

# Pentair

Pentair processes flow faster with ENOVIA



## Overview



### ■ Challenge

*As Pentair expanded to 40 locations in 12 countries, sharing design and manufacturing data securely and efficiently was a daily challenge.*

### ■ Solution

*Pentair chose ENOVIA with multi-CAD and multi-site capabilities to create a single collaborative PLM data vault worldwide. Twelve sites now use the vault, with additional sites pending.*

### ■ Benefits

*Design cycles have been cut by as much as 50 percent. Data access is secure and virtually instantaneous.*



"With ENOVIA, our intellectual property is more secure. But at the same time it has been unlocked to serve our customers better, to improve our quality, to enable our marketing."

Carlos Moreno, PLM Systems Manager,  
Pentair

### Acquisitions bring disparate systems, data challenges

Minnesota-based Pentair Inc., founded in 1966, has evolved into a global powerhouse focused on water technologies and technical products. In 2006, the company's two divisions had a combined 15,000 employees; annual revenues for 2007 are projected to reach \$3.4 billion.

Pentair's Water Group, which includes the pool, pump and filtration groups, is one of the world's largest suppliers of products for moving, treating, storing and enjoying water. Through acquisitions, the group now operates in 12 countries and 40 cities from Sheboygan, Wisconsin, to Shanghai, China. As the water group grew, so did the potential to create synergies among its largely autonomous divisions. But when the company opened two design centers in India and a manufacturing center in China, coordinating the company's far-flung operations became imperative.

### Centers in India, China make global collaboration vital

"Simplifying our data sources benefits our data consumers, including our overseas manufacturing sites in China and Mexico," explains Carlos Moreno, Pentair Water's PLM (Product Lifecycle Management) Systems Manager. Moreno wanted to help Pentair make consistent, reliable, up-to-date data available to everyone, regardless of location, because it would reduce Pentair's business risks and lower the overhead involved in meeting its quality standards.

Traditional data distribution methods such as express shipping CDs, emailing massive data files, or uploading them to non-secure FTP servers did not accomplish this goal. "Each alternative involved many tradeoffs on security, data consistency and transfer speed," Moreno says. "It was not until we began to investigate an integrated PLM platform that we found hope for a more manageable solution."





“My group has been using ENOVIA since 1999, and there’s no way we could do what we’re doing now, having six people work simultaneously on the same project, without it.”

Dave Averbeck, Filtration Group Director, Pentair

### Accessible, searchable, secure data pays multiple dividends

As part of its search for a solution, Pentair executives reviewed all of the company’s product management systems and searched the marketplace for new solutions to address four top needs: a common 3D design system; a single, centralized data repository with a common data model; a collaborative platform capable of supporting multiple sites; and a common approach to workflow.

When the dust settled, the clear winner was a PLM solution from Dassault Systèmes that featured ENOVIA for product data and workflow management. One key factor in the decision was that DS PLM had recently introduced its Multi-Site solution to synchronize data across distributed installations. “In the end, Multi-Site is what got everyone on board,” Moreno says. “To be able to interact was so appealing.” Another advantage is that ENOVIA works seamlessly with multiple CAD systems including SolidWorks, Pentair’s top choice for 3D engineering design.

Although not every division is live on ENOVIA yet, those that are find that having a single source of data and a consistent data model with revision and version management allows multiple designers to collaborate on a project simultaneously, cutting design cycles in half while improving quality.

“Previously, one person had to do the entire design,” says Dave Averbeck, Director of Engineering for the Filtration Group, the first Pentair division to adopt ENOVIA. “Now we can split that project among four or five different people, and everyone knows what everyone else is doing because it’s all right there in ENOVIA. It cuts the time in half and multiplies the brain power applied to every project, which makes for a better design.”

Centralized, reliable data managed in ENOVIA also lowers the potential for mistakes, significantly decreasing the number of changes made at the tooling stage, when they are most expensive. “ENOVIA has enabled Pentair to reap the benefits of engineering globally, without boundaries,” says T. Balagangadaran, Senior PLM Engineer. “Integrating seamlessly makes us a true global company.”



