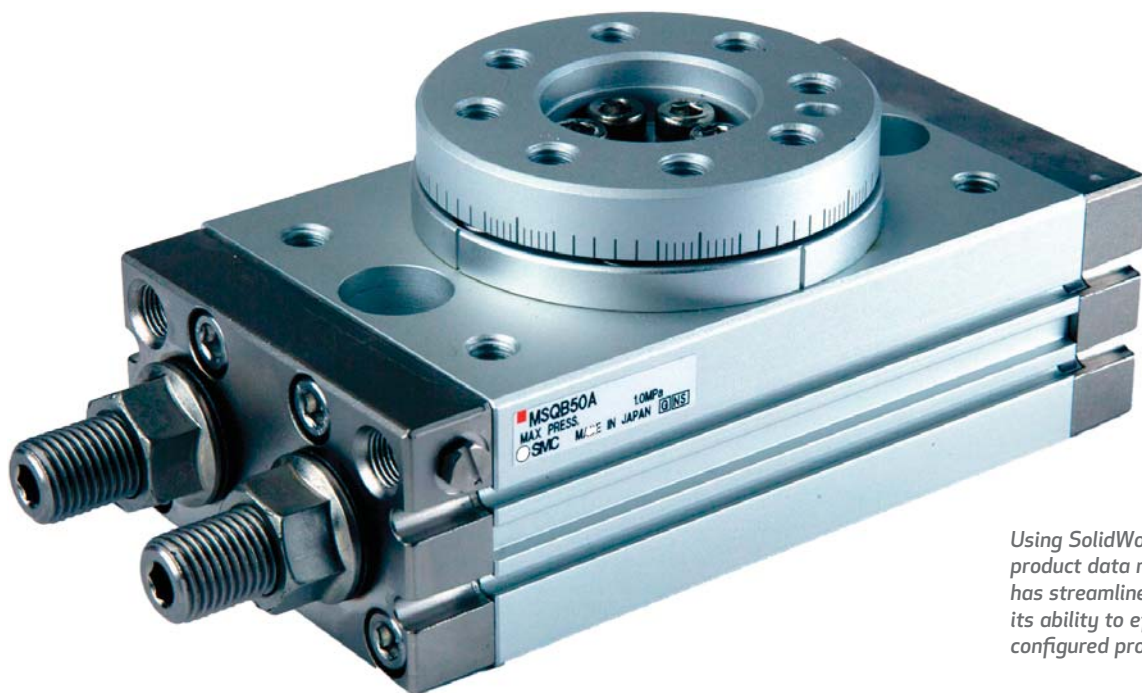


SMC CORPORATION OF AMERICA

Compressing pneumatic component development time with SolidWorks solutions



Using SolidWorks design, simulation, and product data management solutions, SMC has streamlined development and improved its ability to efficiently deliver custom-configured products.

The world leader in pneumatics, SMC Corporation provides industry with the technologies and products it needs to support automated manufacturing. The Japanese corporation's US subsidiary, SMC Corporation of America, produces a wide range of pneumatic components, such as cylinders, actuators, regulators, and valves, for the North American market.

A commitment to meet changing customer needs prompted SMC to migrate from AutoCAD® 2D tools to a 3D design platform in 2000, according to Server Administrator Brandon Waggoner. "Our drawings were becoming more complex, our customers were more frequently asking for custom-designed 'specials,' and our development processes needed to be streamlined," Waggoner recalls. "We were under pressure to automate as much as possible and needed to upgrade to a 3D system to get where we wanted to go."

After evaluating 3D design systems, SMC chose SolidWorks® software because it's intuitive, supports design configurations, and allows the pneumatics component manufacturer to leverage both design data and other technologies—including simulation, product data management (PDM), and online configuration—in an integrated 3D environment. SMC uses SolidWorks Professional design, SolidWorks Premium design and analysis, and SolidWorks Enterprise PDM software solutions.

"SolidWorks provides the multifaceted solutions and reusable data that we need to streamline development and interface more effectively with manufacturing," notes Jason Hyde, UTC Engineering Group.

"A lot of machine designers were also moving to a 3D environment and wanted models from SMC that they could import into their designs," Waggoner adds. "With SolidWorks, we produce data that we know will work, which streamlines the entire process."

Challenge:

Increase product development efficiency, particularly for custom-configured products, while improving product quality and supporting online configurable model downloads.

