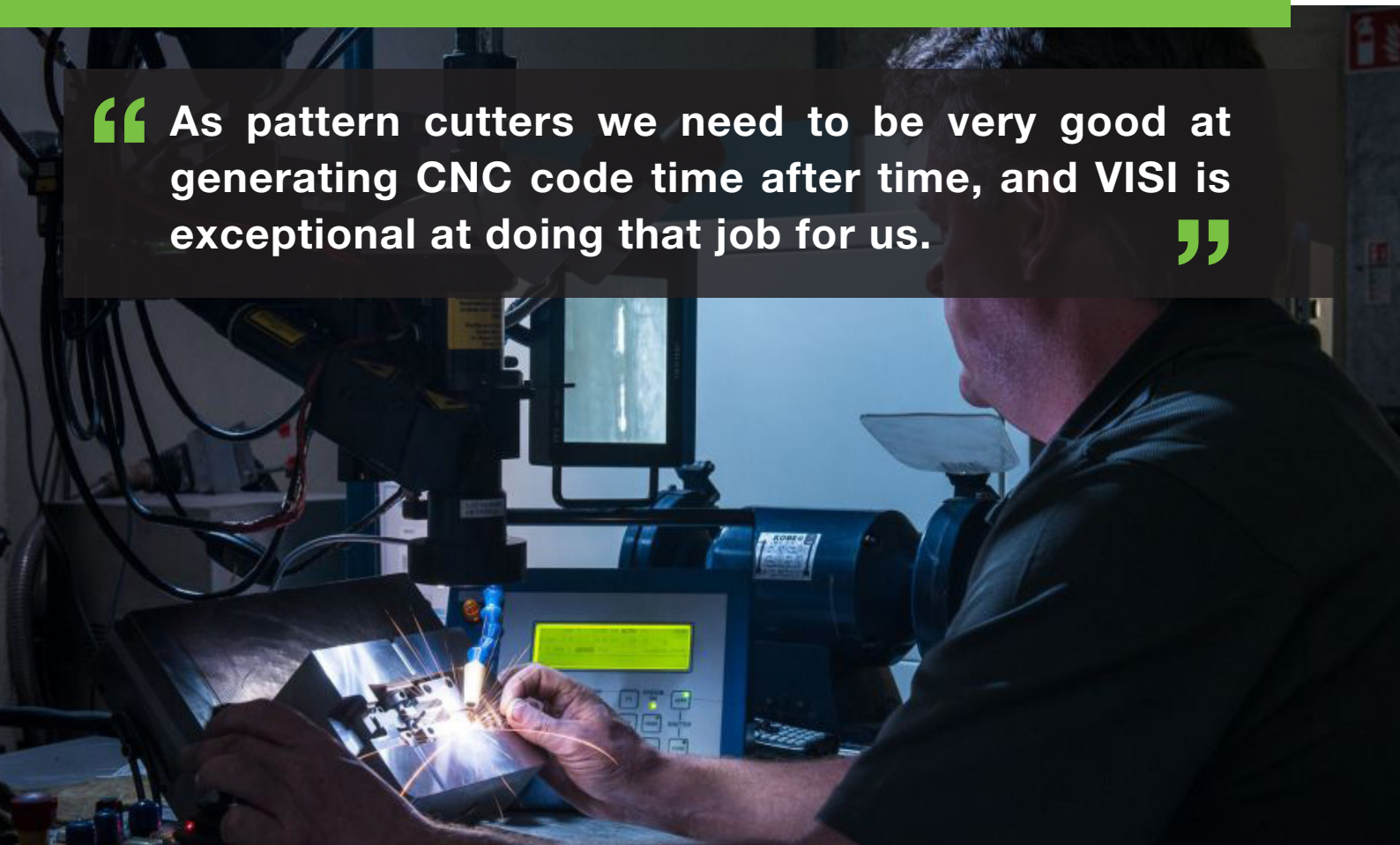




ALPHA PRECISION

“ As pattern cutters we need to be very good at generating CNC code time after time, and VISI is exceptional at doing that job for us. ”



VISI is acknowledged as one of the world's leading PC based CAD CAM software solutions for the Mould & Die industries.

It offers a unique combination of applications, fully integrated wireframe, surface and solid modelling, comprehensive 2D, 3D and 5 axis machining strategies with dedicated high speed routines.

Industry specific applications for plastic injection tool design including material flow analysis and progressive die design with step-by-step unfolding provide the toolmaker with unsurpassed levels of productivity.

Alpha Precision

VISI - The “Communication Tool” Connecting Alpha Precision’s Mouldmaking Team

An injection mould manufacturer has seen a recent resurgence of toolmaking in its native Irish Republic, and says state-of-the-art software helped them through the recession by giving them a competitive edge to work in high-end markets.

Alpha Precision, based at Tubbercurry in County Sligo, operates an almost full suite of VISI modules, which Director Brendan Feely describes as a seamless communication tool.

“Several years ago Ireland experienced an exodus of toolmaking contracts as work went overseas, particularly to China. At the same time, the specialist VISI CAD/CAM software for the mould and die industry was rapidly developing and adding new features. Even companies which weren’t computer literate were investing in the technology to survive. The software had a huge effect on the toolmaking industry, giving us a competitive advantage to weather the storm.”

