



Giving new purpose to decades-old machines

Highlights:

- Delta Metals turned to NJ Tool Repair to help upgrade one of its legacy machines
- The machine was well-maintained mechanically, but the electronics were becoming obsolete
- NJ Tool Repair relied on PLCnext Technology and other Phoenix Contact components to bring the machine into the 21st century and keep operations running

Customer profile: NJ Tool Repair

NJ Tool Repair keeps machine tool shops running. The company specializes in maintenance, repairs, and upgrades for sheet metal machines for the HVAC industry.

“We can take a machine – no matter how old it is – and bring it into the 21st century with the latest safety technology,” said Alan Modracek, owner of NJ Tool Repair.



Figure 1: When Delta Metals needed to upgrade a legacy machine, they turned to NJ Tool Repair. NJ Tool Repair specializes in maintenance, repairs, and upgrades for sheet metal machines for the HVAC industry.

*“We take in an old machine,
and we can turn it into a
smart machine.”*

– Alan Modracek, Owner, NJ Tool Repair

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Challenge: Rebuilding instead of rebuying

One of NJ Tool Repair's customers, Delta Metals, is a trusted name in sheet metal and roofing solutions. Based in Savannah, Georgia, Delta Metals has more than 65 years of experience as a full-service manufacturer committed to delivering high-quality products and dependable service.

"What we make isn't sexy, but it affects your life every day," said Scott Rasplicka, CEO of Delta Metals. "Every building you go into, if you're not wet during a rainy day, it's because our roof's on. If you're comfortable because of the air conditioning, that's because of our ductwork. If you don't lose your fingers in a machine, that's because our guard is there to protect you."

Scott explained, "It's easy to automate something if I'm making the same thing every day, but everything we make is different from the product we made five minutes ago. So we have to find a way to have tools that help the person make that quicker, easier, more efficiently, and less costly. The machinery we buy interfaces with our workers and is the critical component of automation."

Delta Metals talked with NJ Tool Repair about upgrading one of its existing machines. Scott explained, "I could have bought a new machine anywhere. But none of the companies that I talked to wanted to rebuild what we had."

"Delta Metals had a late-model machine, about 15-20 years old with a servo issue," Alan said. "The servo was obsolete and couldn't be replaced. They'd had some electrical glitches here and there. NJ Tool Repair came in and talked about replacing the damaged components and integrating them into what they had or doing a full re-control."

"If you put any level of maintenance into a machine, it can last you 50 to 60 years, mechanically," said Alan. "But the electronics, of course, become obsolete. When things break – and they do – you have to be able to replace them. So, if you've got electronics that are 30 years old, it's not like replacing a bearing."

Solution: A full re-control for intuitive operation

"We took this machine that was mechanically in excellent condition and put all new electronics on it – all new brains and controls," Alan said. "We ended up doing a full re-control. We removed the old cabinets and brought in new cabinets that were prewired with all new servos, relays, PLCs, and our own proprietary HDMI technology."

NJ Tool Repair spoke with Lenny Geisler, a local sales engineer at Graybar Electric. Graybar is a leading North

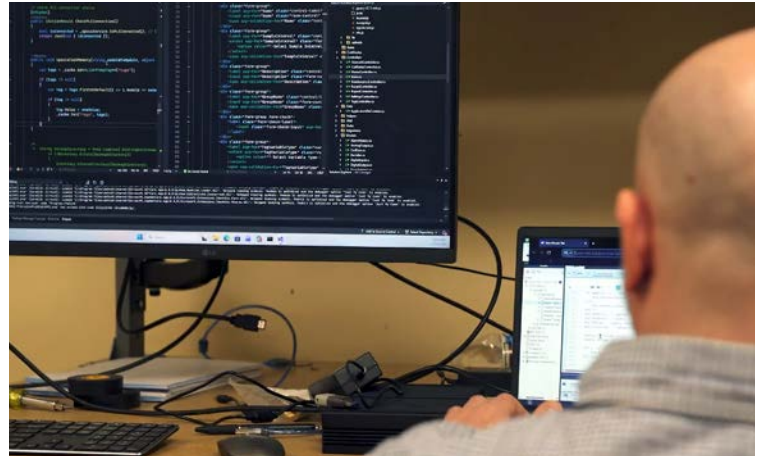


Figure 2a and 2b: One of the engineers preferred to use modern programs, like Python, so Phoenix Contact's open PLCnext Technology was a good fit.

American distributor of electrical, communications, data networking, and industrial products. Phoenix Contact is one of the brands that Graybar represents.

Lenny said, "We had several conversations about hardware and different platforms. Alan had mentioned that he had an engineer who preferred to use some more modern programming means, like Python and things like that. Instantly, we started to discuss how PLCnext Technology could help him reach his goals for this new piece of equipment that he was designing."

"And it's all programmed with CSS, which is the same language that's used to make a web page," Alan stated. "It looks like a web page. It's intuitive, so anybody can use it without a lot of training."

NJ Tool Repair also relies on other Phoenix Contact components, such as power supplies, safety relays, Ethernet switches, PLCs, and industrial PCs.

"We've also discussed transient voltage surge suppressors (TVSS) and Phoenix Contact's Limited Lifetime Warranty. Extending the warranty on his automation components was very appealing to Alan," Lenny said.

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Figure 3: NJ Tool Repair trusts a variety of Phoenix Contact products, including power supplies, surge suppressors, safety relays, and more. Phoenix Contact’s Limited Lifetime Warranty was very appealing.

Results: Making machines smarter

“Our controls require less training than anyone else’s,” Alan said. “We take in an old machine, and we can turn it into a smart machine. We take all of the data from the machine, everything that happens, and we log it into an SQL database. This is probably the smartest machine for what it does on the planet.”

He continued, “My relationship with Phoenix Contact is only going to grow from here. NJ Tool Repair is growing. We’re getting a lot of inquiries, which will turn into more orders. Having that kind of volume of business with Phoenix Contact is only going to help us both.”

Scott concluded, “The guys have loved working on the new core line. It’s so much easier and better than what we had before.”