



Lorin Industries

Industry:
Metal Service Center

About:

Lorin Industries is a unique provider of aluminum coil products that serves such diverse industries as electronics, lighting, architectural panels, appliances, hardware, automotive, aerospace and many other industrial segments worldwide. Lorin products undergo a specialized process called anodizing before they become finished goods. Today, Lorin is the only aluminum coil anodizer with full capabilities for tolling and packaged products. The market for Lorin's products is a global one. Lorin is considered a leader in technology, innovation, size, applications and quality of anodized aluminum products. Founded in 1948 and located in Muskegon, Michigan—some 200 miles from either Chicago or Detroit—Lorin Industries is the only aluminum coil anodizer in the world so diversified it can accommodate a variety of gauges, widths, colors, finishes and shapes, from sheets to large and small coils.

The situation:

Lorin Industries' product line consists of 2,500 products in two categories: Standard and Non-Standard sub-assemblies (products). A Lorin sub-assembly consists of an aluminum coil ranging from 42 to 60 inches in width, weighing between 2,000 and 10,000 pounds. When shipped to a customer as finished goods, a coil has been cleaned, etched, anodized, dyed and sealed. There are 500 Standard products that are manufactured and placed into inventory to meet sales forecast demand as well as long term contracts with customers. The 2,000 Non-Standard sub-assemblies are only fabricated upon receipt of actual customer orders. They aren't placed into inventory; they are shipped directly to the customer upon completion of the fabrication process.

Each product produced by Lorin Industries is sized, packaged, and coated to customer specifications at the Ship-To/Line-Item level. These specifications can change from one order to the next, and are communicated to the production floor so appropriate action and documentation occurs. Many times, completion of specific activities must be certified to the customer. Lorin must be able to accommodate customer specifications without requiring a new Bill of Material or Routing for each new customer configuration. The incumbent system required each order to be treated as a new product, creating redundant work and delays, to the dismay of Lorin's customers and sales force.

The solution:

Lorin Industries, like many other mid-size manufacturers, was not deterred by the old cliché "if it's not broken, don't fix it." While their network of 15 direct sales people and 50 distributors was successfully handling customer demands, they were experiencing increased competition. And Lorin's management was beginning to hear comments like: "If I can quote the job quickly, I can win the deal." Anticipating even tighter competition and increasing demands for responsiveness, Lorin decided the worst thing it could do was to rest on its laurels. So they broke it to fix it.

In preparation for building upon its 50-year record of steady growth, Lorin's management embarked on an ERP system selection and implementation project to secure the tools needed to be more responsive and effective, reduce costs, and serve its customers more efficiently. They chose the ERP Plus system from Verticent.

When a customer order is placed in the Verticent Distribution module, build-to-order specifications are passed to manufacturing through a software feature known as attributes, which can define as many as 150 characteristics of the finished and packaged product. Default values for each attribute are stored at the Customer Ship-To/Item level. This simplifies entry and supports quick, accurate entry of future re-orders for the same or similar products. Example attributes include:

1. The length and width of a sub-assembly.
2. The maximum and minimum weight of each finished coil the customer will accept.
3. The maximum weight of coils to be loaded on each skid.
4. The type of protective poly film to be applied to the slit coils.
5. Type of packaging the customer recommends.



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The solution: continued

Each attribute has multiple values (options) from which the customer can choose. Choice of different options may affect operations on the routing used in manufacturing.

Sub-assemblies are processed into smaller coils or sheets. The resulting coils/sheets are each assigned a move ticket identification number that includes the actual values of the attributes for that coil. When the completed coils are placed into finished goods inventory the Verticent Distribution module allocates material by item number and by attribute value to all open customer orders. This ensures that the product that is allocated, picked, packed and shipped to the customer matches exactly to the specifications requested during order entry.

In addition to the 2,500 products (subassemblies) currently offered by Lorin an additional 46,000 products can be ordered by its customers through the product configurator. A configured product becomes a Non-Standard sub-assembly after the initial manufacturing order is completed. Non-standard sub-assemblies can become standard sub-assemblies when certain sales volumes have been achieved. Tagging products as standard, non-standard, or configured allows Lorin to manage and accurately quote production lead times according to the classification of the sub-assembly.

Configured product customer orders become manufacturing orders designated as "Customer -Order-Special" for products not previously manufactured. The system ensures that the configured product is within production capabilities, validating each segment of the product configuration process. As the product is defined, certain choices will determine the selection of subsequent configuration segments. After a complete valid product specification is developed within the configurator, a where-used process is completed in the distribution module to determine if this configuration has ever been produced before. If the system finds a match, it returns the existing item number to the operator allowing him/her to process the order as a standard or non-standard sub-assembly. If the product is new, a Bill-of-Material and Routing are generated and manufacturing order created automatically.

It should be obvious by now that the possible variations of product configurations that can be ordered by Lorin customers are practically limitless. The process described above significantly improves Lorin's competitiveness in the market and streamlines processes for improved efficiency. After 50 years of steady growth, Lorin Industries is well positioned to adapt to changing market conditions that require it to compete globally.



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