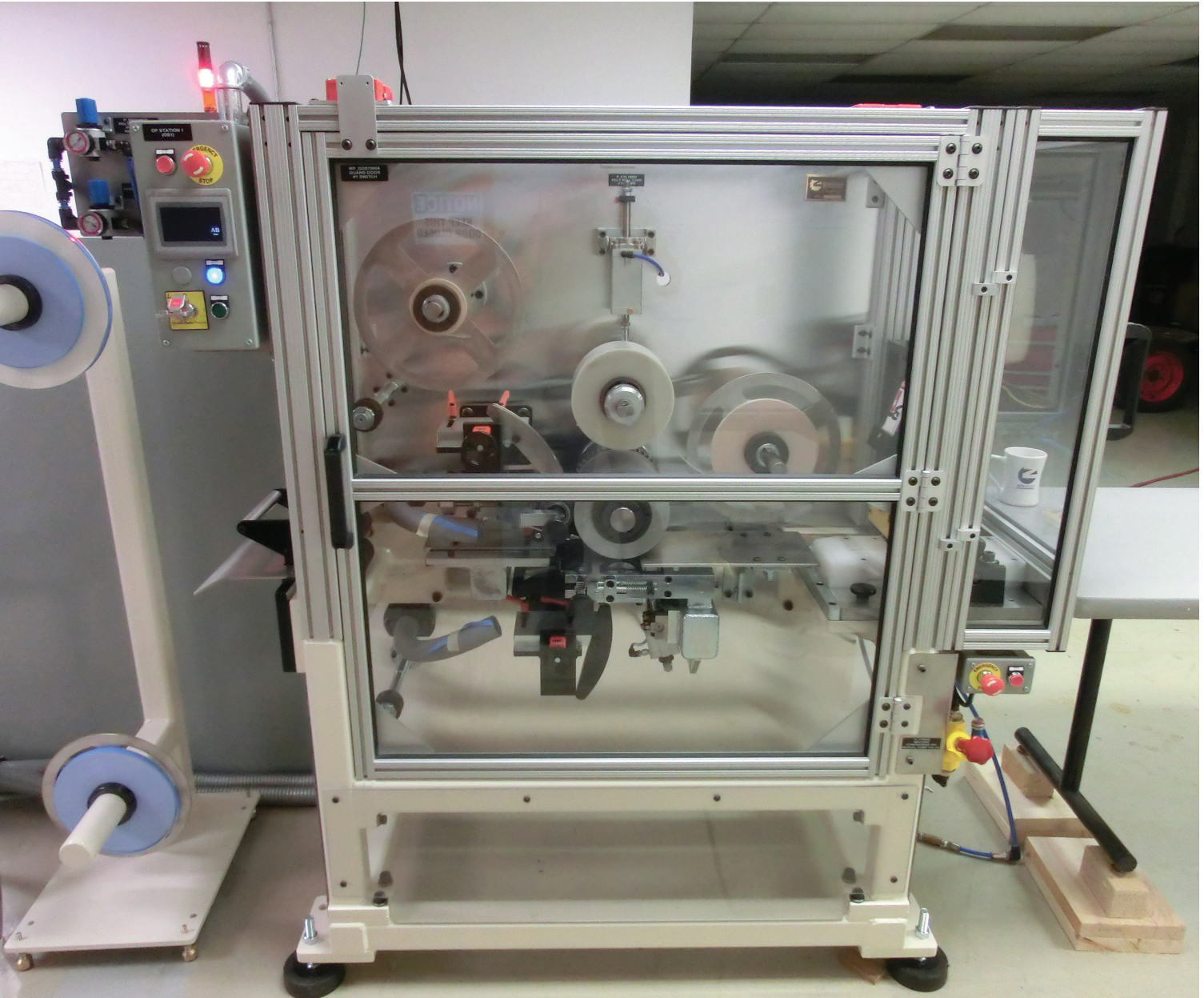


ZETA GROUP ENGINEERING LLC

STREAMLINING DEVELOPMENT OF AUTOMATED SYSTEMS WITH SOLIDWORKS



Zeta Group relies on SOLIDWORKS mechanical and electrical design solutions to deliver advanced automated manufacturing systems that are unmatched in terms of speed and quality.

Challenge:

Establish and grow a robotic manufacturing system automation and manufacturing business by streamlining, improving, and accelerating development cycles.

Solution:

Implement SOLIDWORKS Standard design, SOLIDWORKS Premium design and analysis, SOLIDWORKS Electrical 3D design, and SOLIDWORKS Electrical Schematic design software solutions.

Benefits:

- Cut design cycles by 50 percent
- Shortened customer cycle times
- Reduced customer scrap
- Improved quality of electrical schematics

Zeta Group LLC is a product design, engineering, and manufacturing consulting company that was founded in 2010 to automate manufacturing systems development and production, including robotics, for its clients. With two separate business operations—Zeta Group Engineering and Zeta Group Manufacturing—the company provides a range of services, including turnkey solutions that take automated production machinery and equipment all the way from initial planning and design through assembly, testing, and manufacturing. Customers in the tissue- and towel-converting; nonwoven converting; food and beverage; printing, coating, laminating; and packaging industries rely on Zeta Group systems to make production more efficient and cost-effective.

