



SAUER-DANFOSS

TRANSFORMING A COMPONENTS SUPPLIER TO A HIGHLY CONFIGURED PRODUCTS SUPPLIER

QUICK FACTS

Industry

Industrial machinery and components

Revenue

US\$2.0 billion

Employees

10,000

Headquarters

Lincolnshire, Illinois

Web Site

www.sauer-danfoss.com

SAP® Solutions and Services

SAP® Custom Development organization

Implementation Partner

SAP Custom Development

Sauer-Danfoss Inc. is a worldwide leader in the design, manufacture, and sale of engineered hydraulic and electrohydraulic systems and components for use primarily in off-highway machinery. To reduce sales-order cycles, the company worked with the SAP® Custom Development organization to better leverage information for complex bills of material from the SAP ERP application. This helped reduce sales-order generation lead times for newly created customer-specific products from 4 weeks to 4 hours.

Key Challenges

- Transform business model from components supplier to highly configured products supplier
- Create rapid quotes and sales orders for configure-to-order products
- Develop a solution for creating multilevel bills of material (BOMs) using characteristics, classifications, and the knowledge base

Implementation Best Practices

- Application development and deployment in discrete, easy-to-manage phases
- Integration testing, deployment, and going-live phases in 2 plants before full implementation
- Excellent coordination between solution architects and global development teams
- Close, detailed collaboration between SAP and Sauer-Danfoss through all phases of custom application development

Financial and Strategic Benefits

- Stronger strategic positioning as highly configured products supplier rather than components supplier
- Ability to manage configure-to-order processes without back-office support
- Ability to meet future global demand through improved scalability
- Higher sales volume through rapid sales-cycle completion
- Higher customer order throughput
- Stronger strategic partnership with SAP and integration to SAP standards

Why SAP Was Selected

- Primary strategic partner for Sauer-Danfoss
- Ability to build custom solution that leverages existing SAP® software
- Clear understanding of company's business complexity and application needs
- Application know-how to fully exploit complex configuration modeling and algorithms
- Proven record of success with company

Low Total Cost of Ownership

- Rapid 2-phase deployment: 4-6 month solution development and 3-4 month implementation per phase
- Custom solution that fully leverages SAP software already in place
- Automatic creation of product configuration, eliminating error in integrated processes among order management, pricing, supply chain, finance, and procurement

Operational Benefits

- Automated creation of material variants out of sales documents
- Automated master-data creation for BOMs, routing, pricing, and costing
- Reduced sales cycle for custom orders by more than 98% – from 4 weeks to 4 hours
- Increased quote and sales-order accuracy to 98%
- Eliminated manual validation processes
- Ensured accurate information flow from engineering to manufacturing and assembly of products



“Our ability to compete globally requires that we transform our business model from a components supplier to a sophisticated provider of configured products.”

Krish Kumar, Vice President of Information Technology, Sauer-Danfoss Inc.

www.sap.com/contactsap

Speeding Up the Sales Cycle

Sauer-Danfoss Inc. is a global manufacturer of hydraulic and electrohydraulic components and integrated systems used in off-highway machinery. Building complex, custom-engineered solutions in a timely manner has always been a key competitive differentiator. As customer requirements have evolved, however, product configurations have grown increasingly complex.

To manage this complexity, Sauer-Danfoss would manually configure material variants of single-level bills of material (BOMs) and use manual processes to execute routing, pricing, and costing tasks. But this approach caused bottlenecks between the engineering and order-entry groups. “Our ability to deliver engineer-to-order solutions rapidly is absolutely critical,” says Krish Kumar, vice president of IT at Sauer-Danfoss. “We needed a way to complete the product configuration process in a matter of hours, not weeks.”

Harnessing the Power of the “Super BOM”

Sauer-Danfoss chose the SAP® Custom Development organization to help speed up the generation of complex sales orders. The company already had a long record of success with SAP, having implemented the SAP ERP application across 52 locations in 22 countries.

Here, Sauer-Danfoss required an enhanced variant-configuration application that could automatically create material variants and ease the downstream processes for BOM creation, routing, pricing, and costing. These variants are derived from the company’s highly engineered component models known as “super BOMs.” The application needed to fully leverage the company’s super BOMs as well as information available in SAP ERP. Sauer-Danfoss stores each configuration as a part number and is capable of delivering the part or service unit throughout the life cycle of the vehicle and up to 12 years after the OEM has stopped building the vehicle in production.

In an aggressive two-phase development cycle, the solution took less than 10 months. “SAP Custom Development has a clear understanding of the complexity of our business processes,” says Kumar. “It also knows how to translate that complexity, particularly our configuration modeling, into a scalable application architecture.”

From Weeks to Hours

Today, completion time for configure-to-order sales is not four weeks but just four hours. Without extensive engineering and back-office support, the sales team can now create customer-specific material variants directly out of the sales order. Users can also execute BOM creation, routing, pricing, and costing tasks in a newly created transaction with a single

click of the mouse – with 98% accuracy. “This saves us tremendous time and effort,” says Kumar. “More important, it has facilitated our transformation from a components supplier to a very sophisticated provider of components and multilevel configured products.”

The custom application also takes full advantage of SAP ERP, enabling cross-organizational automation that links order management, pricing, production, costing, and procurement groups. The application’s scalability will allow the company to meet current and future product configuration demands worldwide.

Partners in Continuous Improvement

Moving forward, Sauer-Danfoss is seeking automation improvements that will further reduce sales-order completion from four hours to one hour. “Our business also wants the ability to graphically model multilevel material-variant configurations,” says Kumar. “Doing so will enable customers to design, build, validate, and order complex component systems over the Web. Today we have a vastly improved sales-order process that reduces complexity and speeds our time to delivery. For Sauer-Danfoss, SAP is not simply a technology partner but a strategic business partner that helps us maintain our competitive advantage.”

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