

RPD STEP BY STEP

with Flexible
CAD Partials



AN ADVANCED THERMOPLASTIC

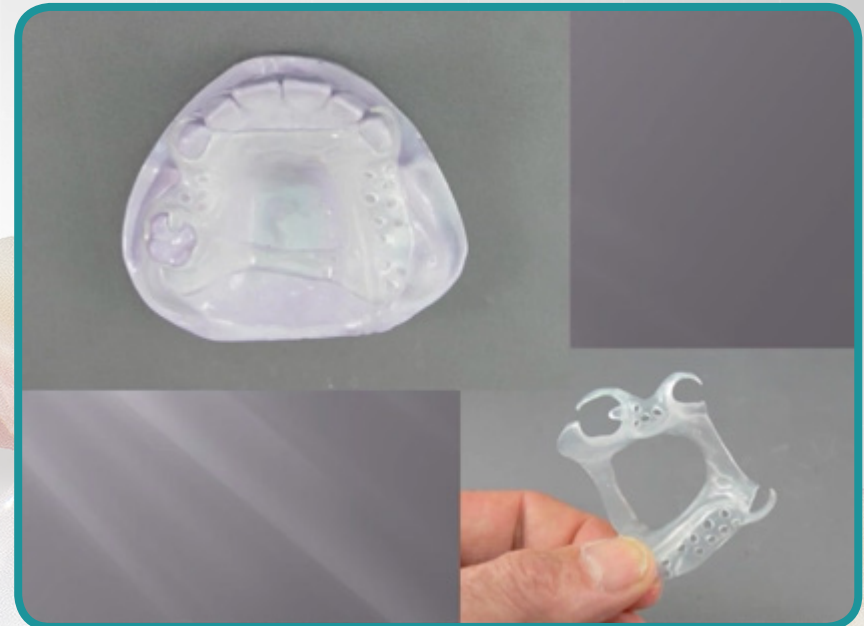
Myerson VisiClear is an advanced thermoplastic for making clear, flexible, partial denture frameworks, occlusal splints, and nightguards. For the purposes of this eBook, the focus is on using VisiClear to manufacture removable partial dentures. VisiClear is now available in a millable disc, which integrates seamlessly into a digital workflow.

Due to its unique chemical properties, VisiClear does not absorb water, resulting in a partial denture that is resistant to the development of stains, bacteria, and odors. In the event that the surface is stained, the restoration can easily be restored with a cleaner or by polishing. Adding clasps or making repairs is simple and takes less than 30 minutes with the Myerson Hot Shot Elite injector.

Because VisiClear is flexible and clear, it offers increased patient comfort and esthetics, taking on the color of the surrounding teeth or tissue. In addition, the VisiClear digital workflow results in an excellent fit due to the accuracy offered by scanned models and digital manufacturing. Doctors who receive finished products made of the VisiClear disc continue to be pleased and offer positive feedback on both the material and quality of the product.

Indications for Use

- Partial Denture Framework
- Occlusal Splints
- Night Guards



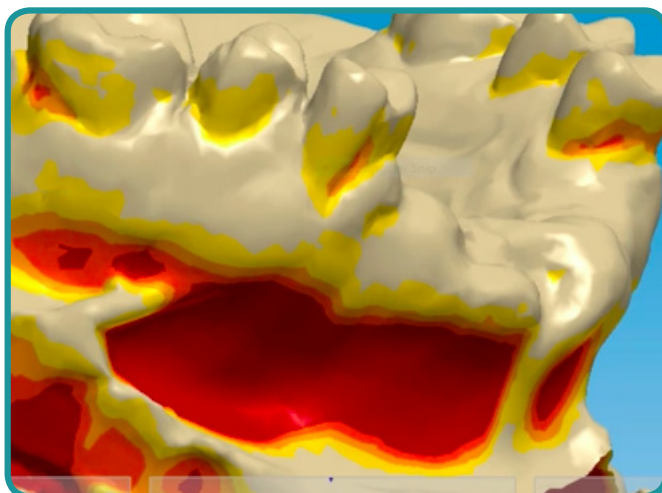
CASE DESIGNED WITH 3SHAPE



Case and Discussion adapted from RPD Step by Step Myerson VisiClear Flexible CAD Partials

Presented by
Kris Schermerhorn, CDT

Referencing the 3Shape image below, the undercut is characterized with a yellow color for a mild undercut, an orange color for more undercut, and red colors for an extreme undercut. It's important to understand that there is limited flexibility in the area where the clasp attaches to the major connector, because the material becomes stiffer the thicker that it is. Having acrylic keeps the clasp from moving, therefore it needs to be at or above the height of contour in that area.



