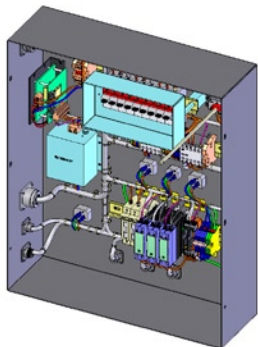


BÖWE BELL + HOWELL

ACCELERATING AUTOMATED MAIL-SORTING SYSTEM DESIGN WITH SOLIDWORKS OFFICE PREMIUM



BÖWE BELL + HOWELL engineers utilize SolidWorks automated design tools, such as sheet-metal, weldment, cable routing, and integrated analysis capabilities, to accelerate sorting machine design.

→ Headquartered in Wheeling, Illinois, BÖWE BELL + HOWELL, a company with more than 70 years of industry experience, is a leading provider of high-performance document management solutions and services. The company's portfolio of cutting, packaging, inserting, plastic card, sorting, integrity, print-on-demand, and software solutions is the most comprehensive product offering for paper-based and digital mail communications. One of the largest dedicated service organizations in the industry supports these solutions. For further information on BÖWE BELL + HOWELL, please visit www.bowebellhowell.com

BÖWE BELL + HOWELL is one of the largest automated mail-processing systems manufacturers in the world. The company's automated mail-sorting equipment, which helps mailrooms of any size route documents, can measure 14 feet wide by 285 feet long and can process up to 50,000 pieces of mail per hour. The engineers at BÖWE BELL + HOWELL once used AutoCAD® 2D design tools to develop sorting machines, but in 2004, management decided to move to a 3D CAD system to increase design productivity and accelerate large-assembly development. Although BÖWE BELL + HOWELL engineers believed that transitioning to Autodesk Inventor® 3D software represented a natural progression from the AutoCAD environment, they soon began to question their choice of a 3D CAD solution, according to David Schwaba, manager of hardware engineering.

"We used Inventor software for about a year and realized the product was not as mature as we had hoped," Schwaba recalls. "We experienced stability issues involving the loss of drawings and data that we could not recover."

"We use a lot of sheet metal, weldments, and fasteners to assemble our products," adds Brian Bowers, vice president of engineering. "Our former system didn't handle these features well."

BÖWE BELL + HOWELL reevaluated its 3D solution in mid-2005 and decided to move to the SolidWorks® 3D CAD environment. The company chose SolidWorks, implementing eight seats of SolidWorks Office Professional and four seats of SolidWorks Office Premium software, because of its ease of use and large-assembly, sheet-metal, and cable-routing capabilities. BÖWE BELL + HOWELL also values integrated PDMWorks® Workgroup product data management (PDM) software for managing workgroup drawings and COSMOSWorks® Designer analysis software for evaluating design strength and performance.

"SolidWorks handles all our design requirements and is stable, so we don't have to worry about losing hours of work," Bowers notes. "It is easy to use and allows us to work in both 2D and 3D environments to meet our customers' design needs. In addition, we use the 3D models to create our assembly and maintenance documentation utilizing the same models. This significantly reduces our time-to-production."

Robust capabilities accelerate design

Since implementing SolidWorks software, BÖWE BELL + HOWELL engineers now develop new processing systems four times faster than they did with their previous CAD solution. Schwaba says SolidWorks has provided a more efficient solution because engineers can access a robust set of automated tools, such as sheet-metal, weldment, cable routing, and integrated analysis capabilities.

The company also takes advantage of SolidWorks design configuration capabilities to customize standard product designs quickly to meet a customer's exact specifications. "Design configurations are a big help," Schwaba stresses. "We have seen dramatic improvements in time and performance."



- Designed new processing systems four times faster
- Decreased rework by 70 percent
- Reduced the number of design errors substantially
- Improved design visualization, simulation, and communication

- BÖWE BELL + HOWELL is one of the largest automated mail-processing systems manufacturers in the world. In 2004, company management made the decision to transition from AutoCAD 2D design software to a 3D CAD system to increase design productivity and accelerate large-assembly development. After using the Autodesk Inventor 3D package for a year, BÖWE BELL + HOWELL decided to reevaluate its 3D CAD solution.
- The company chose SolidWorks as its 3D CAD platform because of its ease of use and large-assembly, sheet-metal, and cable routing capabilities. The firm also valued integrated PDMWorks PDM and COSMOSWorks design analysis software. By deploying SolidWorks, BÖWE BELL + HOWELL designed its new processing systems four times faster; decreased rework by 70 percent; reduced the number of design errors substantially; and improved design visualization, simulation, and communication.

Improved handling of large, complex assemblies

Large-assembly design capabilities are critically important at BÖWE BELL + HOWELL. The company's mail-processing machines require sophisticated assemblies comprising hundreds, and sometimes thousands, of individual moving parts. SolidWorks interference detection capabilities have helped BÖWE BELL + HOWELL engineers improve quality and eliminate design errors, reducing rework by as much as 70 percent.

"The capabilities and stability of SolidWorks have helped us to develop large, complex assemblies in the manner we originally envisioned for 3D," Schwaba says.

To further improve assembly development, BÖWE BELL + HOWELL plans to integrate its PDMWorks PDM solution with its enterprise resource planning (ERP) system to connect SolidWorks bills of materials (BOMs) to costing, billing, and other automated functions, such as the production of assembly instructions.

Enhanced visualization, simulation, communication tools

By moving to SolidWorks software, BÖWE BELL + HOWELL has improved its capabilities for visualizing assemblies, simulating design performance, and communicating designs to its customers. In addition to using SolidWorks interference detection capabilities to address potential collisions early in the design process, the company uses integrated COSMOSWorks Designer analysis software to simulate design performance and ensure that its machines will stand up to the daily rigors of processing large volumes of mail.

"We use COSMOSWorks not only to respond to part failures, but also to make sure we address potential problems before a product is released to manufacturing," explains Schwaba. "COSMOSWorks has made us very effective at running a quick check on our design data and has helped us to optimize our designs for improved strength and performance."

Using email-enabled eDrawings® files, BÖWE BELL + HOWELL can more quickly and effectively communicate design concepts to its customers than the company did in the past with traditional 2D drawings.

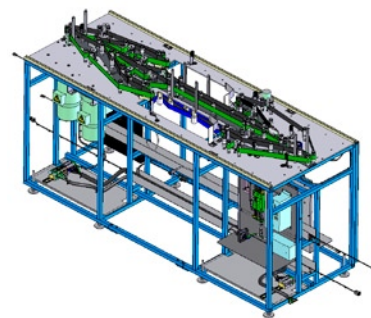
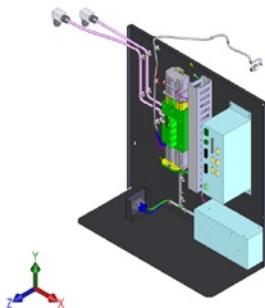


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SolidWorks interference detection capabilities have helped BÖWE BELL + HOWELL engineers to reduce design errors and rework on the company's mail-processing machines, which require sophisticated assemblies comprising hundreds, and sometimes thousands, of moving parts.



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