Solution:

Implement SolidWorks Professional design, SolidWorks Premium design and analysis, and SolidWorks Enterprise PDM product data management software.

Results:

- Streamlined development processes
- Increased number of custom-configured products
- Reduced volume of scrap and rework
- Supported e-commerce with configurable model downloads

Accelerating product development

By implementing SolidWorks solutions, SMC has shortened development time. While the company has realized productivity gains in its standard product line, SolidWorks solutions produced the most dramatic benefits in the design of custom-configured products—requests for specials (RFS)—which represent a growing segment of SMC business.

"If a customer can't find something to fit their exact needs in our catalog, they submit an RFS, and we custom-design and manufacture it," Hyde explains. "This could be as basic as a simple thread or part change, or customizing time or travel. Or, we may need to design a completely new component from the ground up. The beauty of SolidWorks is that there's a lot of reusable data, so you're not constantly redesigning the same thing over and over. I can take many standard components, plug them in, modify them as needed, and move forward with the design. It's just a huge timesaver for us.

"Using SolidWorks, we have accelerated RFS development while improving quality," Hyde continues. "Even if it's an RFS, in terms of quality it's exactly like a standard product."

Simulating performance, managing data

Design, simulation, and PDM solutions have enabled SMC to improve product quality—and minimize errors, scrap, and rework. With simulation capabilities, the company's engineers conduct structural analyses on big-load-bearing components, such as large cylinders. The SolidWorks Enterprise PDM system facilitates design reuse, establishes more effective revision controls, and automates workflows at SMC.

"SolidWorks really opens you up to a whole different world of being able to visualize designs, simulate design performance, and share that data with customers in a language that they can understand," Hyde says. "Because SolidWorks data is reusable and our processes are automated, we've seen a big reduction in the amount of rework that we need to do and the volume of scrapped material that we produce."

Supporting configurable model downloads

The web is replacing SMC's traditional catalog business, and SolidWorks design is helping SMC take advantage of online commerce. The solution drives SMC's ETECH initiative, an interactive website that lets customers configure components online, download models for inclusion in their designs, and purchase components.

"The customers want to see the product working in their assembly," Waggoner points out. "ETECH leverages SolidWorks design configuration capabilities to provide fully configurable models for download. Customers have downloaded millions of models that are configured this way."

"Time is money, so anything we can do to speed up the process will improve customer satisfaction," Hyde adds. "Whether it's a request for specials or configurable models for download, SolidWorks is helping us achieve that ultimate goal."

"THE BEAUTY OF SOLIDWORKS IS THAT THERE'S A LOT OF REUSABLE DATA, SO YOU'RE NOT CONSTANTLY REDESIGNING THE SAME THING OVER AND OVER. I CAN TAKE MANY STANDARD COMPONENTS, PLUG THEM IN, MODIFY THEM AS NEEDED, AND MOVE FORWARD WITH THE DESIGN. IT'S JUST A HUGE TIMESAVER FOR US."

Jason Hyde
UTC Engineering Group



SolidWorks design configuration capabilities are helping SMC drive e-commerce by enabling the pneumatic component manufacturer to offer configurable models of its products for download online.

Authorised Value Added Reseller:



About IME Technology

IME TECHNOLOGY is Malaysia's leading and #1 SOLIDWORKS certified Sales, Training, and Support Centre. With more than 35 years of establishment and experience, we have the most qualified, skilled and specialised technical expertise in the ASEAN region. Our team will ensure that the partnership between IME and our customers will grow, shine, and sustain.

IME TECHNOLOGY SDN BHD (356192-T)

SELANGOR (HQ)
22A, Jln. PJS 1/46,
Taman Petaling Utama,
46000 Petaling Jaya,
Selangor, Malaysia.
Tel: +603-7783 6866

KUCHING
2nd Floor, Sublot 17, Parent
lots 9659 & 9276, Block 11
MCLD Second Precinct,
Jalan Setia Raja, 93350,
Kuching, Sarawak.

IME TECHNOLOGY (PENANG) SDN BHD (677811-M)

68, Jln. Perai Jaya 4,
Bandar Perai Jaya,
13700 Pulau Pinang,
Malaysia.
Tel: +604-399 5571

IME TECHNOLOGY (JOHOR) SDN BHD (677810-P)

25-01, Jln. Bestari 8/2,
Tmn. Nusa Bestari,
79150 Iskandar Puteri,
Johor, Malaysia.
Tel: +607- 238 7978