

Unique Guitar Project

Alphacam Hits All The Right Notes

A student finished his education at the HMC Wood and Furniture College in Rotterdam with a unique final project: a wooden guitar which is specially designed to let musicians play it in a more natural position. And he used Alphacam CNC software to ensure accurate milling of the complicated shapes.

The body of the electric bass guitar is twisted 15 degrees upwards and the neck 20 degrees downwards. It is made with four different kinds of wood, and all four parts – the neck, two cheeks and the keys—were processed and milled with Alphacam.

Student Alex Blok, who was at HMC for six years, spent many hours drawing the guitar, thinking how to mill the special shape and working on counter moulds. A drawing programme helped him create the 3D drawing which was easily imported into Alphacam.

"I'm kind of an Alphacam fan," he says. "During my time at the college I've used various software packages for milling, but most of them are hard to control, and while one of the systems worked very well for 3D shapes, it didn't for 2D. Alphacam has the perfect balance."

Because of the non-standard design Alex encountered some challenges in making the guitar – not with the college's Biesse 5-axis CNC router programmed with Alphacam, but with the postprocessor. Although HMC got the postprocessor with the CNC machine, he says it was very limited in simultaneously controlling five axes.

He knew that with the CNC machine and Alphacam's extensive 5-axis capabilities, he should be able to create the guitar exactly as he designed it, but the original postprocessor wouldn't let him. "The postprocessor got confused when I wanted to mill five axes simultaneously. I was sure the CNC machine could handle the Alphacam 5-axis program, because it worked when I controlled it manually."

The college's CNC Technology lecturer Anton van Veldhoven realised that Alex would not be able to complete the guitar with the old postprocessor, so purchased a new one from Alphacam reseller Proteus Systems Europe BV. With the new postprocessor in place the 5-axis Alphacam program was readily communicated to the Biesse, and easily created the separate pieces of the guitar.

Alex's guitar takes in concepts from five different styles, producing a unique end product that has drawn extremely favourable comments from bass guitarists who have trialled it.



About The College :

Name : HMC

Business : Wood and Furniture College

Website : <http://www.hmcollege.nl>

Benefits Achieved :

- Extensive capabilities for 5-axis milling
- Prepares students for working life
- Tested limits of CNC machines

Comments :

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Alex Blok

Former student – and creator of a unique wooden guitar

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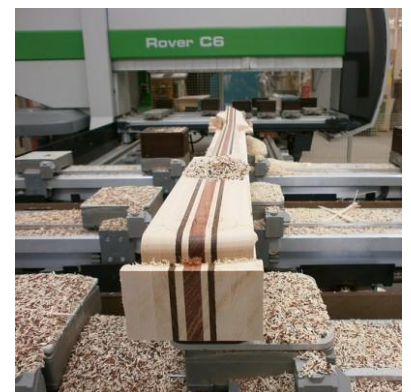
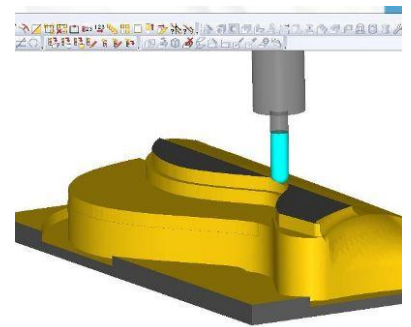
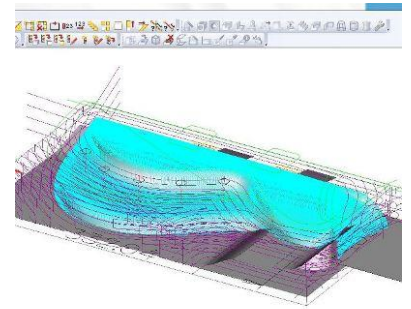
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Anton van Veldhoven initiated the use of Alphacam at the college more than 20 years ago, and they now run Alphacam Educational, a version of Alphacam which allows students to learn about the possibilities for controlling CNC machines with software.

Recently HMC, which is an institute for Intermediate Vocational Education preparing students for the wood, furniture and interior design sectors, started using Proteus Educational alongside Alphacam. This is a fully integrated solution to manage all company processes.

Starting at Level Two of The Netherlands' Furniture Education system, Alex went on to Level Four, giving him the opportunity to work with various machines and software packages. "I wanted to test the limits of all the CNC machines at HMC, and thanks to Alphacam I certainly did that."

Following his graduation from the college Alex landed a job with an interior designer in the Netherlands which focuses on design, creation and renovation. They recently purchased a CNC machine, panel saw and edgeworker, and hired Alex to set up the work preparation. And there was some additional good news for Alex – he will be teaming up with Alphacam again. His new employers are convinced of the possibilities Alphacam can offer to their company that they have decided to buy the software for him to work with.



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