

VISI provides highest technical solution for QDM specialist



Polyhitech Co. Ltd.

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.

A Quick Delivery Mould (QDM) specialist says Draft Analysis is an important time saver for their business, and has played a major contribution towards meeting customers' increasingly faster turnaround demands.



The QDM market has been changing rapidly... In accordance with these changes, we've invested aggressively in our facilities, and improved technology through VISI, WORKNC and WORKXPLORE."

Jisung Yu,
Mould Design Manager

Based at Incheon in South Korea, Polyhitech Co. Ltd. use VISI as their CAD system for designing a variety of plastic injection mould tools for medical, automotive and IT products, and say it has slashed surface editing time by up to half.

But they are not just ordinary mould tools. Polyhitech focuses on QDM, which is a manufacturing system for injection parts using 3D CAD data that shortens delivery time by assembling machined cores and cavities into a standard mould base. The system is used primarily for trial moulds for new product development.

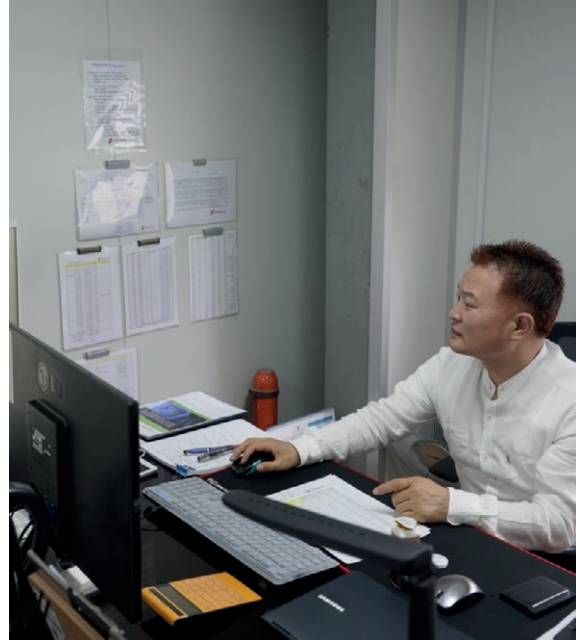
It costs 40 per cent less than normal production, while reducing delivery time to between three and eight days, and is used largely for prototyping, verifying the mould at the pre-production stage, and small quantity batch production.

Since Polyhitech was established in 2007 the company has always looked to develop leading technology, and has invested in 19 machine tools covering the entire manufacturing process – mills for cutting the moulds, high-speed mills for machining electrodes and cores, EDMs, and injection moulding machines.

Polyhitech's Mould Design Manager, Jisung Li, says as well as fast delivery times, customers also demand high precision, and that is where VISI, from Hexagon, comes in. "The main reason we invested in VISI was that our previous CAD system couldn't fully deliver our customers' needs for shorter delivery times. When we received data from them we used to edit the surface before starting the mould design process.

"But we found it difficult to meet deadlines, because we were spending a lot of time editing where surfaces were corrupt or missing, and working on complex geometry where a high graphic performance was required. We decided that the software was no longer viable for us to meet the standards of mould design and production that we required, so we invested in VISI to provide us with the solution."

Amongst the many benefits they saw immediately, he was particularly pleased with efficiency improvements in reduced work time. "Thanks to VISI we were able to reduce the time spent on editing surfaces by between 30 and 50 per cent."



About the company:

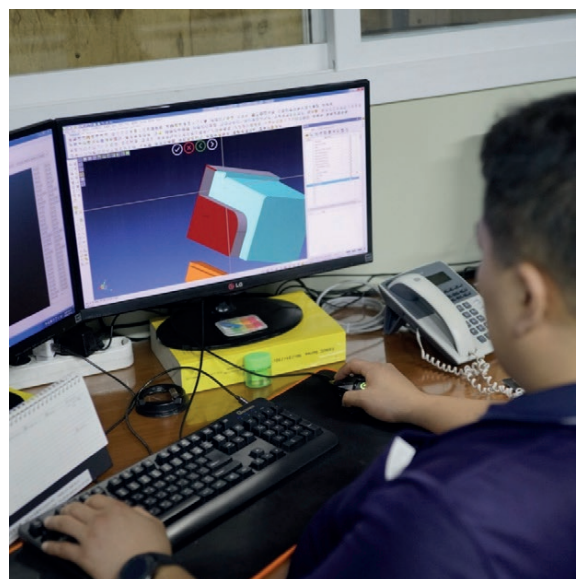
Name: Polyhitech Co. Ltd

Business: QDM (Quick Delivery Mould) for various industries, including medical appliance, automotive component and IT products.