At the middle of the clasp to the tip, you can drop in to the deepest undercut, even into some of the red colored areas at the tip. Once 3Shape shows where the undercuts are, the insertion direction can be positioned so the undercuts are exactly where you want them—for example, less undercut in the anterior, more in the posterior.

Product Specifications

- Diameter: 98.5 mm
- Thickness: 15 mm, 20 mm, 25 mm
- Mills using standard PMMA tools
- Add clasps or make repairs quickly and easily with the Myerson Hot Shot Elite handheld injector

Prep Guide

Partial Denture Framework

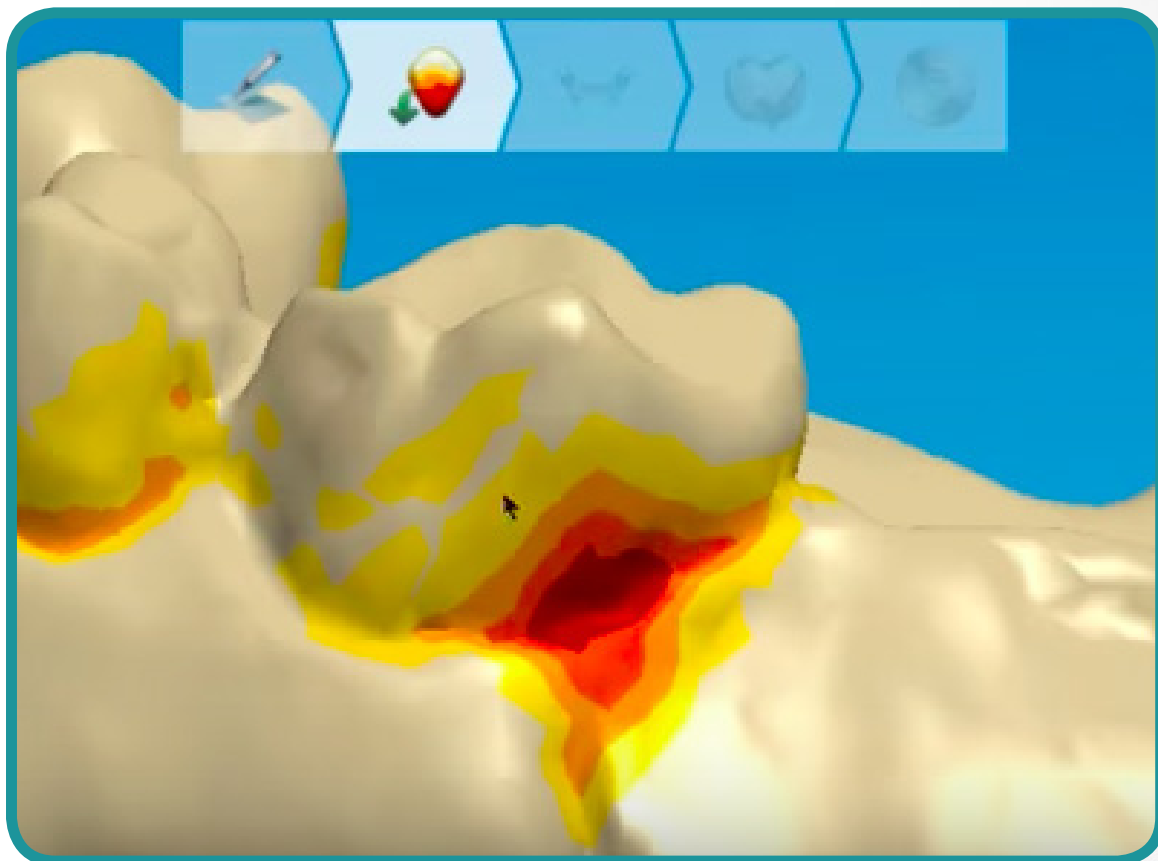
- Major: 1.2 mm
- Saddle Connectors Area: 0.8 mm

