



Empowered by ZW3D, Modern Industries help machinists boost productivity

You would think, in today's world of computer numerical control (CNC) milling machines, that producing custom-machined parts would be incredibly fast and easy. But it isn't always so.

"The key problem," says Ron Bemis, product engineer for Modern Industries, Inc. in Erie, PA, "is setup. The time required to set up for each machining operation can absolutely kill productivity. Fortunately, leveraging the power of ZW3D, Modern Industries created the mPower™ line of workholding tools. With a precision fixturing and mounting system, modular tooling columns, and indexers, it is now possible for machine shops to slash the time for setup by as much as 80%. That can have a huge impact on productivity and profitability, and ZW3D helps to make it all happen."

Modern Industries' Tool of Choice – ZW3D

We originally bought ZW3D two years prior to the mPower project," Bemis says. "Our toolmakers used – and continue to use – ZW3D to build our fixtures in 3D to make sure there isn't any interference when they do machining or hold the part. It is very helpful to find out about interference ahead of time."

Bemis says, "When we began to get involved in the mPower project, we had to convert all the original drawings into ZW3D, because the inventor had created the drawings in another [CAD package](#), and it couldn't create [CAM programs](#) for machining the parts. ZW3D can do that easily."



"But that was just the beginning of the ZW3D advantage for Modern Industries.

"Sometimes customers want a turnkey product. They want everything for a new machine, including fixtures for new parts, and they want it done all at once. ZW3D makes it easy to pull it all together, get it done quickly, and get it done right."



At other times, customers are adopting the mPower system for the first time and want to make sure that they will still be able to use the fixtures in which they already have considerable investment. Bemis says, “In that case, I use ZW3D to lay out the mPower base plate to make sure the customer’s existing fixtures are still compatible. Usually I just need to know the hole pattern in their existing fixtures to design a plate that fits. Sometimes a plate that we already make will do the job.”



“Everyone who has tried the mPower system has fallen in love with it,” Bemis says. “That’s because it’s a modular system, a bit like Legos™, that fits together so that everything is properly aligned and positioned in the same way every time.”

“mPower has become an ‘ongoing design,’” Bemis says. “When customers need something special, I

bring their project into ZW3D, even if it was designed in another system. Then I can quickly browse through the layers of their previous projects and select the components that fit, check for interferences quickly send off a new setup. Thanks to the speed of ZW3D and the versatility of mPower, I can often have the work completed for them in a matter of hours.”

The impact on customers has been substantial. For example, previously it took one machine shop a full day to do the setup and change from one machine to another to do the machining for a series of parts. Now, thanks to mPower, the same changeover is accomplished in about an hour. It’s little wonder that mPower customers return again and again with special requests that Modern Industries is happy to fulfill.

Bemis says, “ZW3D has had a substantial positive impact on our business. I love that ZW3D lets me create custom products on the fly for customers as they need them, and it’s easy to confirm they will be right the first time.”

Note: VX CAD/CAM software and technology has been acquired by ZWCAD Software Co., Ltd. VX CAD/CAM has been rebranded as ZW3D. All the testimonials of ZW3D refer to its predecessor.