### **Searchable, centralized data drives efficiency**

“One of the huge benefits is the ability to avoid redundancy in design,” says Randy Baker, Engineering Services Manager for Pentair Water, Pool and Spa. “When you don’t have a strong database, you can waste two days searching for something you never find, and then you waste the time re-designing something you already had. That’s a huge cost, and a powerful tool like ENOVIA eliminates it by allowing you to run a query that finds every design that meets a certain requirement set.”

The manufacturing center in China now has a high level of confidence in data from ENOVIA-enabled sites. Configuration management processes executed with ENOVIA ensure that only the final revisions are released to manufacturing. Every location equipped with DS PLM Multi-Site, including the design centers in India, has access to precisely the same data and product structure and receive regular, synchronized updates of only that data that has changed since the previous update.

“What we’ve done is really amazing, because it’s a true global implementation,” Baker says. “We haven’t just connected multiple sites. We’ve connected clusters of Multi-Sites, and we’re continuing to add more all the time.” Pentair is currently working to bring its European sites on board with Multi-Site, extending the benefits even further, and each new implementation is accomplished faster than the one before.

Pentair’s DS PLM implementation also supports the broader enterprise with product data. “Our Supply people use the system on a day-to-day-basis, Customer Service stores product manuals in it, Quality uses it extensively to store their ISO control documents and manage processes such as ROHS,” says Dan Turkoski, who led the implementation team. “Production keeps work instructions in it, Purchasing uses it for make-versus-buy decisions and in sourcing to ensure they sent out the latest product documents for quotes. We track the regulatory certifications for every part in every product in every jurisdiction. DS PLM is making life easier for our entire organization.”



“Supply, Customer Service, Quality, Production, Purchasing, they all use ENOVIA. It has become the trusted source of data for everyone in the company.”

Dan Turkoski, PLM Implementation Leader, Pentair



## Solution grows as needs evolve

To minimize disruption, Pentair rolled out the solution site by site. A dozen sites are already up and running with ENOVIA; seven of those share their data using the Multi-Site solution, with more on the way. Moreno particularly appreciates the solution's combination of modular design and scalability, which allows the company to invest in certain functionality today and add more in the future, spreading the investment over multiple budget cycles.

The phased implementation also allows each new group to benefit from the development work done by its predecessors. "It's great that any idea, process, or workflow developed for one group can be recycled for the benefit of the entire organization," says Chris Lange, Director of Engineering for the Pump Division. Adds Baker: "There are 22 pre-defined workflows available to my group that were developed by others, and I can roll them out individually or modify them slightly to meet the unique requirements of my business. But I don't have to reinvent the wheel."

## Leveraging success for additional value

Pentair plans to leverage its DS PLM investment for even greater future returns, including rolling out Multi-Site

access to its locations across Europe. "In an ever-increasingly competitive market, it is only logical that our efforts in 2008 concentrate on continuously fostering innovation, in addition to our process improvements," Moreno says. "The fact that we can now leverage our DS PLM platform to shift from a business case driven solely by efficiency to a competitive and strategic positioning of our product development team is a great advantage we plan to capitalize on moving forward."

The team is working to automate more than 40 standard business processes through ENOVIA and to develop a strategy for integrating ENOVIA with corporate enterprise resource planning (ERP) systems. Part standardization and portfolio management, as part of a seamless corporate Engineering Workbench serving the entire organization, are also being planned.

But while focused on the future, the team also appreciates what it has already achieved. "Thanks to our investment in DS PLM, our intellectual property is secure from threats, even as we have unlocked it to better serve our customers and improve our quality," Moreno says.



"With ENOVIA, we can query a database for a set of requirements, which helps us avoid the costly process of re-creating something that already exists."

Randy Baker, Engineering Services Manager, Pentair Water, Pool and Spa



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RF\_F\_L35VZ\_EN\_200706

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