Clasp on Anterior Tooth

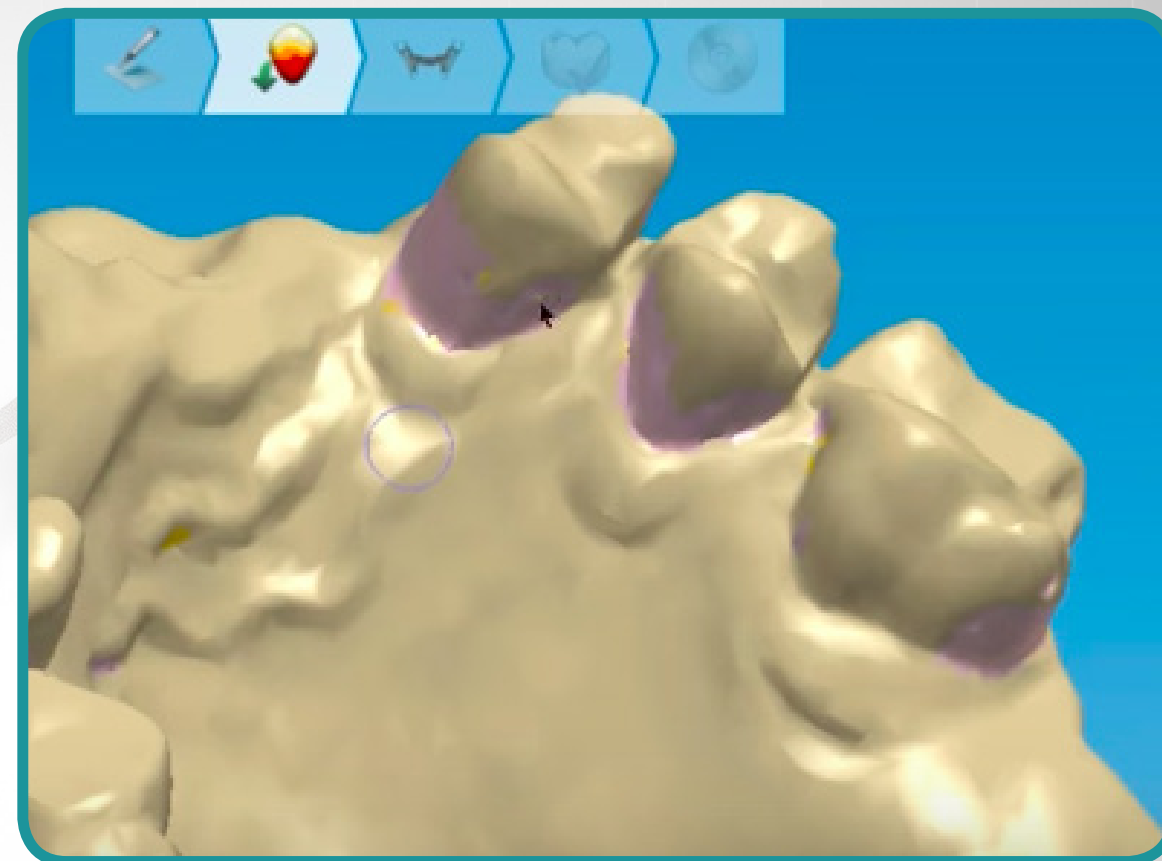
- 3.0 mm where clasp joins framework thinning to 0.7 mm at tip

Clasp on Posterior Tooth

- 4.0 mm where clasp joins framework thinning to 0.7 mm at tip



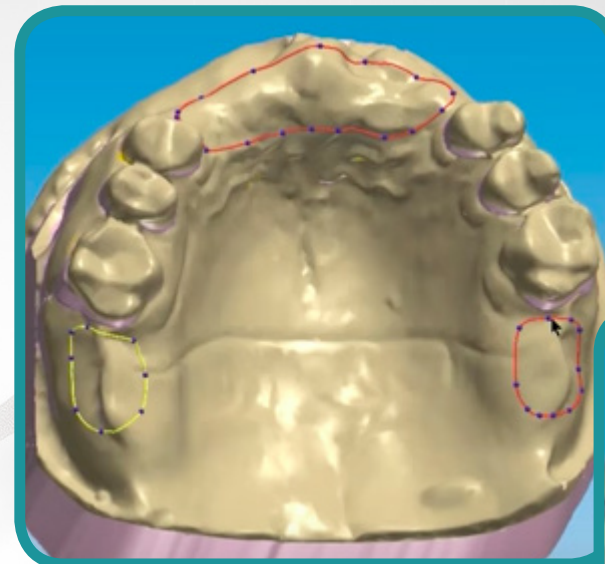
Next 3Shape will block out the undercuts and add wax to that area. As the frame is designed, it is important to stay above the height of contour, and then drop the clasp down in to gain retention. One advantage of the VisiClear disc is that retention from the lingual can be added if it seems too light.



The VisiClear material is flexible, and it can move into the lingual undercuts. Using 3Shape, you can remove some of the block-out to expose the undercut on the lingual, and then use the facial clasp as a reciprocation instead of a retentive option, allowing them to work together.