Website: polyhitech.com

Key benefits achieved:

- 50 per cent savings on work time
- Light handling and ease of use
- Smooth communication with their customers and design team
- Costs 40 per cent less than normal production



He says the Draft Analysis function in VISI Analysis is perhaps the most important tool for their mould design and production process. "I often use Draft Analysis after finishing the design. It's so easy to check if there are any undercut areas. Our previous CAD system didn't fully support that function, so I had to enlarge each part and check them one by one.

"Now, using VISI, I can quickly find any undercut areas through the colour display by draft angle, and it's possible to split the parting line according to that."

Although he and his colleagues were apprehensive about changing software at first, he says their fears that it may be difficult to learn were quickly proven to be unfounded.

"It was so easy to learn. And given the continuing trend towards small batch quantity production, if demand for products using non-standard mould bases continues to rise we're likely to invest in another VISI Advanced Mould Tool module."

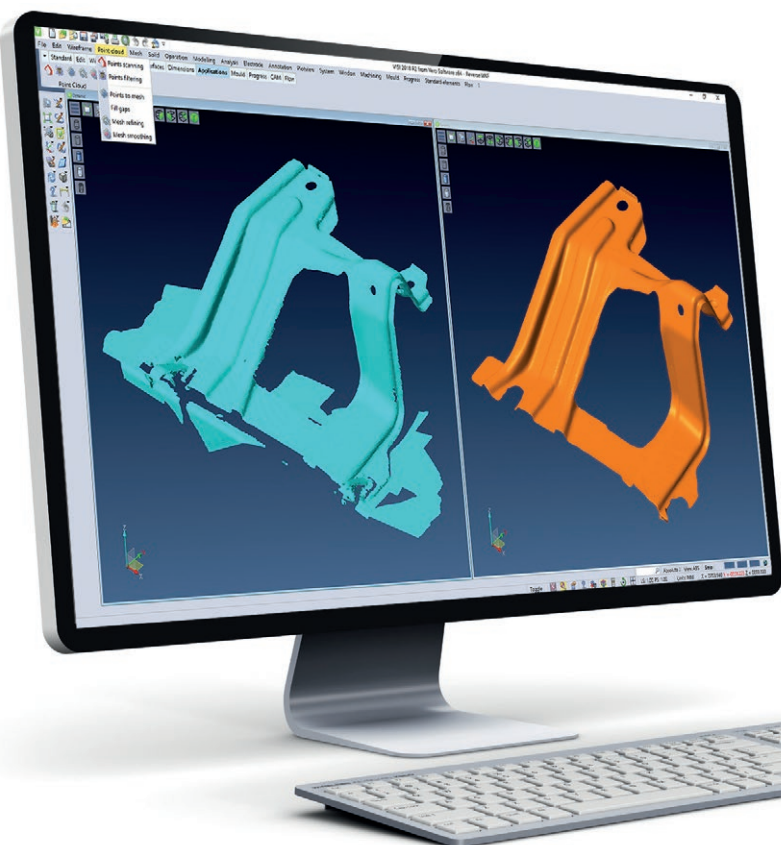
Polyhitech also work with two other Hexagon brands in their overall production process. WORKNC creates reliable and efficient tool paths to cut moulds on their CNC mills. And the WORKXPLORE high-speed collaborative communication viewer is used for inter-departmental communication and producing accurate financial quotes for the customers' mould tools. Before starting the design WORKXPLORE thoroughly reviews the existing CAD data for the product, using annotation and the Analysis function for curvature radii, draft angles, section and thickness. It's also used for detailed communication between the design team and customer.



Sales Director Yong Duk Kim is Polyhitech's principal WORKXPLORE user. He says: "The biggest synergy came from the software's powerful data compatibility. It's so easy to import third-party CAD data of the product design... and also to open the mould design data from VISI. It's an essential part of the communication process between my design team and the customer."

In conclusion, Yong Duk Kim says: "The QDM market has been changing rapidly – in particular the rise of smart phones means demand for traditional mobile phone components is decreasing. In accordance with these changes, we've invested aggressively in our facilities, and improved technology through VISI, WORKNC and WORKXPLORE.

"As a result, we have the highest technical solution in the QDM industry, enabling us to produce moulds of up to 450 mm, giving us a clear competitive advantage. We're now looking for the software to be an integral part of promoting QDM to new business sectors."



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Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications.

Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Manufacturing Intelligence division provides solutions that use data from design and engineering, production and metrology to make manufacturing smarter. For more information, visit hexagonmi.com.

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