

## Stratasys Fuels Product Design Firm's Exponential Growth

*"In just a few weeks, we came back to the retailer with a revised prototype and they were blown away. We could never have had that kind of fast turn around time without our Dimension 3D Printer."*

— Wendy Steele, Tape Wrangler

Tape Wrangler is a product development and manufacturing company that attributes rapid revenue growth in large part to product design made nimble by a move to in-house 3D printing.

Founded in 2006, the Traverse City, Michigan-based company brings innovative, high quality products to the marketplace. Among its offerings are a line of specialty hardware products, including its popular Tape Wrangler™ heavy-duty tape dispenser.

### Using Rapid Prototyping Services

During its first year of business, Tape Wrangler worked with several different design bureaus to create 3D models for product development and was unsatisfied with the results. "Outsourcing proved to be too costly, time-consuming and inefficient," said Wendy Steele, Tape Wrangler co-founder and CEO. "In addition, to time and expense, we had to go through the trouble of getting the design service bureaus to sign non-disclosure agreements to protect our intellectual property."

### Printing 3D Models Right in Their Office

All that would change during a visit to the Dimension 3D Printing booth at the Pack Expo trade show. After learning more about Dimension 3D Printers, Wendy and her husband Rick Steele – Tape Wrangler co-founder and COO – were confident that bringing 3D printing in-house would be a wise business decision. Within a month, they purchased a Dimension 3D printer and it was added to their design shop.

Since purchasing a Dimension printer, Tape Wrangler's growth has more than doubled and projections for the future look even more profitable. "Gone are the days of expensive and inconvenient outsourcing," said Rick Steele. "The printer allows us to produce functional 3D models we can take on the road and demo at trade shows."

One of Tape Wrangler's biggest successes with the Dimension 3D printer came when they met with a major national retail chain about having one of their tape dispenser designs marketed under a private label brand. The mass retailer reviewed the original design and suggested a few tweaks to increase the product's appeal to consumers. Tape Wrangler quickly re-designed the product and printed a functional 3D model with their Dimension printer.

"In just a few weeks, we came back to the retailer with a revised prototype and they were blown away," said Wendy. "Instead of testing our product in 100 stores as originally



Tape Wrangler improves its design of the ProSeal 200D by testing multiple iterations quickly and inexpensively.

### How Did FDM Compare to Traditional Prototyping Methods for Tape Wrangler?

Method	Cost Average*	Time*
Traditional Prototyping	\$38,000	49 days
FDM Prototyping	\$5,075	29 days
<b>SAVINGS</b>	<b>\$32,925</b> <b>86%</b>	<b>20 days</b> <b>41%</b>

\*Based on 29 tape dispensers.



Rick & Wendy Steele, founders of Tape Wrangler.

planned, they decided to expand testing to over 1,300 stores. We could never have had that kind of fast turn around time without our Dimension 3D Printer."

In addition to the ability to quickly produce models, Tape Wrangler is thrilled with the high quality and fine feature detail delivered by its Dimension 3D Printer. The company's products are highly engineered – some of its pieces requiring tolerances down to 1/250,000 of an inch. "The strength, level of detail and appearance rivals a final production piece and it makes our printer a priceless design and marketing tool," said Rick.

Tape Wrangler also uses the Dimension to build fixtures, jigs and supports to assist in manufacturing and assembly processes. For example, Rick created a fixture to hold the body of their tape gun while branding labels were put on. The fixture makes it easy to put the labels on straight for a professional look.

### Ramping up to 3D Production

With the help of their Dimension Printer, by early 2009, the company had almost a dozen new products designed, prototyped and ready for production. Like many business owners, this progress came during a weary economy with cautious buyers.

But how could they cost effectively launch these products without breaking the bank? In the past they built steel injection molded tools which cost hundreds of thousands of dollars. Once again the answer came from Stratasys. This time, it was the Fortus 400mc with its variety of plastics and large build envelope. As Rick explained, "We had worked with FDM technology with our Dimension printer and knew that somehow, this technology had to be the answer on the tooling side as well".

Since purchasing their Fortus 3D Production System, Tape Wrangler has built jigs, fixtures and end use parts to assist in their manufacturing and assembly processes. "Buying the Fortus not only saved us thousands of dollars on tooling, but also allowed us to build real parts in lower quantities," said Rick Steele. "In some cases we eliminated injection molding completely by producing parts on our Fortus. It literally changed the way we do business from product development to manufacturing."

Tape Wrangler's products are available at ACE Hardware, True Value and on their Web site, [www.tapewrangler.com](http://www.tapewrangler.com).



*Tape Wrangler uses CAD design software in conjunction with their Dimension 3D Printer to speed product development.*

For more information about Stratasys systems, materials and applications, call **888.480.3548** or visit [www.stratasys.com](http://www.stratasys.com)

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