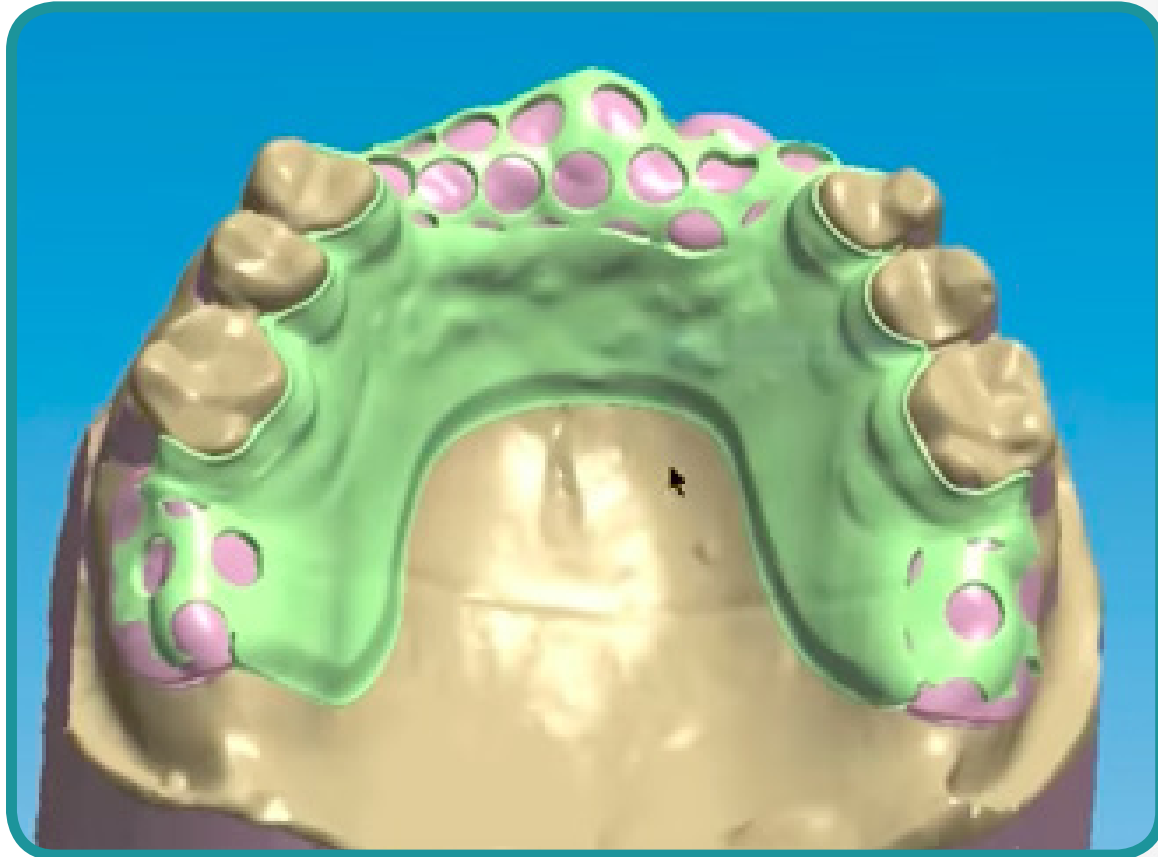


Above is an image of a case after 3Shape has blocked out undercuts. It's important to use the minus tool to remove the block out wherever you need clasp retention



In this image, note the large holes for the mesh, which speed up the milling process. The bond between the denture base acrylic (whether poured, packed, or injected) and VisiClear framework is purely mechanical, so the larger holes will facilitate a strong bond.

