

Urschel Laboratories and The Future of Manufacturing
With a Little Help From hyperMILL®



Urschel Laboratories is a vibrant Indiana manufacturing company that has been growing steadily since its founding in 1908. The company's manufacturing floor takes up more than 70% of its 300,000 square foot facility in Chesterton Indiana where its 400 employees produce a comprehensive line of food processing machines that help feed our nation and the world.

To sustain their growth into the future, Urschel is now transitioning and upgrading to high-speed milling machines that cut metal across 5-axis. 5-axis machining allows Urschel to machine complex geometries quickly and precisely in one pass, using just one holding fixture, and without having to reposition the part for each milling operation. Not only does 5-axis machining save Urschel time and money, but it has allowed them to produce parts that just can't be produced on their 3 and 4 axis machines.

The software that drives these machines is critical, and Urschel chose Open Mind's hyperMILL® CAM software to help them move into the future.

At Urschel Laboratories it all began when its founder William E Urschel was approached by a Michigan farming couple who had more gooseberries than they could handle and needed help getting them to market.



Gooseberries on the Vine

in 1907 that farming couple grew gooseberries which come equipped with a stem and a thick bud appendage that both need to be removed before this pungent-sweet fruit is put into cans and onto grocery shelves. But, it just wasn't practical or cost-effective to hand trim each gooseberry on an assembly line. They needed a machine that would economically take their harvest to market.

They approached William Urschel, a young man of 25, who had gained a reputation for being a whiz kid, and a genius at all things mechanical. William took on the challenge and a year later in 1908, he filed a patent for his Gooseberry Snipper machine that solved the couple's dilemma.



The Original Gooseberry Snipper



Urschel Labs' Product Showroom

He then launched a company to manufacture the Snipper followed by a line of innovative machines that are now used by virtually all food manufacturing companies worldwide to slice, dice, trim, grate and process the food you store in your pantry and on your refrigerator's shelves.

The next time you sprinkle grated cheese on a salad, heat up a quick cup of instant soup, open a can of green beans, or eat virtually any processed food, from any manufacturer, you'll most likely be experiencing firsthand the efforts of the people, and the food processing machines that they make at Urschel Labs.

Go Hoosiers!

Urschel Labs adopts the latest manufacturing techniques, machines, and sophisticated hyperMILL® CAM software to move the ball forward.

I visited Urschel in Chesterton, Indiana and met with Bill Monroe, their Sr. Manufacturing Engineer to , learn their history, see the team in action and take a peek at their new manufacturing direction.

I met Bill in the "by invitation only" Urschel museum. As docent, he guided me across a room-size mural that took me on a historical journey beginning at the painting's left hand side with the 1908 Gooseberry Snipper and ending on the right with a



depiction of today's Chesterton facility. Another part of the room replicated William E. Urschel's office, and was filled with artifacts; The original Snipper, early harvesting machines, a drafting table, and the lathe that he used to create prototypes of his many food processing inventions.

After the tour, Bill told me that as manufacturing Engineer, one of his missions was exploring new ways to streamline and improve the existing manufacturing process. He studied up on 5-Axis machining, and learned that by using this technology he would be able to build better parts for the Urschel product line faster, with more accuracy, and even be able to build complex geometry parts that he just couldn't build with existing equipment and software.



Bill first wanted to experiment with 5-axis machining. At the outset, he had absolutely no idea of what he would be able to create using this method, but he knew that possibilities would materialize once he got his hands on a fast and accurate 5-axis mill, and the CAM Software to control it with.

For his R&D effort, Bill purchased a high-speed DMU-50, 5-Axis mill and then searched for the CAM software. The CAM software that they were using wasn't up to the task, so he started looking for the right CAM solution for the job. Bill immediately narrowed down the field.

All 3D design work at Urschel is done using SolidWorks CAD, and he quickly decided that, *"I didn't want to use an unfamiliar CAD package and wanted CAM software that was directly integrated into SolidWorks. hyperMILL® CAM software definitely met this critical need."*

SolidWorks integration was just one consideration. Bill was anxious to start his 5-Axis experiments, wanted to get up to speed fast, and needed quality training and ongoing support and help with 5-axis machining strategies to meet his current and future needs.

"The hyperMILL® technical support team was great to work with, and another factor was that Open Mind had some strategies that other people didn't quite have. At that time we weren't quite ready to use them yet, some pretty high-end stuff, but I knew that once we learned them and once we got there they would be valuable."

The learning experience was great. Instead of going out to classes they came here for us and then we'd go out to our lab and work together on our machine.

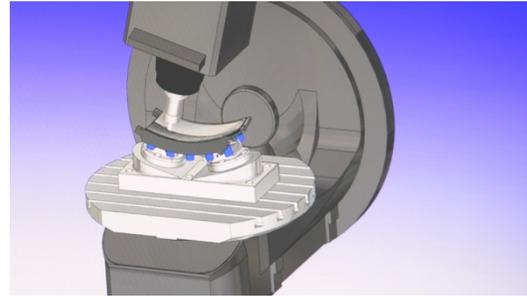
The hyperMILL® training and support experience has been excellent. it is always one on one, right here in our building, with our parts, and on our machines. Our team couldn't be happier."



Bill Monroe, Sr. Manufacturing Engineer

Bill also needed an ongoing responsive working relationship with a CAM company that would be there with expert guidance and advice, to guide and work with him 24/7 to fulfill his needs over the long term.

While making his buying decision Bill checked off all these factors and firmly decided on Open Mind's hyperMILL® CAM solution. In just a few short months, based on the cost and time saving benefits of 5-axis machining, and the ability to go beyond what Bill thought was possible, *"We bought a second machine along with another seat of hyperMILL® and are now loading it up with production jobs."*



hyperMILL® Simulation

Working with Open Mind's hyperMILL® team has been a positive experience all the way through. I chose hyperMILL® because I was already familiar with its interface from working with SolidWorks, and that was critical. And then, being able to have a package that was big enough and comprehensive enough to grow with us over the long term was extremely important. We didn't want a pared down package just because it worked in SolidWorks. We needed and have found a solution that is comprehensive and that we can grow with, and having really good support is key.

We wouldn't have been able to move to production as quickly as we did without the hyperMILL® people teaching us along the way. And, they didn't try to oversell us, which was a huge deal. Our relationship with Open Mind is a relationship that will continue to grow, for a very long time.

With a little help from Open Mind and the hyperMILL® team, Urschel Laboratories is now poised to continue its growth into the future.