According to President Kevin Marrick, the Zeta Group strives to develop advanced automated manufacturing systems that are unmatched in terms of speed and quality. “We set out to offer engineered-to-order manufacturing systems that exceed anything currently available on the market,” Marrick explains. “For example, we developed a system that resolves the ergonomic issues associated with producing the large, LED signs that are increasingly erected on highways. To consistently produce the level of quality and automation for which we’ve become known, we need robust design and engineering tools to streamline and accelerate production.”

Zeta Group has used SOLIDWORKS® mechanical design solutions—including SOLIDWORKS Standard design, and SOLIDWORKS Premium design and analysis software—since its inception, because the tools enable the company’s designers and engineers to quickly develop, optimize, and validate production machinery. However, Marrick says the company did not enjoy the same level of productivity with the AutoCAD® 2D design software that it initially used to develop electrical systems and schematics.

“We began looking for a better electrical design solution because using AutoCAD software to create electrical schematics for our systems slowed us down—particularly when design changes are required late in the process, which often occurs,” Marrick recalls. “We were expending too much effort in rechecking and redrawing schematics whenever changes were requested.

For example, one of our client projects involved more than a thousand drawings. Incorporating a design change manually with that many drawings could potentially take us another 500 hours. We needed a parametric electrical design system that would allow us to make changes without this kind of time burden.”

Zeta Group implemented SOLIDWORKS Electrical 3D design and SOLIDWORKS Electrical Schematic software in 2013 because the software is easy to use, is integrated with SOLIDWORKS mechanical design tools, and makes design changes less costly and more efficient.

QUICK, EASY DESIGN CHANGES

By implementing SOLIDWORKS Electrical design solutions, Zeta Group can incorporate design changes that affect electrical systems quickly and easily, eliminating the manual time sink that such changes would previously require and leading to overall design cycle reductions of 50 percent. “Because we’ve replaced using 2D mechanical CAD with intelligent, parametric SOLIDWORKS Electrical software for creating schematics, we are saving time overall and are much more efficient at handling design changes,” Marrick stresses.

“We now develop every aspect of a machine—including mechanical, electrical, and pneumatic systems—on the same SOLIDWORKS 3D design platform,” Marrick continues. “Whether we’re iterating on a design or incorporating customer-requested changes, SOLIDWORKS solutions make us more efficient, resulting in the high levels of quality that both we and our customers demand.”



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—Kevin Marrick, President

FASTER CYCLE TIMES, LESS SCRAP

Zeta Group's use of the SOLIDWORKS integrated mechanical and electrical design system also allows the company's engineers to intensify their focus on achieving customer production objectives, including accelerating manufacturing cycle times and improving production quality. "One of our customers was using a machine that took six hours to produce 75 pieces, 80 percent of which were scrap," Marrick recounts.

"Using SOLIDWORKS mechanical and electrical design tools, we redesigned the machine to produce 75 pieces in 20 minutes with just one piece of scrap," Marrick adds. "That's what I call automation."

HIGH-QUALITY SCHEMATICS, IMPROVED COMMUNICATION

In addition to saving time and facilitating design changes, SOLIDWORKS solutions have enabled the Zeta Group to dramatically improve the quality of its electrical schematics and significantly enhance communication with customers. "When you are automating machinery, you can't fudge things and have to be accurate," Marrick notes.

"SOLIDWORKS Electrical Schematic software has helped us significantly improve the quality and accuracy of our electrical schematics," Marrick says. "We also use SOLIDWORKS eDrawings® to better communicate ideas, concepts, and recommendations to our clients. They can open up an eDrawings file, easily manipulate the model, and then fully interrogate the design, which enhances our ability to communicate effectively with clients."

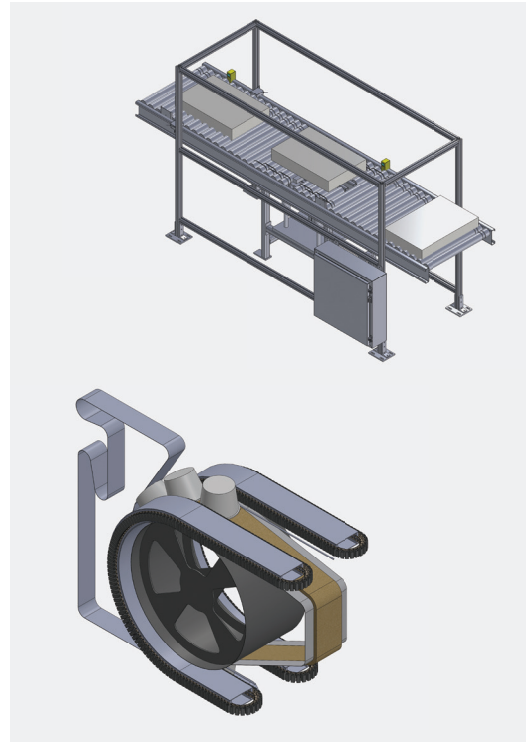
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Using SOLIDWORKS mechanical and electrical design software, Zeta Group can more efficiently develop automated manufacturing systems; more quickly implement design changes; and more effectively communicate ideas, concepts, and recommendations to its clients.

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