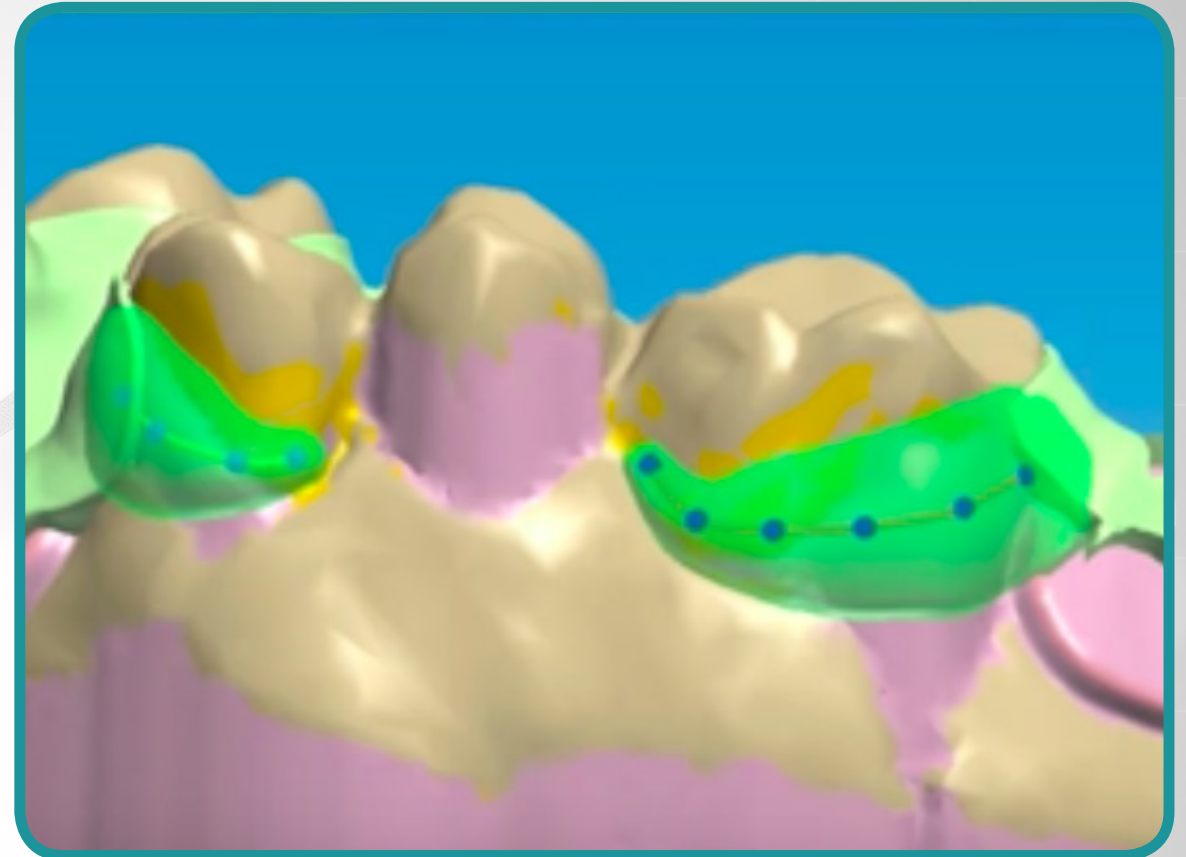
In addition, make sure to have more space on the underside of the mesh. It can be up to about 0.90-mm block out. The mesh work itself should be about 0.80 mm as well.



For a major connector, be sure to mark different spaces: the major connector, the necks of the teeth, and the top half down to the lower half.

For most designs, the following parameters work well:

- major connector - 1.0 mm to 1.2 mm thick
- wax thickness - 0.10 mm
- substructure thickness - 0.80 mm



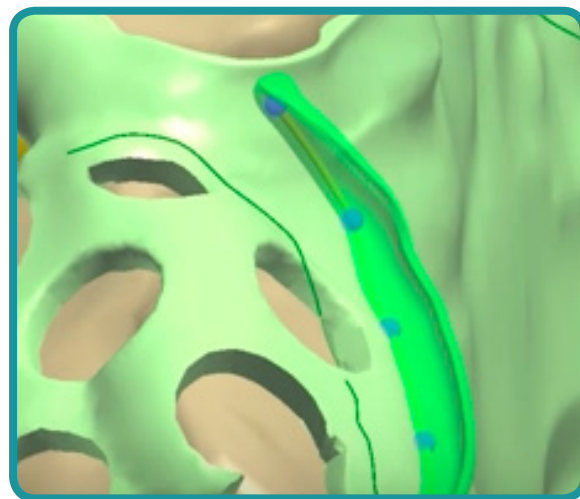
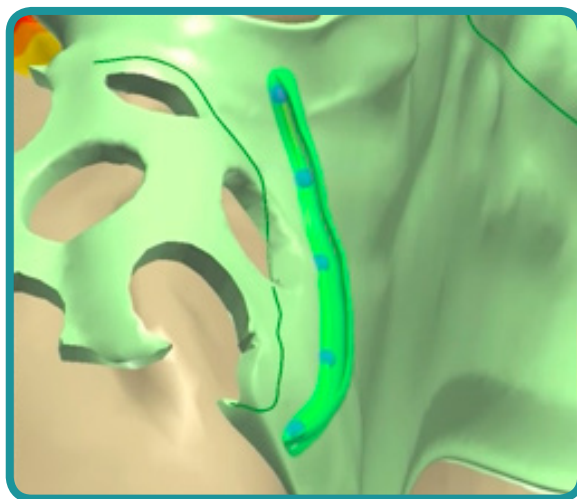
Another advantage of 3Shape is the use of mouse controls and shortcuts. Using any one of the dots created in designing the positioning of the clasp, a combination of the ctrl or shift key when using the scroll wheel can be used to widen or shrink the clasp. The software will report the measurements as you work, so it takes seconds to make the clasp the correct dimensions.

In order to have proper retention and esthetics, the VisiClear clasp is designed to be much wider and flatter to the tooth. This causes it to be more esthetic because it's thinner and light can pass through it. This creates two major benefits to the patient: (1) food will not get caught on it because it's flat to the tooth, and (2) it won't rub the cheek, making it significantly more comfortable for the patient.

