

# Von Ruden Manufacturing

## A NEW MARKET WITH ELLISON TECHNOLOGIES

Von Ruden Manufacturing has built its business on producing gearboxes and hydraulic motors since 1946. But when the company recently decided to shift its emphasis to the design and production of live tooling, it stepped into a whole new market with all new challenges.

Von Ruden hadn't planned to enter the live tooling market, but became frustrated with existing attachments that didn't hold up well during operations involving casting, grey iron, and ductile iron. So the company came up with a better design and began manufacturing its own attachments in 2001. Word spread and soon the machine tool companies themselves began placing orders. At the time, Von Ruden was the only company in the United States that designed and manufactured its own live tooling components.

Over the next few years, due to growing demand, Von Ruden began to shift its focus from hydraulics and power transmissions to live tooling. However, the company soon realized that its existing equipment couldn't support the smaller lot sizes and short lead times necessary to be profitable.

It was time to invest in new technology. "We already had been machining to very tight tolerances due to our work in the hydraulic industry, so there wasn't much of a manufacturing learning curve," said Von Ruden's President Brandon Anderson. "The challenge was transitioning to a new market where the lot sizes went from hundreds of pieces down to under 50 pieces. We had to do a lot more cutting of a lot more pieces to get the same revenue."

### The Most Efficient Way

In 2008, Von Ruden turned to Ellison Technologies to determine the most efficient way to make these parts. After comparing the capabilities, setup times and costs of three different multitasking lathes, Von Ruden quickly narrowed the decision down to a Mori Seiki NT4250SZ/1500DCG CNC Multi-Function Turning Center.



Left photo: ER Collet Spindle for OD Holder on Mori Seiki NLX Series.  
Right photo: Housing for OD Holder on Mori Seiki NZX Series.

"It's a unique story because we bought a machine from one of our machine tool suppliers and they were buying our attachments that we would make off this machine," Anderson said. "It's a good example of how we can partner together on equipment and technology to tighten up the supply chain and add more value."

Von Ruden allowed Mori Seiki to display the machine at IMTS in 2008, but didn't end up putting it into full production until 3 years later. That's because the market slid shortly after purchasing it. Von Ruden simply didn't have a need for it because it had so much inventory and work in process.

"There were times we actually wondered if we made the wrong decision," Anderson said. "But we came out of it saying our only mistake was that we should've purchased it 2 years earlier. If we would've installed it before the downturn, we wouldn't have had all this excess inventory on the shelves. So the economy didn't detract from the purchase of the machine, it actually underscored the need to act more aggressively when we see a need in the future."

Prior to installing the machine, Von Ruden's live tooling required 8 hours of setup time, 4 operations across several work centers and 7 days of processing. In addition, each setup generated a considerable amount of scrap. The Mori Seiki NT4250SZ changed all of that.

Now all the parts are processed in a single operation, slashing setup time by 95 percent. Forecasted lead times were reduced from 8 weeks to less than 3 weeks. And scrap virtually has been eliminated. The machine has been so successful that Von Ruden plans to purchase two more over the next year.

Anderson spoke highly of Ellison Technologies' expertise and service.

"What struck me the most about working with Ellison Technologies is their support," Anderson said. "They worked with us 2 years later to complete the training, installation and support. It was all done based on when we needed it, not when it was best for them."

### About Ellison Technologies

Ellison Technologies has been providing advanced machining solutions to North American manufacturers since 1955. The solution may involve a stand-alone machine, multi-process equipment, or an integrated manufacturing system with robot integration. Whatever it is, Ellison Technologies is committed to helping customers determine the "lowest-cost-per-part" way of making parts.

On a larger scale, the company is committed to bringing parts back from overseas.

"We're convinced that if our customers adapt lean manufacturing principles, invest in current technology,

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- Brandon Anderson, president, Von Ruden Manufacturing

train people properly, and automate where appropriate, they can be competitive with any country in the world," said Craig St. John, president of Ellison Technologies' Minneapolis office, which serves Minnesota, North and South Dakota, and Western Wisconsin.

He went on to say that more and more manufacturers are looking to manufacture parts complete in one operation. Fewer customers are purchasing 3-axis machining centers or 2-axis lathes, opting for multitasking lathes and 5-sided machining solutions instead. Ellison represents the latest technology from DMG/Mori Seiki, Taiyo Koki, Dixi, and FANUC Robotics.

Another trend he's noticed is that even small manufacturers are integrating automation. Ellison Technologies

designs and builds over 50 large turnkey automation systems each year and remains the largest FANUC integrator for loading and unloading machine tools for robots in the United States. Ellison Technologies also has pre-engineered simple robotic solutions that literally "plug and play" onto customers' existing machines, making robotic integration easy and low cost for all size shops.

Aside from its array of high-end machining and automation solutions, Ellison Technologies prides itself on providing the highest level of customer service possible. The company has the highest ratio of service technicians to installed machines in the five-state area. As a result, it has the ability to respond to customers the same day or the next day

they call and get them back in operation very quickly.

For customers like Von Ruden, long-time service and support are key.

"What we appreciate most about Ellison Technologies is their ability and willingness to support us as a company now and in the future, not just when they're about to make a sale," Anderson said. "Three years later, they're still visiting our facility to make sure we're getting what we need out of the machine we purchased. I know that if we ever have an issue or need advice, they'll be right here. I would definitely recommend Ellison Technologies to other companies."

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For more information about Ellison Technologies, visit [www.ellisontechnologies.com](http://www.ellisontechnologies.com), or contact Craig St. John at 763.545.9699.