ENGINEERING SPECIALISTS

ONLY BETTER IS GOOD ENOUGH

Doing things better – much better – is what motivates **Engineering Specialists**. The systems integrator based in Brookfield, in the US state of Wisconsin, certainly doesn't do things by halves. Its vision is to establish a holistic production system for the company's own panel building operations. The powerful impact of **Eplan** software and **Rittal** automation technology is already evident – in the shape of enhanced productivity, higher quality and more attractive working conditions.

John Miller, Vice President of Engineering Specialists

The flexibility of Rittal enclosures makes them very popular in production departments. The rear panel, side panels and roof are all easy to remove.

An initial peek inside the production building, which covers an area of around 60,000 m², already suggests that a lot of things here are different from what you would normally expect to see at an industrial production plant. It is bright, clean and quiet – ideal working conditions for the 140 or so employees. Something else quickly becomes clear, too. Besides providing plenty of space for many, many enclosures, the company also has very big ideas and is looking a long way into the future. As demonstrated by its use of the latest, data-driven automation systems, Engineering Specialists is run by innovators and visionaries who are determined to get the most out of their panel building operations right now – and are always thinking ahead.

"I'm very much a visionary and see opportunities for doing things far better. When it comes to our customers' automation processes, for example, we are helping to improve efficiency," says John Miller, Vice President of Engineering Specialists. "When I took a look at our own panel building operations some years ago, however, I realised we weren't doing a good job ourselves," he adds. ▸

ENGINEERING SPECIALISTS

Brookfield (Wisconsin), USA

The systems integrator for industrial automation and controls in Brookfield, Wisconsin, supplies solutions for virtually all sectors. The company currently has around 140 staff and has successfully completed over 20,000 projects since it was founded 50 years ago. The portfolio ranges from consulting on engineering solutions to panel building and turnkey automation systems.

This realisation set the transformation in motion.

PRECISION AND SPEED COMBINED

Although the first CNC system for machining large enclosures put an end to laborious and noisy manual processing using jigsaws, requirements increased further still. When the company moved into its new production building three years ago and the number of customers grew in a very short space of time, this suddenly created capacity problems. “We were machining enclosures on multiple sides and handling higher volumes, and we just couldn’t keep up. Our lead time was simply too long,” reveals Miller. To resolve the bottleneck, the company purchased a Rittal Perforex laser centre LC.

For the first time ever, it was now possible to machine enclosures quickly and from five sides in a single operation. This was particularly beneficial in the case of stainless steel enclosures, which the company supplies to numerous customers in the food and beverages sector in Wisconsin. “The LC is much faster than a vertical CNC machine, and we don’t have all those residues and burrs to remove afterwards,” says Miller. What’s more, lots of projects require very precise, square cut-outs in the enclosures to insert small connectors. A task that previously involved manual drilling followed by laborious filing is now completed by the laser with maximum speed and precision. “The laser can machine an entire enclosure – from several sides – in just ten minutes,” he continues.

CONSISTENT WIRING

Miller then realised he had a further problem – the wiring process. “I asked myself how we could make it consistent. We build a control panel for one particular OEM every month, but no two employees wire in the same way. I wanted to achieve a professional result,” he explains. Miller was also looking to reduce the huge amount of wiring waste and speed things up by using pre-assembled and labelled wires. During a visit to the Rittal Application Center in Houston, he discovered the Rittal Wire Terminal WT C, a wire processing machine that has now been in operation at Engineering Specialists since 2024.

SWITCH TO EPLAN

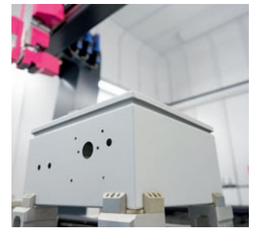
That also involved a new approach on the software side. According to Miller, automatic wire processing called for a hard switch to Eplan at the engineering stage. Younger engineers at the company and a growing number of customers were, he says, already recognising the benefits of Eplan over AutoCAD, which has been in use for over 40 years.

“We can see the engineering efficiency achieved with Eplan – thanks to the Data Portal, for instance, but also the use of Eplan in the machine control system,” emphasises Miller. “We’re starting more and more projects with Eplan, and we want to use the software throughout the organisation,” he adds. Miller describes his ultimate goal as follows: “Using the Eplan Platform to combine all the automation solutions in a first-rate, holistic production system that will maximise process efficiency.”

In the future, Engineering Specialists also intends to use Eplan Smart Wiring and integrate it into the workflow. “The software helps staff get the app-based wiring process exactly right. Moving forward, that means we won't necessarily need to have specialist staff who can read wiring plans working in panel building operations,” says a delighted Miller. □

Left: Engineering Specialists has been using the Rittal Wire Terminal WT C since 2024.

Below: Enclosures are modified with speed and precision thanks to laser technology.



“IT’S GREAT HAVING THE OPPORTUNITY TO DO THINGS BETTER WITH EPLAN AND RITTAL!”

JOHN MILLER, VICE PRESIDENT OF ENGINEERING SPECIALISTS

THE NECESSARY SWITCH

Mr. Miller, where would your company be today if you hadn’t invested in automation?
If we hadn’t invested in Eplan software and Rittal automation technology, we wouldn’t have been able to remain competitive. Producing higher volumes would have been totally impossible for us. Given that our company is growing and we want to be an industry leader, we couldn’t leave things as they were.

Which aspects of this development do your customers particularly appreciate?
It’s great having the opportunity to do things better! Some of our customers are especially impressed by our machine setup. They can also see how the quality of our solutions has improved and how our standards have progressed in terms of consistency. We’re faster, too. It no longer takes us two weeks to build ten enclosures. We can now do it in a single day. That’s a game-changer.

Why have you switched to Eplan and Rittal solutions?
I’m convinced it’s the way forward. Rockwell and Siemens are also moving in that direction. They, too, are using Eplan software, the Eplan Data Portal and Rittal automation technology. That’s where the industry is headed, with Eplan and Rittal leading the way.

The Rittal Perforex laser centre LC – ideal for the automated mechanical modification of standard enclosures made of stainless steel, sheet steel and powder-coated metals.

Scan here to go to the video:

GRÖSSE CODE: 20 MM, FARBE: SCHWARZ