



Epicor Success Story

Vollrath

Vollrath Racks Up Improved Uptime and Overall Equipment Effectiveness (OEE) With Epicor

Company Facts

- ▶ Location: Sheboygan, Wisconsin
- ▶ Industry: Manufacturer of injection-molded warewashing rack systems and plastic kitchen products for the food service industry
- ▶ Website: www.vollrathco.com

Success Highlights

Challenges

- ▶ No integration between existing ERP system and production monitoring system
- ▶ No process monitoring capability
- ▶ Limited real-time data reporting capabilities
- ▶ Limited availability of key data
- ▶ Insufficient reaction to machine downtime

Solution

- ▶ Epicor Mattec MES, manufacturing execution, and real-time production monitoring system

Benefits

- ▶ Improved uptime to 91 percent
- ▶ Improved OEE by 10 percent
- ▶ Gained real-time production and process monitoring
- ▶ Added real-time statistical process control (SPC)
- ▶ Minimized response time with alerting system
- ▶ Achieving annual savings of \$728,000 across 14 machines



For more than 136 years, The Vollrath Company has manufactured quality equipment and smallwares for the food service industry. In particular, the Vollrath plastic injection molding and light assembly facility in Dane, Wisconsin manufactures warewashing rack systems, tabletop accessories, bar supplies, food preparation products, dispensers, trays, and signage used throughout the food service and hospitality industry.

Key challenges

While Vollrath had an existing production monitoring solution in place, it had a number of weaknesses:

- ▶ Insufficient reaction to machine downtime
- ▶ No process monitoring
- ▶ No integration with Vollrath's existing ERP system
- ▶ Real-time data reporting was limited to a few standard reports, and the ability to run these reports effectively in real time was limited
- ▶ The user interface offered only limited network accessibility, which also limited the availability of key data to those who needed it
- ▶ The existing system was programmed in Access when a relational database was preferred
- ▶ Product enhancements were no longer released on a consistent basis



"We were concerned about the vendor's sustainability, given the size of the existing user base and number of new users they were bringing in," said Steve Boeder, director of operations at the Vollrath Dane facility.

"That seemed to impact product enhancements because they had become few and far between. We also had no process monitoring capability. We had paid for that module as part of an upgrade, but we just couldn't get the functionality to work."

These weaknesses were the driving force behind Vollrath's search for a new production and process monitoring solution.

Solution

As Vollrath evaluated several vendors and solutions, the new system had to meet several key requirements, including:

- ▶ Real-time processing alerts
- ▶ Comprehensive statistical process control (SPC)
- ▶ A quality system module
- ▶ Easy-to-use machine interface units (MIUs) for the employees on the floor

Impressed by Epicor manufacturing execution and production monitoring system, Mattec MES, Vollrath's search was over. "We had an extensive RFP," said Boeder. "But Mattec MES was able to meet 97 percent of our requirements out-of-the-box, without expensive customization."

Straightforward implementation

The Mattec MES implementation was completed in three months. Vollrath spent the necessary time to ensure that the data conversion for the new system went smoothly and that all data elements were included.

Without missing a beat, Vollrath disabled its existing production monitoring system, enabled the Epicor system, and brought 14 machines online.

"The system configuration was straightforward. We were up and running with real-time monitoring instantly," Boeder said.

Impressive quality

Mattec MES provides Vollrath with real-time production monitoring to capture downtime reasons, reject reasons, and reject quantities. Real-time reporting is available to users on the network, improving accessibility to key information.

The quality system within Mattec MES is also used extensively to timestamp samples while production is running. The samples are then brought to the lab and specifications are inspected.

"Prior to Mattec MES we had a standalone quality system," said Boeder. "After testing the quality module during the first phase of implementation, we were so impressed that we chose to implement it right away. We had it up and running a year ahead of the scheduled quality roll-out. It was a pleasant surprise."

Alerting Vollrath to results

The greatest influence on improved uptime at Vollrath has been the use of the alerting and voice paging system of Mattec MES. According to Boeder, the alerting system has been "phenomenal."

"We use manual alerts for paging the necessary resources, like maintenance staff, quality staff, supervisors and first responders to a machine. We also have automatic alerts based on cycle times. If Mattec MES finds that a machine is running out of cycle, these key alerts let the technicians know that something needs to be changed."

"The voice paging and alerting system has had the most impact on our ability to improve uptime," said Boeder. "Prior to the software installation our uptime (of our planned run time) was at 79 percent. As we implemented and rolled out Mattec MES in the middle of the year, it rose to about 81 percent. By the next year that number was 90 percent. This year-to-date we're averaging 91 percent uptime. That's just from the alerting capability, which allows us to get the right personnel over to the affected machine immediately."

In addition to the alerts on display monitors, the Mattec MES paging system sends detailed voice messages over Vollrath's PA system. Useful messages, for example, 'press number one, production cycle, out of spec' are heard when triggered. The system continues paging until a technician or the appropriate resource goes to the machine, acknowledges the page and addresses the issue.

Prior to the alerting and voice paging system of Mattec MES, Vollrath used a buzzer system for audio alerts. Certain buzzer bursts meant a technician was required, or that a material handler was required on a press.

"People were looking around and wondering which press needed attention," said Boeder. "It wasn't easy to get the right individual to the right press immediately. Now, the system tells us



which press requires attention and which resource is required. It lets us identify and address issues immediately.”

In addition, the Mattec MES alerting system notifies the floor when production runs are almost complete. “The Mattec MES touch screens alert us when there are 30 parts to go, which allows the material handlers to prepare for a color change and stage materials, and pre-alert the setup department and process technicians to the upcoming event.”

Improved OEE

Along with improved uptime, Mattec MES has helped improve overall equipment effectiveness (OEE) at Vollrath. “Prior to the installation, our OEE was 77 percent. With the improvement in our uptime, this year-to-date we’ve achieved 87 percent OEE.”

“With our improved OEE, we could theoretically generate, at full capacity, 608 hours of additional time per machine per year. For a product with an average run rate of \$85 per hour, and the extra 608 hours per machine, we could see \$52,000 in annual savings. If we could pick that up at all 14 machines, we’re then looking at \$728,000 in annual savings. I think anyone would be interested in gaining these levels of annual savings.”

Planning ahead

As Vollrath continues to grow, so do its plans for Mattec MES.

“As we move forward we’ll be setting upper and lower control limits on processing parameters,” said Boeder. “We’re already collecting the data on certain machines so that we can prepare these control limits.”

While Vollrath has a process alert for cycle time, this feature will expand to other areas. “We’ll also implement pre-alerting to other variables that indicate when a process is out of bounds,” said Boeder. “Rather than being reactive—likely finding something’s out of bounds after we’ve done a quality inspection—we’ll know immediately that we need to make an adjustment.”

Conclusion

By minimizing down machine response times through the real-time voice paging and alerting functionality of Mattec MES, Vollrath has steadily improved OEE to 87 percent, and uptime to 91 percent. Real-time reporting has improved accessibility to key information to the people who need it. Asked to sum up his experience with Mattec MES, Boeder said, “We’ve been very pleased with the functionality of Epicor Mattec MES system, and the service we’ve received from the start, from implementation all the way through to ongoing support.”

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