



Carolynn Capps & Vicki Thomas She Designs Dental Studio

3D Printing: When the Right Solution Is a Complete Solution

Timing Is Everything

Timing may be everything, but the timing was anything but auspicious when Carolynn Capps and Vicki Thomas made the decision to start their own dental laboratory six months after the onset of the COVID pandemic. To make matters even more challenging, they were incurring the high cost of outsourcing all of their digital printing needs.

Searching for a Solution

Realizing they could greatly reduce their costs by bringing digital printing in house, they agreed that Carolynn would focus on incorporating a digital printing workflow into the laboratory while Vicki focused on handling most of the day-to-day operations of the laboratory. Carolynn initially purchased an inexpensive 3D printer and software to familiarize herself with the technology and workflow, but then started interviewing different 3D printer manufacturers to understand how their products and services compared. She describes the process as “scary at first,” and after using the small inexpensive printer, she quickly learned precisely what she did not want in a digital printer. More importantly, however, Carolynn and Vicki knew that it would not be enough to have the right 3D printer. They would need to have a complete 3D printing solution.

The Right 3D Printer

Fortunately, the process ceased to be “scary” as soon as Carolynn observed a presentation about the DMG 3Demax® printer. The DMG team’s relaxed, no-pressure approach helped her appreciate not only the printer’s technological capabilities, but how seamlessly it works as the hub of a complete 3D printing solution.

With DMG’s 3Demax printer, everything was totally integrated and worked together seamlessly from one step to the next. It simplified our digital workflow, and with the addition of a little pink glitter wallpaper, it looks beautiful in our studio!

**MUCH LESS IS
MUCH MORE**

MUCH LESS COST

MUCH LESS TIME

MUCH LESS
IMPRECISION

MUCH LESS SPACE

MUCH LESS MESS



The Right Support

She Designs uses Netfabb® nesting software from Autodesk, part of the DMG solution. To design appliances and electronically transfer files to and from their dental practice clients,Carolynn and Vicki chose DentaMile connect software from DMG. Even though the 3Demax is an open system that works with a variety of printing resin brands, they chose the LuxaPrint line from DMG. They did so because they liked the clear transparency look and the accuracy of the fit of the splint resin, the outstanding detail of the grey color and the accuracy of the fit of the model resin, and the validated workflow.

Speaking of which, She Designs' selection of DMG as the supplier of their 3D printer, design software and resins was not due solely to the individual benefits provided by those products. It was equally due to the way in which those products work together effortlessly, and to the customer support provided by the DMG team. Understanding the importance of validation, DMG made sure that its entire 3D printing solution was fully validated. All components – the 3Demax printer, the LuxaPrint resins, the 3Dewash washing unit, and the 3Decure curing unit, and DentaMile connect software – were all tested as a system to provide a fully integrated digital workflow.

“ The printer manufacturer’s support team is crucial. DMG’s team was incredibly helpful, and very patient answering all our questions and concerns. They made it easy for us to contact them when we needed assistance, and that was great for our peace of mind. ”

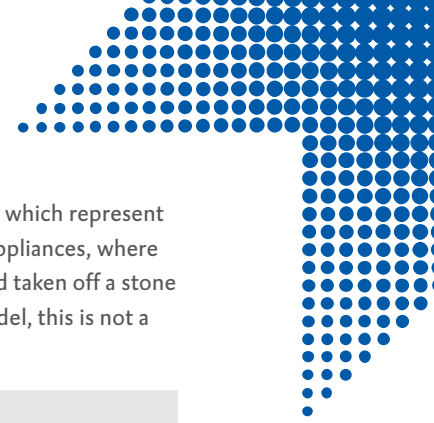
Reducing Cost, Time, Space, Mess and Mistakes

The move to 3D printing has created not only cost saving for She Design, but time savings and space-savings as well. With the analog approach, pouring, trimming, and articulating the models were completed in three separate steps. With the digital approach, a model is designed, articulated, and nested in one continuous step and then sent to the printer. In addition, the analog approach requires grinders, handpieces, lathes and other pieces of costly equipment that take up a lot of space. The small footprint occupied by the 3Demax’s compact design frees up space for other uses, and the fact that 3D printing avoids the annoying mess associated with the analog approach to appliance manufacturing is something that everyone in She Designs appreciates.

“ Bringing digital printing inhouse, cut our outsourced digital printing costs by more than half. ”

One of the most important advantages of 3D printing is the ability to avoid human errors that can happen with the conventional approach to dental appliance manufacturing. For example, pouring models can lead to imprecision caused by expansion, and scanning the poured model introduces the opportunity for that error to be compounded. These errors can possibly impair the appliance’s fit requiring the dentist to make more adjustments chairside, which unnecessarily wastes time for both the dentist and the patient.

“ With 3D printing, I can design and print a nightguard in under two hours. With analog, the process would take almost two days, and the precision is not nearly as great. ”



Carolynn and Vicki have seen a meaningful improvement in accuracy with their crown and bridge appliances, which represent a large percentage of their revenue. The improvement in accuracy has been even greater with removeable appliances, where there can be a significant amount of abrasion that changes the model when a cast framework is placed on and taken off a stone model. In contrast, when a cast framework is designed digitally and placed on and taken off a 3D-printed model, this is not a problem.

|| The most pleasant surprise to me has been how quickly and flawlessly I can take a designed model file, nest it in NetFabb, and send it directly to the printer. The entire process takes no more than a few minutes. ||

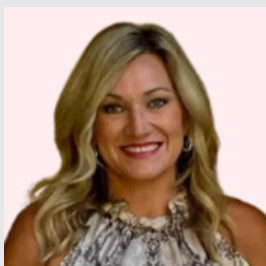
The Courage to Succeed

The degree of concern and uncertainty due to the COVID pandemic was significant for all businesses in 2020, but especially so for new businesses like the one Carolynn Capps and Vicki Thomas had just opened. To their credit, rather than sitting back and simply waiting and hoping for things to improve, they took matters into their own hands. Rather than cutting back on their spending, they made the courageous decision to invest in a new technology they felt could change their fortunes. And rather than simply investing in a product, they did their homework and invested in a comprehensive solution comprising the right software, the right hardware, the right materials, and the right customer support.

In the year since Carolynn and Vicki installed their 3D printing solution in house, they greatly increased their customer base. And it is clear that She Designs has the designs on further growth in the years to come.



CAROLYNN CAPPES is a Co-Founder and CEO of She Designs Dental Studio in Matthews, NC. She began her dental career in 1993 as a ceramist at a small family-owned dental laboratory in Tampa, Florida. Carolynn received her MBA from Western Governor's University and her BS in Biomedical Sciences from the University of South Florida and is a graduate of National Association of Dental Laboratory University and a recipient of its NADLU Scholarship Award. She received her Certificate in Dental Technology in Ceramics in 2009 and co-founded She Designs Dental Studio in 2020.



VICKI THOMAS is a Co-Founder and President of She Designs Dental Studio. She has been in the dental industry since 1996 and became a lab owner in 2009. Vicki's professional passion is leveraging her attention to detail in order to create strong lasting partnerships with her clients and outstanding esthetic results for their patients. Vicki is currently pursuing AACD certification, which only a small percentage of technicians achieve. A former owner of Stanfield Ceramic Studio, she co-founded She Designs Dental Studio in 2020.