

# Manufacturing for Various, Demanding Industries – Done Profitably!

## From Poland to America

Ultimate Machining and Engineering Inc. was founded in 1994 by John Kulczuga, a naturalized American Citizen who emigrated from Poland to the USA in the early 1980's. "I went to Poland's Warsaw University of Technology and graduated with a degree in Mechanical Engineering. I was anxious to do something and America gave me that opportunity," said John.

John's first steps into America included working as an employee in various metalworking shops. But, he believed he possessed "...a little luck" and a strong enough work ethic to make a go of it on his own. For him, doing "something" meant renting a shop in Mundelino, Illinois, and setting up his own company: Ultimate Machining and Engineering, Inc, where he serves as the President.

His engineering expertise is the backbone of Ultimate's success. His leadership and work ethic, along with the strong management team he has assembled, guides the company through continued success. Ultimate has grown from a start-up in a rented storefront to a 35,000 square foot manufacturing plant located on five acres in the Southwest suburbs of Chicago.

## Demanding & Various Industries

Ultimate initially specialized in making industrial hydraulics components. They secured orders from Caterpillar, Inc., their first major client, by fabricating spools and stems. The multi-billion dollar company required a variety of complex parts for their earth-moving equipment, something that Ultimate was able to fulfill to Caterpillar's exacting specifications. Ultimate remains a strategic supplier to Caterpillar still today.

Ultimate also branched out to other industries, including the construction, automotive, defense, and medical industries. Their customers include, among others, Parker Motion Control Technology, the Department of Defense (DOD), and also Volvo, where Ultimate provides after-market parts.

"We do a lot of work for many different industries, parts with slots and grooves, milling, drilling and turning – some requiring a lot of attention and others not as much," said John.

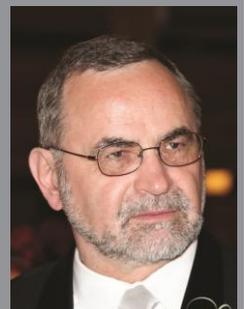
One reason why Ultimate can turn on a dime comes from the talented engineering and mechanical team that John Kulczuga assembled at Ultimate; the company is confident that they can tackle any design that comes to them. They pride themselves in being able to handle extremely difficult manufacturing jobs.



## Eurotech Gave Ultimate Machine Considerable Production Growth Increased Profits and New Contracts

- "With our first Eurotech (the 420SLLY) we could multi-task which allowed us to cut down on cycle times and the costs of milling."
- "The Eurotechs have simplified our processes down to a single operation, and made the operation, overall, run much faster."
- "The Eurotech machines offer a flexibility that we found to be extremely useful. You can make a whole range of different parts on just one machine."
- "For those jobs that were more complex, Eurotech saved our cycle times by 50%, and in some cases more than 50%."
- "We can run two or three machines at the same time with only one technician attending."
- "Because we operate with Eurotech machines, we are perfectly fit to do any job."

*John Kulczuga, President*





### The other source of their confidence comes from Ultimate's use of the Eurotech machinery.

Asked to describe what is needed in order to add work from an order from Caterpillar, to, say, an order from the Department of Defense, John said, **"With Eurotech, it's just a matter of making space in our warehouse, which we can do; the footprint of these machines is incredibly small. It's that simple."**

### Parts in One Operation!

Ultimate purchased their first Eurotech in 2004. Kulczuga found that with the Eurotech 420SLY, the company could multi-task, which enabled them to cut down cycle times and the costs of set-ups. Prior to that time, Ultimate ran separate milling operations: generally two to three, or more, per part. Their Eurotech machine simplified the processes down to a single operation, and made the operation, overall, run much faster. What made the Caterpillar work tricky was the need to adhere to the varying requirements in the sizes of the different spools, sometimes with tight tolerances. They ranged from 1/2 inch to 3 inches in diameter, and 2 inches to 20 inches long. Kulczuga referred to them as "...the intricate parts for the hydraulic brains of Caterpillar's excavation equipment."

Ultimate currently owns a total of 5 Eurotech machines: the two 420SLLYs, two of the 710 SLLYs and also the B658SLY. Ultimate uses the dual 710s and 420s to make all of these spools. They offer a flexibility that Kulczuga has found to be extremely useful. **"You can make a whole range of different parts on just one machine,"** he said. Kulczuga saw that the Eurotechs needed anywhere from 3 minutes to 12 minutes to complete a part, depending on the job. For those jobs requiring more complexity, Kulczuga said that using Eurotech **"the cycle times, in some cases, were lowered by 50%! And even more than 50% sometimes!"**



### EXAMPLES OF SOME OF THE LONG SHAFT WORK THAT ULTIMATE MACHINING DOES FOR THE HYDRAULIC INDUSTRY ON THE EUROTECH MACHINES IN ONE OPERATION

*Eurotech offers an unbeatable solution for long shaft, precision work. A unique and proprietary attachment built for the Eurotech Elite machines – the process includes pinch turning and pinch milling while holding the part between both spindles. The result is one set-up, one inspection, and a part that is unloaded by gantry arm in perfect finished condition (no nick or dings).*

Specifically, using just the Eurotech machines, Ultimate manufactures an average of 3,000 parts per month. While Ultimate has not retired their original, non-Eurotech machines (those conventional machines are still being used for smaller tasks), bringing Eurotech into the operations at Ultimate Machining and Engineering has allowed Ultimate to grow their production considerably.

### "It helps to make this a kind of unattended operation."

While Ultimate employees can't leave the operation unattended for a long time, Kulczuga said that they found that they can run two or three machines at the same time, with only one technician attending because the machines are effective as well as reliable.

### Competing: the Bottom Line

"Our goal was to lower costs so we can compete on a level market. With one guy running two machines at the same time, and with the cut in cycle times, you cut costs...including the cost of having to have more employees, so you can compete with China prices," laughed John. "We can compete. I love it. And it works." For Kulczuga, the bottom line comes to this: "Eurotech is amazing, especially for a lot of the Caterpillar parts, and other difficult parts. All in all, everything runs better and smoother than it did before we bought the machines from Eurotech."

The current set-up of the company's footprint, with their Eurotech machines, allows them to be nimble enough to handle their current customers' needs, while also being able to pursue additional contracts. "Because we operate with Eurotech machines, we are perfectly fit to do any job. We just need the access to new customers to bring more on board."

Business, going on nearly twenty years, has been good for Ultimate. They currently operate out of an expanded facility of 35,000 square feet in Plainfield, Illinois, and employ 35 people. Ultimate Machining is another great example of the achievement of the American dream.



**"Because we operate Eurotech machines, we are perfectly fit to do any job!"**  
**-John Kulczuga, President**

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