CAD CAM Positive Model Vacuum Formed
Computer designed and manufactured model vacuum formed

10% FRAME TO MODEL VARIATION TOLERANCE

FOOT IMPRESSION METHODS ACCEPTED
Plaster Slipper Cast, Foam Impression, STS Slipper Sock, 3D Scanner

FRAME MATERIAL OPTIONS
Polypropylene, Subortholene, Carbon, TPE, EVA

ADVANTAGES
• Digital 3D model stored indefinitely
• Allows variety of frame material options

DISADVANTAGE
• Some foot contour lost with routed positive model

Creating a Computer-Assisted Designed Computer-Assisted Machined (CAD CAM) positive model from an STS slipper sock or 3D scan is the standard method for producing custom-molded frames. It's also a great option for plaster slipper casts or foam impression if desired. The benefits of using this process are indefinite digital model storage and simplified reordering. The negative of using this method is an increased variance in congruence accuracy. CAD software shortcuts are used to reduce the time needed to design the digital frame, resulting in an increased variation between the shape and contour of the orthotic frame and the patient's impression model. Orthotic lab CAD technicians are economically time limited, making it difficult to create perfectly congruent positive model designs. Mill bit size and mill limitations also increase the contour variation between the patient's foot impression and the CAD CAM positive model. Nevertheless, this is still a great method for fabricating custom orthotics. Any calibrated frame material is available and nearly every frame modification is available with the CAD CAM positive model process.

Note: For more visual images depicting positive model vacuum formed process, please see page 20, images 8-10.
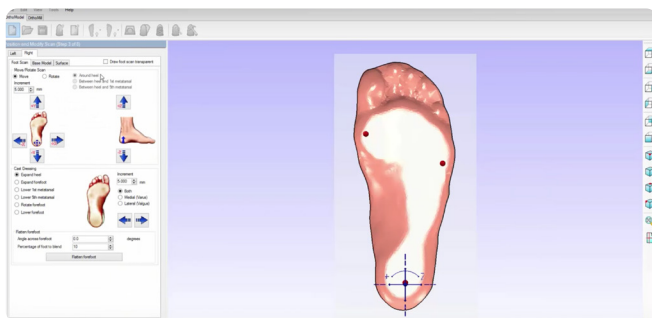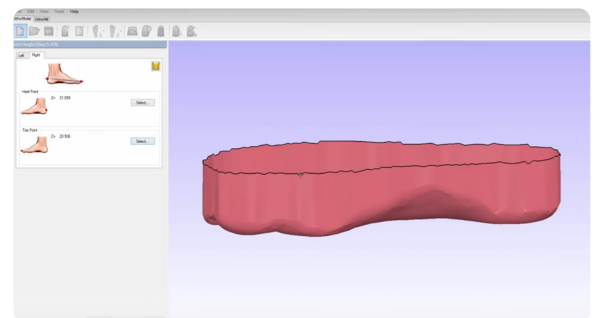

Milled out CAD CAM Positive Models
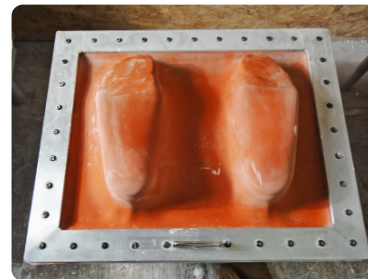
Vacuum forming frames over CAD CAM Positive Models

Positive Model Milling Process

Positive Model CAD (Computer-Assisted Designed)

Positive Model CAD (Computer-Assisted Designed)