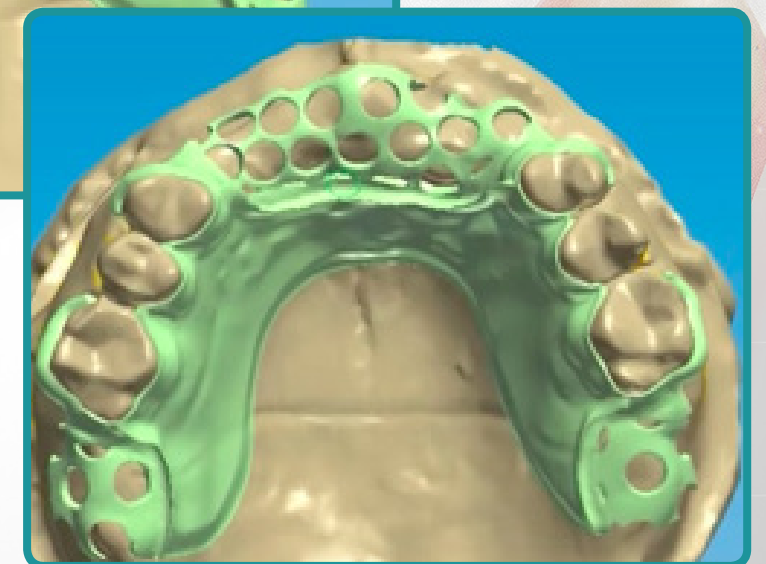
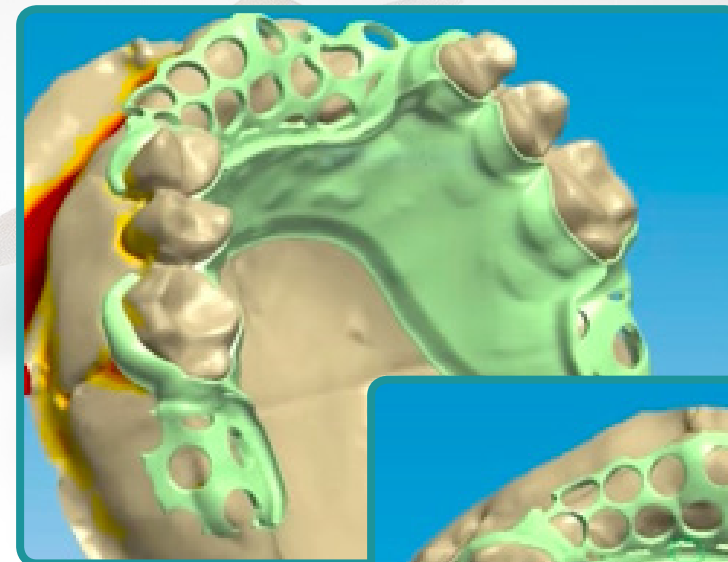
Because of the flexible nature of VisiClear, the tissue stops should be a little thicker and more robust than with metal (at least twice the size). Tissue stops are essential with flexible material. During try-in, the saddle areas should be stable, so the doctor doesn't experience movement or an improper fit when they push back. A robust tissue stop is needed to keep things stable during try-in. Similarly, when packing or injecting acrylic, thousands of pounds of pressure can warp the meshwork, resulting in a bad fit after processing.



When the material comes out of the mill, it can be adjusted very easily with a handpiece and grinds beautifully. Because of this, when first starting to design, you can be a little bit heavier on the clasps and then fine tune it to your own philosophy and the requirements of the doctor. Right out of the mill, the material can be snapped out clean, polished, and ready to go for a frame try-in.



Finally, having a heavier butt joint will allow for more thickness of materials. Where the acrylic, a rigid material, is combining with a semi-flexible material, there should not be separation. Having a more robust butt joint that is solid will create less likelihood of any movement, separation, or staining.



The finished frame in 3Shape.

SEE VisiClear IN ACTION



View the full webinar for more information and demonstrations

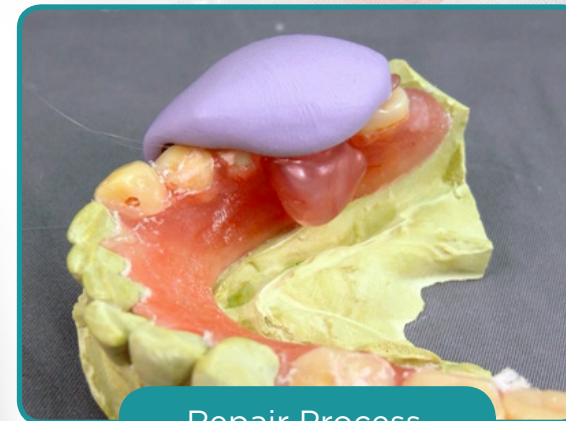
Lecturer and trainer Kris Schermerhorn, CDT, has a degree in dental technology from J. Sergeant Reynolds College and presently owns and manages a full-service dental laboratory in Virginia. He is the co-inventor of the Myerson HotShotElite injection gun, and co-developer of Myerson DuraCetal, DuraFlex, and VisiClear materials, and the Myerson FlexPress digital injection system. He was named inventor of the year in 2007 by the NADL.



