

Amerimax Home Products, Inc.

Customer Success Story

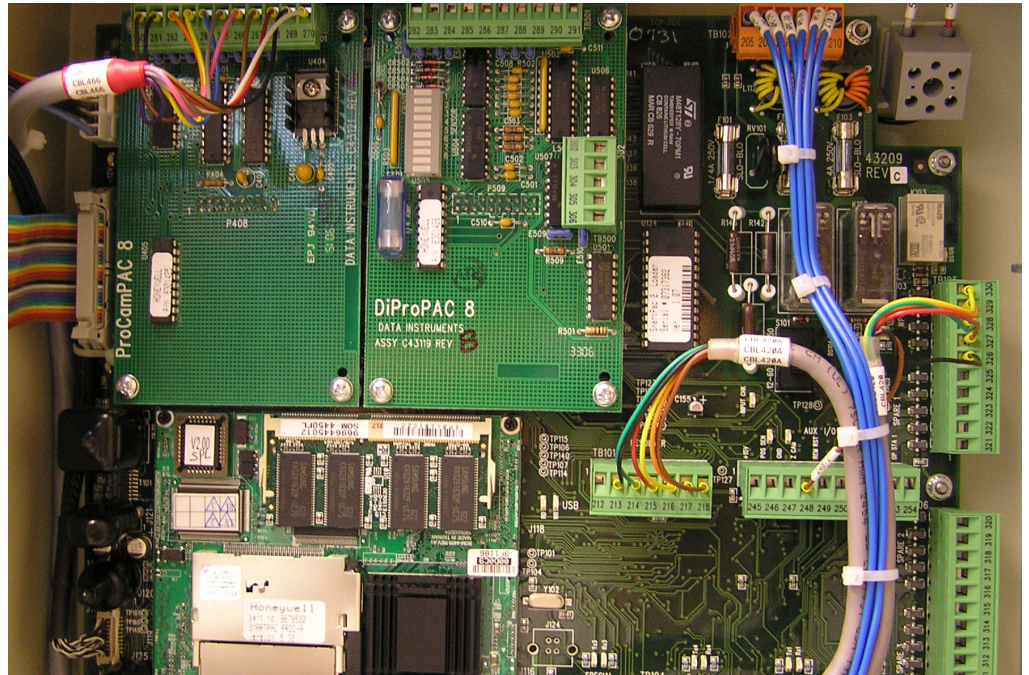
AutoCAD® Electrical

With AutoCAD Electrical, I can create a whole new set of drawings in minutes. It's saved me countless hours of work.

—Dave Patches
Electrical Engineering Tech
Amerimax Home Products, Inc.

Wired for Success.

Amerimax speeds design of electrical controls by 400% with AutoCAD Electrical.



Project Summary

Pennsylvania-based Amerimax Home Products, Inc. (Amerimax) manufactures all-weather, exterior building products, such as gutters, railings, and related accessories. To fabricate its products quickly and efficiently, the company designs its own ergonomic, safe, and fast production machinery. Electrical controls and automated systems are at the heart of these machines. After relying on AutoCAD® software for years, Amerimax adopted AutoCAD® Electrical to accelerate the design of electrical controls. Part of the Autodesk solution for Digital Prototyping, AutoCAD Electrical helps Amerimax:

- Create electrical control drawings more than 400% faster
- Make changes to electrical designs in minutes, rather than days
- Generate bills of materials (BOMs) automatically
- Reuse designs and reduce rework

The Challenge

To stay ahead of the competition, Amerimax must produce high-quality products as efficiently as possible. The company has found that by designing its own production machinery it is able to achieve that goal. An electrical engineering tech at Amerimax, Dave Patches is responsible for designing the electrical control systems for the company's custom automated machinery.

For years, Dave used AutoCAD software to produce electrical control designs for everything from roll forming and punch press lines to plastic extrusion machines. An expert user, he pushed the software to its limits. Even so, Dave wasted time because his software was not purpose-built for electrical design.

"I had to start every drawing from scratch," he says. "I could copy some things from similar existing drawings, but AutoCAD didn't update asset, serial, part, or wire numbers, so I had to do that manually."

Dave continues, "I also wasted a lot of time creating bills of materials and wire pull lists manually. A wire pull list alone sometimes took hours. And if someone wanted to make a change halfway through a multi-sheet drawing, it was a lot of work. I'd have to remember to change wire numbers as well as

Autodesk®

Using AutoCAD Electrical, Amerimax is speeding up electrical controls design drastically, while reducing errors and rework.

part, numbers, and line references manually. There was always the potential for errors to add significant cost to a project.”

The Solution

After a few days of training, Dave began benefiting from the power of AutoCAD Electrical. Many of the routine tasks that once ate up days were now automated or were exponentially faster.

