

## CASE STUDY

# ULTRA TOOL & MANUFACTURING

Ultra Tool & Manufacturing, located in Wisconsin, is a privately owned manufacturer focused on quality and repeatability for metal parts and tooling dies from design to production. Specializing in stamping and fabrication, Ultra Tool & Manufacturing produces precision metal components that serve the recreational vehicle, automotive, electrical, lawn and garden, small engine, and military defense industries. With just over 100 employees on board, 2023 marks 54 years of business for Ultra.

**Industry:**  
Industrial  
Manufacturing

**Location:**  
Germantown,  
Wisconsin

## Results



Realized \$48K annual savings  
from automating production  
recording and label-making



Reduced work center  
setup time resulting  
in \$80K annual savings



243 manual  
labor hours  
saved annually



With a humble beginning in 1969 as a Milwaukee-based tool and die shop, Ultra Tool & Manufacturing has grown to include additional services like metal stamping, die design, and metal fabrication. Their world-class operation is headquartered out of Germantown, WI. While they might be located in a smaller town, Ultra manages a larger-scale operation. They have provided their customers with excellent quality and service for over 50 years and continue to thrive today.

This eagerness for growth is why Ultra has gone on to receive national recognition—the company’s leaders have never been afraid of embracing new technology. A new facility in 2015 opened the doors for larger presses and expanded capabilities, including the implementation of Plex’s Enterprise Resource Planning (ERP) cloud-based solution. Over the years, Plex ERP, which includes its Manufacturing Execution System (MES) solution, has helped Ultra improve quality, processes, and responsiveness. Since this implementation, Ultra identified a new need for their growing business: the ability to better control plant floor performance.

## Making Up for Lost Time

The need for improved plant floor performance introduced Ultra to Plex’s MES Automation and Orchestration (MES A&O) solution, which connects Plex MES to the plant edge to control information flow and processes adding efficiency, saving cost, and eliminating manual errors. When a company makes millions of parts per year, the ability to track and gain visibility is an important capability. Ultra recognized that lack of automation and insight into data at a granular level left a lot of room for mystery—and with mystery comes cost. For Ultra, that cost equated to tens of thousands of dollars in manual labor for setup and more than 240 extra operating hours each year.



One of my sole focuses right away was just figuring out what we're really saving from a standpoint of automating production recording and label making. So in just those two things alone, we captured right around \$48,000 of annual savings which basically paid for the Plex MES A&O product easily."

**Andrew Loescher**

Ultra Industrial Automation Specialist

When searching for their plant floor automation solution, Ultra identified a variety of pain points they hoped to be addressed. Overall, they lacked visibility on the plant floor. Little to no plant floor insight brought with it a domino effect of other issues: Ultra had no way of knowing machine rates, what they should be, or why an operator failed to meet rate expectations. Some issues, like an operator forgetting to log in or out of production, boiled down to manual error.

Plex MES A&O, a powerful low-code toolset that connects Plex MES to the plant edge, allowing for automation of tasks and orchestration of workflows to remove human error and manual oversight, offered Ultra the solutions they were looking for. Since implementing Plex MES A&O in June 2021, Ultra has experienced a variety of positive changes like increasing visibility into production and tracking data.

After starting with just one stamping press, Ultra moved through nine more over the course of a year and upgraded the controls on machines that were old or obsolete. Their implementation went beyond just machines and included training or retraining operators to utilize Plex MES A&O best. This was a crucial move for Ultra as their operators often hop from machine to machine. A big transition for Ultra, the implementation went smoothly as they broke up the process into sizeable pieces.

## Visibility Gained

**Before migrating to Plex MES A&O, Ultra struggled to see its operations clearly. According to Ultra Industrial Automation Specialist Andrew Loescher, “We were blind... and kind of floundering as to how we could address our pain points.”**

At the time, Ultra utilized Plex as their ERP and MES solution. Although they were happy with Plex’s cloud-based ERP system, they needed even more control on the shop floor. Specifically, they needed the automation capabilities and visibility that Plex MES A&O offers.

Ultra is now able to track data points that were previously unavailable, and they’re able to do so in real time. For instance, with MES A&O, Ultra can grab real-time machine rates from all of their machines—and they can do it on top of production recording. This visibility has allowed Ultra to create a color-coded system for machine rates. When machine rate is good, it’s colored green. When machine rate slows or falls behind, it’s colored red and flagged for attention.

This visibility extends to the operator as well. Ultra can see the operator rate with MES A&O—it’s so detailed that Ultra can calculate how an operator’s performance impacts yearly costs. This insight also allows Ultra to see faster and slower rates between operators, allowing them to verify which rates can be achieved and which ones are unattainable. Increased attention on operators has opened avenues of support for those on the shop floor. If an individual requires additional training, they are now more easily spotted and addressed.



Gaining visibility has been invaluable for Ultra, saving both money and time. A testament to the immediate benefit of adding on Plex MES A&O, Ultra saved 48K in production productivity in their first year. Loescher speaks to the excitement of such savings, “One of my sole focuses right away was just figuring out what we’re really saving from a standpoint of automating production recording and label making. So in just those two things alone, we captured right around \$48,000 of annual savings which basically paid for the Plex MES A&O product easily.”

Additionally, before migrating to Plex MES A&O, Ultra was spending 64 hours of manual setup time in excess of their typical setup times. Plex now gives Ultra’s managers the tools they need with tracking, alerting, and utilization of custom screens that visibly display setup times. With all machines considered that are automated with Plex MES A&O, this amounts to \$80,000 annual savings from eliminating this non-value-added excess setup.

## Next Steps

Ultra’s current implementation is only the first phase. As they continue to move forward with Plex MES A&O, the plan is to continue automating other areas of the company. Increased visibility has led to better decision-making, and the company believes there are more benefits to come down the road. The newfound visibility has inspired Ultra to update other systems in the company, as they continue to streamline processes and unify their teams across all departments.

### ABOUT PLEX

Plex, by Rockwell Automation, is a leader in cloud-delivered smart manufacturing solutions, empowering the world’s manufacturers to make awesome products. Our platform gives manufacturers the ability to connect, automate, track, and analyze every aspect of their business to drive transformation. The Plex Smart Manufacturing Platform™ includes solutions for manufacturing execution (MES),

ERP, quality, supply chain planning and management, asset performance management, production monitoring, process automation and analytics to connect people, systems, machines and supply chains, enabling them to lead with precision, efficiency and agility. To learn more, visit [www.plex.com](http://www.plex.com)