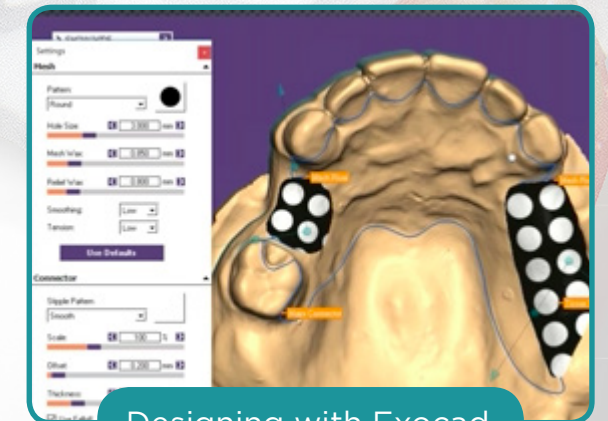
Injecting Process



Tips for Milling



Repair Process



Designing with Exocad

How to Make Repairs with the Hot Shot Elite

- Step 1: Wax new clasp
- Step 2: Make putty matrix
- Step 3: Load material and heat
- Step 4: Inject and allow to cool
- Step 5: Finish

GETTING STARTED WITH VisiClear

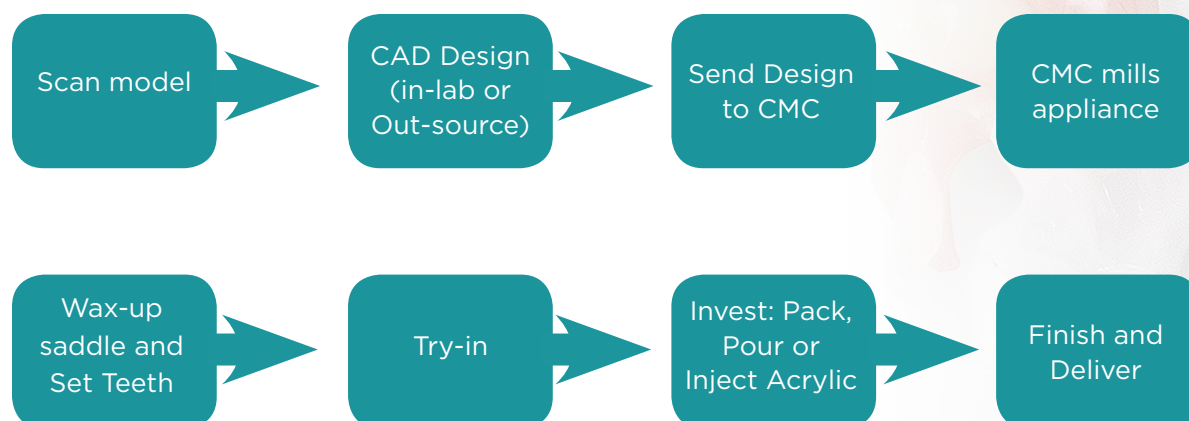
Whether you're a removable laboratory interested in going digital or a digital laboratory interested in adding a removable department, VisiClear represents new opportunities to become more efficient, expand your product offering, and deliver a cutting-edge product that doctors and patients alike will appreciate. VisiClear discs can be purchased exclusively from Zahn Dental and milled in-house. Another easy way to get started is to outsource to Custom Milling Center (CMC), the only milling center that offers VisiClear. Outsourcing works well because it's a prudent way to test the waters. Send a case to CMC, review the work, and share it with some of your most trusted doctors for feedback. It's easy to scale up from there by simply sending more cases to CMC or choosing to begin milling in-house.