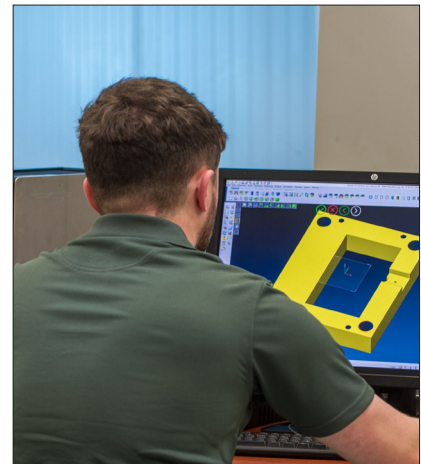
He says it’s now “high end all the way” for Alpha Precision – high end staff building high end mould tools with high end software. “The technology promotes a more automated process, and means our staff need a different skillset nowadays, to use VISI to its full potential.”

To explain fully how he feels VISI is the seamless communication tool that acts as the glue in the complete toolmaking environment, he likens his toolroom to a football team. “We need our goalkeeper, defenders, midfielders and strikers. We have a variety of different machines doing different jobs, so our operators have different skills. The software’s applied on the back of the machining, and because there are several disciplines, such as design, milling, wire and spark eroding, the software fits naturally into its given area. The operator in that area is just trained on the one particular VISI module.”

Continuing the “team” analogy, he says the toolroom is like a group of people from different countries with none of them speaking a language other than their own. “One language is design, with others including flow analysis, milling, wire eroding, spark erosion. VISI is the common language that unites all processes, ensuring everything moves fluently through the toolroom from one discipline to another.”

Operating with 12 employees, the company produces an average of around 40 tools a year, ranging in size from 100mm x 100mm x 100mm, up to 600mm x 1-metre, mainly for the automotive, medical, packaging and electronics industry sectors.

Two of their current projects: Producing a number of high cavitation tools for one of their many medical customers; and



About The Company:

Name:

Alpha Precision

Business:

Injection mould manufacturer

Website:

www.alphaprecision.ie

Benefits Achieved:

- Gave a competitive edge to work in high-end markets
- More automated process
- Controls everything in one environment
- All milling for hard prepping and high speed finishing is handled quickly and accurately

Comments:

“Using VISI Machining we can quickly produce a highly polished medical part with fine detail, a milled finish, and a split line within micron accuracy”

Brendan Feely
Director



a contract for two-shot plastic injection tools, which involves an overmould. “Although two-shot production adds another element by involving a second material and process, VISI keeps it simple and efficient.”

With VISI programs running their high speed milling on Röder, and F3 and F5 Makino machining centres, the challenges posed by the medical industry requiring very fine micro levels, are readily overcome. “We use high-end 42,000 rpm spindle speed for very small detail finishing, and cut our electrodes on the Makino F3, with high definition being done on the F5. And we can also machine a cavity in just one night, that would otherwise take a week. Using VISI Machining we can quickly produce a highly polished medical part with fine detail, a milled finish, and a split line within micron accuracy.”

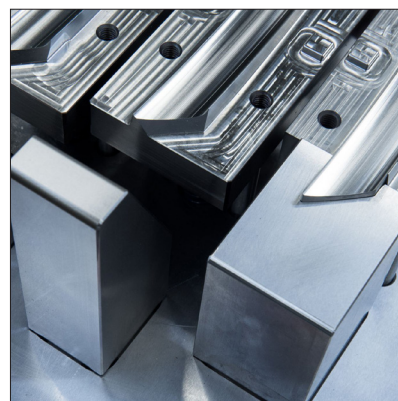
VISI also powers Alpha Precision’s EDM Charmilles machines for spark eroding, and Mitsubishi wire eroders. He says parts of the tool will have been cut on each of the machines, and when it’s ready for shipping it is a very fine-micron, accurately controlled finished tool for, typically, the medical or automotive industry.

Having invested in many VISI modules including Modelling, Analysis, Flow, Mould, Progress, the wire cutting and electrode systems, along with 2D Milling, 3D Milling and High Speed Milling, the software is used at every stage of their process, beginning with providing an accurate quotation for the customer. “We use VISI’s analytical tools to check the drafts and all the different features we’ll need to build into the mould, such as the core and side pieces.

“When the order’s been placed, we work closely with our customer’s moulders on the design concept, including flow analysis and tool layout. Once the 2D design is broken down and we have the tooling in full 3D we really begin to see the huge power of VISI, which controls everything from design, through milling to wiring in one environment. Because we’re not going across translators there’s a perfect understanding within the technology, taking it right through every stage.”

Combining VISI’s Compass technology with its 2D and 3D milling capability, all milling for hard prepping and high speed finishing is handled quickly and accurately, which he says is vital to their operation. “We make a lot of one-off custom components for each mould, meaning we only run a program once. As pattern cutters we need to be very good at generating CNC code time after time, and VISI is exceptional at doing that job for us.”

Although injection mould tools form Alpha Precision’s core business, they also provide a blow moulding and forming tool service, and have experience in specialised press tooling. But Brendan Feely concludes by saying they are currently embarking on an exciting new journey, working closely with one of their major customers on injection rubber.



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