

ABCO AUTOMATION, INC.

Automating packaging systems development with SolidWorks Enterprise PDM



With SolidWorks Enterprise PDM, ABCO Automation has accelerated time-to-market for its automated packaging solutions through shorter design cycles, increased collaboration, and greater design reuse.

When you have to fill 60 bags of liquid soap in 60 seconds for refillable dispensers, you need automated packaging solutions that are fast, reliable, and cost-effective. ABCO Automation, Inc., has met challenges like this since 1977. For ABCO, which provides comprehensive industrial automation and fabrication services to a variety of industries, success rests on the company's ability to develop high-quality automation equipment within a tight development window.

Over the last decade, the automation systems manufacturer has experienced dramatic growth, resulting in a threefold increase in the size of its North Carolina development facility. To manage this expansion, ABCO needed to resolve issues within its development processes that inhibited growth, according to Chip Montgomery, team leader in ABCO's Mechanical Design department.

"We needed a product data management (PDM) solution that would truly take advantage of SolidWorks® 3D CAD software technology and address the constraints to growth," Montgomery explains. "We also needed a secure data management and collaboration solution that would manage our documentation and team collaboration, utilize design standardization and reuse, and reduce scrap and rework, in order to achieve faster time-to-market and higher profitability."

After evaluating several PDM packages—including Autodesk® Vault, EDS Teamcenter®, and SolidWorks Enterprise PDM—ABCO chose SolidWorks Enterprise PDM because it is more tightly integrated with SolidWorks CAD software, includes better administration tools, could be installed in days, could be implemented in weeks, and has more capability than the other packages.

"We did our due diligence and determined that SolidWorks Enterprise PDM was the best solution to help us achieve our goals," Montgomery notes. "What's more, we liked the fact that we didn't have to bring another vendor into the mix to implement our PDM solution. We felt comfortable having everything under one umbrella and working with TriMech Solutions, our SolidWorks software reseller, to help with any interrelated issues."

Challenge:

Remove growth constraints by maximizing design reuse, automating development processes, and increasing collaboration.

Solution:

Implement SolidWorks Enterprise PDM to improve the efficiency and effectiveness of ABCO's entire development process.

Results:

- Shortened design cycles by 30 percent
- Accelerated time-to-market by 20 percent
- Reduced development costs by 20 percent
- Cut scrap and rework costs by 50 percent

Removing barriers to growth

After implementing SolidWorks 3D CAD software and SolidWorks Enterprise PDM without experiencing significant downtime, ABCO has successfully cut development costs, reduced design cycles by an estimated 30 percent, and accelerated time-to-market by 20 percent. And because it's intuitive and doesn't require extensive resources, Montgomery says administering the PDM system requires about 10 percent of the administrator's time.

"We've tripled our floor space, and more than doubled in size without increasing headcount in the design group," Montgomery adds. "Since implementing PDM, we have the foundation in place that we need to automate our processes, eliminate waste, and remove unnecessary costs. SolidWorks Enterprise PDM has allowed us to really ramp up."

Maximizing collaboration produces efficiencies

ABCO has achieved these productivity gains because SolidWorks Enterprise PDM facilitates design standardization and reuse, promotes greater collaboration across the project team, and minimizes design errors that require rework. "With PDM, there's less chance for overwriting a file, re-creating 10 different versions of a cylinder when one will do, or breaking important links to a previous project," notes Document Control Specialist Mike Sveda.

"Our new mantra is 'no customizations, just configurations,'" Montgomery points out. "With PDM, design reuse has increased by 15 percent, because now it's much easier to find an existing assembly or component to use in a new machine, which reduces time and out-of-pocket costs and lets us take advantage of proven field-tested designs. And since locating and using existing design data is also a lot easier, our engineers and designers collaborate more. This is the area where we've realized our greatest increases in efficiency," Montgomery adds. "We used to utilize a project team of one designer and one engineer. Today, we have multiple engineers working with a pool of designers. PDM enables us to do more in the same amount of time with the same personnel."

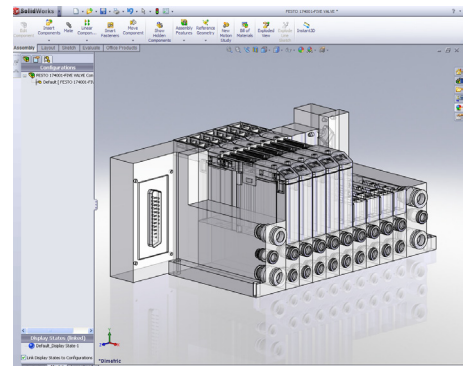
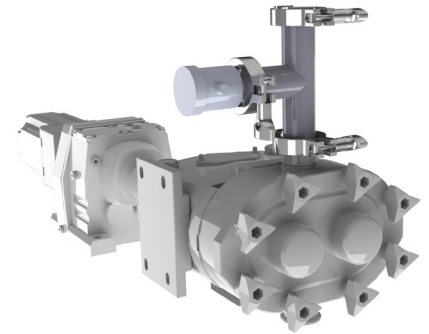
Improving quality by automating workflows

By automating ABCO's workflows, SolidWorks Enterprise PDM has helped the company dramatically reduce scrap and rework costs, and consistently improve quality. "Before implementing 3D CAD and PDM, our process was to rough out the design in 2D and then do what we needed to make it work on the shop floor," Montgomery recalls. "That resulted in higher rework costs and longer time-to-market."

"Now, we have the workflows in place—such as using email notifications to route a design within the department—to ensure consistently high quality," Montgomery continues. "Essentially, we're using the PDM workflow to refine designs electronically instead of in metal. Using SolidWorks software solid modeling and SolidWorks Enterprise PDM, we have cut our scrap and rework costs by 50 percent."

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Chip Montgomery
Team Leader



SolidWorks Enterprise PDM enables ABCO to automate its workflows, improving quality and reducing scrap and rework in the process.



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