Marketing Launch Kit

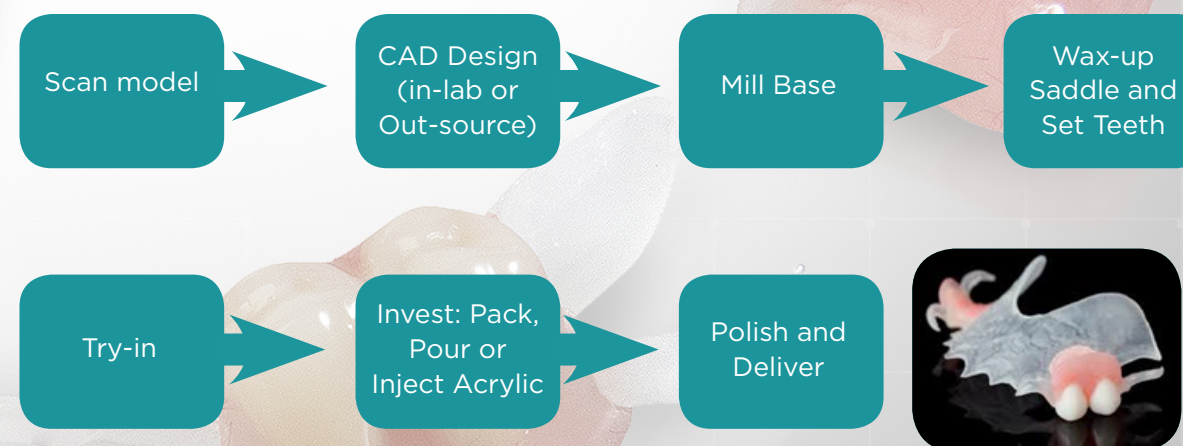
New product introductions always require an educational initiative. The VisiClear launch kit is available for download at cap-us.com/visiclear. Be prepared to launch to your doctors and your network with the following items:

- 1-page sell sheet (PDF to print)
- Postcard (PDF to print)
- Email blast
- Social media post
- Talking points/call script
- Marketing images
- Product announcement

Digital Workflow: Outsourcing to CMC



Digital Workflow: Milling In-house



ABOUT THE COMPANY

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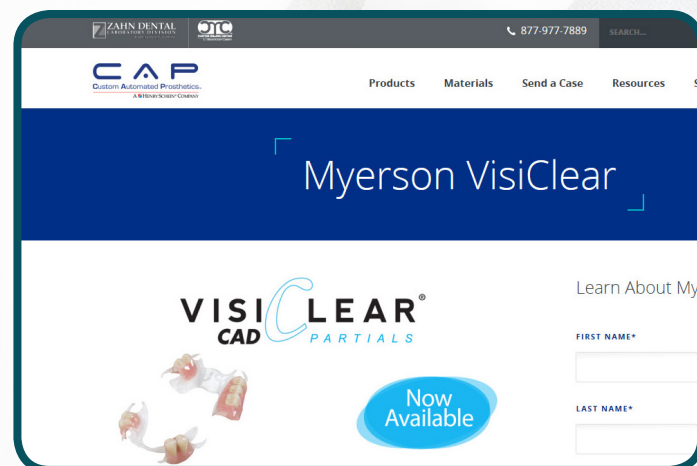


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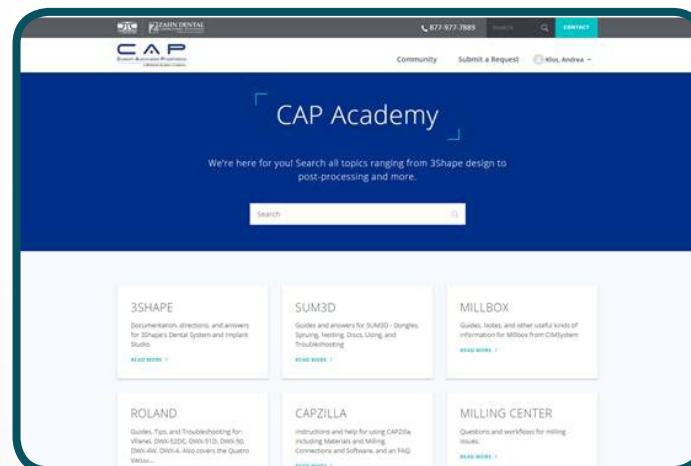
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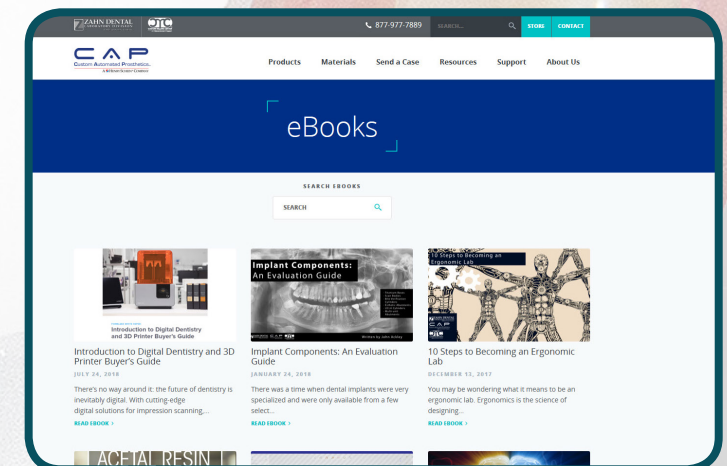
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