VisualMILL Goes Airborne: 007 Style!

At MecSoft Corporation, we love to see our products being used by all different types of businesses and individuals. We do our best to make our software as adaptable as possible. With this in mind, we love hearing about our CAM products being used by interesting and exciting companies. BD-Micro is one of those companies, and we couldn’t wait to team up with them to write this case study! BD-Micro Technologies, Inc. of Siletz, Oregon manufactures a specialty high performance, jet powered experimental aircraft kit. If you’ve seen Roger Moore as James Bond in the 1983 film, OctoPussy, then you may have an idea of what BD-Micro manufactures. Best of all, BD-Micro uses MecSoft’s VisualMILL for SolidWorks in their production process!

At BD-Micro, lead engineer Richard Karnes, uses a single seat of Visualmill for Solidworks. He was fortunate enough to purchase VM4SW when we first launched it in 2009, and “it’s been a great experience from the start,” tells Richard. BD-Micro uses VisualMILL for SolidWorks in the production of their aircraft kit, and they machine a wide range of aerospace type materials in various thicknesses. Some examples are 7075-T6, 2024-T3 and 6061-T6 Alum, several types of composites, various plastics, wood and wood products, and rubber. In addition to sheet metal plate and flat stock material, BD-Micro’s machine is set up for processing bar stock and aluminum extrusion in longer lengths. Richard has told us that VM4SW does a fantastic job in cutting the high quality surfaces that Solidworks is able to generate.

The Instrument Panel

BD-Micro used SolidWorks + VisualMILL for SolidWorks in the design and production of their Micro Jet Instrument Panel
There was a part that we had to revise several times before we were satisfied with the clearance on the windscreen, and with VM4SW we were able to get this done with impressive speed.

And here’s the production process using BD-Micro’s CNC machine:

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At MecSoft, we love seeing the finished product! It’s inspiring to see what our software helped make possible. As we saw above, VisualMILL for SolidWorks helped BD-Micro manufacture their instrument panel. Below are a few images of the finished product!

“VM4SW is the tool that allows us to make real parts from the designs that we create on the computer.”
The AOA Vane

BD-Micro also used VM4SW in the production of an AOA (Angle of Attack) vane that is mounted on the noseboom of their jets. Richard told us this was their first experience programming a two-sided part with VM4SW, and he said, “it turned out real nice!”

Here’s a few pictures of the AOA Vane:

A vane type AOA was specified because it is the most direct means of sensing an aircraft’s true angle of attack.
And here’s the AOA Vane being machined after the tool paths were generated in VM4SW.
The Aileron Tip

The last part production we'll be looking at is the machining for a part called the “aileron tip”. The aileron tip can be seen on the jet in the image to the right.

“VM4SW delivered the important things that I was after & is just a good fit for our company.”

The aileron tip was designed in SolidWorks, and the tool paths were generated with VisualMILL for SolidWorks. Take a look at the production process in the image below.
Here it is being machined on BD-Micro’s CNC Machine

The Finished Product

For more information on BD-Micro visit their website at www.bd-micro.com.