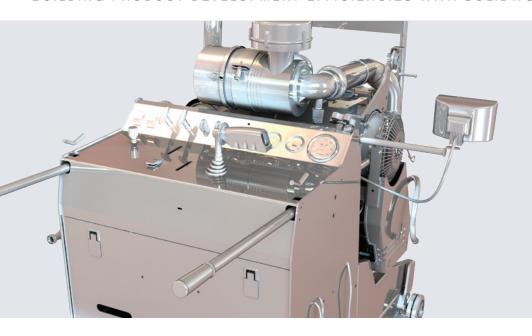# Multiquip, Inc.

BUILDING PRODUCT DEVELOPMENT EFFICIENCIES WITH SOLIDWORKS PROFESSIONAL

With SolidWorks Professional software, Multiquip has improved efficiencies in virtually every downstream function in the product development process.

- Reduced design cycle by 10 percent

- Shortened handling of ECOs by 10 percent

- Cut prototype development costs by 12 percent

- Decreased annual scrap costs by 25 percent

Multiquip, Inc. manufactures a broad spectrum of light- and medium-sized construction equipment and is one of the largest and most diversified suppliers to the construction and equipment rental markets. In an effort to improve efficiencies in product development and manufacturing and overcome growing global competitive pressures, management at the company's manufacturing and development facility in Boise, Idaho, decided in 2001 to evaluate available product development platforms with built-in product data management (PDM) capabilities. Multiquip initiated its search after determining that its existing product design system would not provide the necessary improvements in productivity, according to Tom Sigler, CAD administrator.

Multiquip had used the Pro/ENGINEER® solid modeling system for product design and believed they might realize some productivity gains by adding the Pro/Intralink® PDM system, but as soon as they installed Pro/Intralink, they experienced a 20 percent loss in productivity and realized they needed another solution.

After evaluating a range of CAD/PDM system combinations, including Think3®, Solid Edge®, Intergraph®, and CATIA®, Multiquip selected the SolidWorks® Professional software suite because of its technical functionality, integrated SolidWorks product data management software, SolidWorks eDrawings® communications capabilities, sheet-metal features, value, ability to reuse legacy data, and potential for accelerating product development, especially outside of engineering.

"We set out looking for a good-value 3D CAD system with PDM," Sigler explains. "After a year-long investigation, SolidWorks Professional software was the clear choice. SolidWorks not only met all of our technical needs but was also the best value and provided the greatest potential benefits downstream in the product development process."

Saving time and money

Since implementing SolidWorks Professional software, Multiquip has cut its product design cycle by 10 percent, reduced prototype development costs by 12 percent,

SolidWorks Professional software provides Multiquip with powerful CAD capabilities, an integrated PDM system, and a range of design communication and CAD productivity tools.

and decreased scrap costs by 25 percent. Sigler says these productivity improvements stem from the improved access, revision control, and utility of having integrated SolidWorks PDM capabilities.

"SolidWorks Professional software gives us more confidence in the accuracy and validity of product data," Sigler notes. "It allows us to organize all of our design data for various product lines in one easy-to-use and easy-to-access system and eliminates time-consuming, tedious tasks, such as manual drawing creation."

Using SolidWorks product data management software, Multiquip has reduced inventory costs by developing an approved library of components. "We used to store every kind of bolt known to man," Sigler says. "SolidWorks product data management software enables us to set up a component library and approval process for using components outside the library, which has helped us to reduce our inventory of components."

Accelerating handling of ECOs

Since transitioning to SolidWorks Professional, Multiquip has also increased productivity in the implementation of engineering change orders (ECOs), which now take 10 percent less time to address.

"Before we went to SolidWorks Professional as our design environment, ECOs could really hold up our processes because we were using a manual system consisting of the distribution of paper drawings," Sigler explains. "We have seen dramatic improvements in the handling of ECOs as a direct result of SolidWorks product data management software. With an on-screen PDM system instead of paper and the ability to use eDrawings software to communicate changes, there are simply far fewer questions about ECOs."

Downstream efficiencies

In addition to the productivity gains Multiquip has achieved within its design group since implementing SolidWorks Professional, the company has improved efficiencies in virtually every downstream function in the product development process, from purchasing, quality control, and manufacturing to sales, technical publications, and marketing. "Having access to live, real-time product information through the SolidWorks Web Portal benefits all of our product development functions," Sigler says.

Multiquip's quality control people used to have to inspect fabricated components with only a 2D drawing and no dimensions for reference. They can now access the actual 3D part, eliminating the need to interpret or make assumptions. Technical publications can use the actual CAD file to develop illustrations for product manuals. Manufacturing and assembly can pull up an eDrawings file, explode, and rebuild the assembly to determine how parts go together. Purchasing can obtain quotes faster. Manufacturing can make production plans more quickly. Sales can review a product model with a customer directly from the customer's site. Marketing can use PhotoWorks™ rendering software to create dazzling, photorealistic product images.

"SolidWorks Professional gives everyone involved in product development the tools they need to access product data and do their jobs more quickly and more accurately," Sigler says.