Reusing Designs

By leveraging existing AutoCAD Electrical drawing to start new projects, Dave has shortened design cycle time dramatically. “I’m building a library of AutoCAD Electrical drawings for our custom machines,” he explains. “When I need to design electrical controls, I simply pull drawings from this library and adjust them to meet the new project’s requirements. With AutoCAD Electrical, I can create a whole new set of drawings in minutes.”

Reusing Symbols

While switching to AutoCAD Electrical did require Dave to make some adjustments, it didn’t mean he had to recreate the wheel. All the custom symbols he’d developed for AutoCAD could easily be converted into an intelligent AutoCAD Electrical symbol. That meant Dave didn’t need to build a new custom symbol library from scratch.

“My WBLOCKS retained all their special attributes,” says Dave. “I just insert a special symbol into a drawing and AutoCAD Electrical keeps track of all the terminals and part numbers. And when I create a wire list, all the information is there. There’s nothing in standard AutoCAD that comes close.”

Automating BOMs

While creating BOMs used to be a headache, it’s now automated. “When I put a symbol in a drawing, it has a part number,” Dave explains. “AutoCAD

Electrical keeps track of the parts the design requires. At any time, I can create a BOM with a click of a button.”

In addition, making design changes is no longer a manual, time-consuming, and error-prone process. “I used to have to go back over the drawings and check against my parts spreadsheet any time there was a change to minimize mistakes,” adds Dave. “Now, everything updates automatically—and I never worry that my BOMs aren’t current.”

Dave takes advantage of this new capability by ordering parts that he knows have a long lead time far in advance. “I have peace of mind because I know we’ll have these components in house and on time for machine installations,” he says.

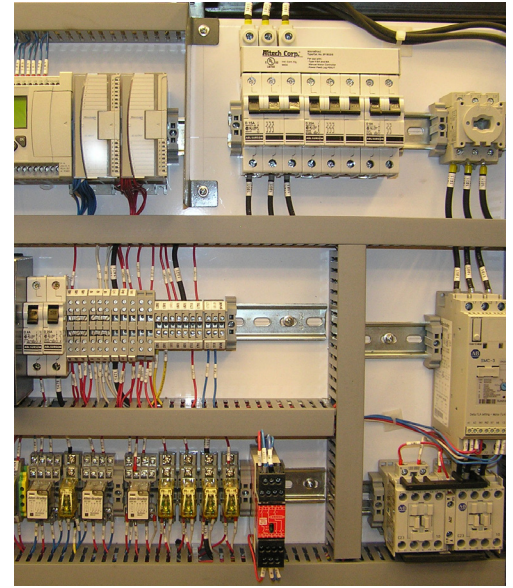
Better Designs

Because it’s no longer laborious to adjust designs, Dave is now more likely to make alterations that enhance ergonomics, production speed, or operator efficiency. “In the past, anytime someone wanted a change, it meant a lot of rework,” explains Dave. “It could take me up to a day to look through 60 sheets to change a reference, so I was more likely to suggest a workaround. But with AutoCAD Electrical, I can make changes within an hour, rather than two-to-three days. Now, we are able to improve machines more proactively.”

The Result

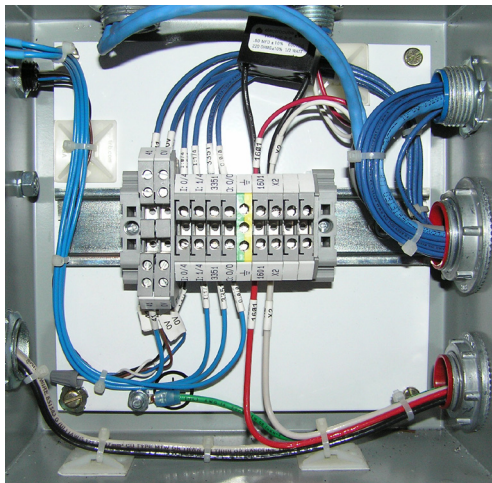
Thanks to the Autodesk solution for Digital Prototyping, Amerimax is designing higher-quality electrical controls to support more efficient production machinery. And because AutoCAD Electrical doesn’t allow incorrect wiring and automates many manual tasks, there’s less chance for human error.

With AutoCAD Electrical automating many routine tasks, Dave creates electrical controls designs more



than 400% faster. For example, producing a wire list that once consumed hours, now takes minutes. “Things that used to take me days in AutoCAD, I can now complete with a few keystrokes using AutoCAD Electrical,” concludes Dave. “AutoCAD Electrical has saved me countless hours of work. I simply wouldn’t be able to complete the work required of me in a reasonable timeframe if we hadn’t switched to AutoCAD Electrical.”

To learn more about AutoCAD Electrical, visit www.autodesk.com/autocadelectrical.



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