socketprint.gremlich.dev

ProvelPrint was designed for printing prosthetic sockets using Provel Print Cups and the Provel E2.20 Extrusion Printer. The user will import a residual limb shape file created by scanning patient anatomy or by casting the residual limb and digitizing with a cast digitizer. The resulting STL file will be imported into a prosthetic limb CAD program for modification. Once the necessary adjustments have been made, the shape is ready to open in ProvelPrint.

**Help Menu**

**File**

Allows the user to navigate to and open a file.

**Edit**

Allows changing material profile values including: Nozzle Temp, Cup Temp, Shrink Factor, and Output Factor.

**IP Address and Port**

Allows the user to enter a port and the printer IP address to establish connection with the printer. Indicates whether the port is open or closed.

**Lock**

Indicates which side the release button hole in the cup should be on when loading the cup in the cup fixture.

**Cup**

Allows selection of the correct cup diameter and height.

**Nozzle Size**

Generally a 5 mm nozzle will be used to print adult sockets, but a smaller nozzle (4 mm) may be more typical for a juvenile or pediatric socket.

**Layer Height**

A layer height of 2.0 mm (.080”) might be typical. But for abrupt contour changes, a thinner layer height will allow greater overlap and commensurate improvements in layer to layer adhesion. Thicker layer heights will usually print faster.

**Material**

CP1 is the same polypropylene copolymer used to injection mold Provel Print Cups. This provides best adhesion between the cup and the socket. There is a long history in the industry of using polypropylene copolymer for thermoplastic sockets.

**Shrink Factor**

Corrects for normal shrinkage during cooling. Can be edited in Material Profiles.

**Output Factor**

This allows user correction for minor over or under extrusion while printing.

**Print Time**

Shows estimated print time.

**Conform End**

Blends the distal end of the socket shape to the groove in the top of the chosen cup size.

**Generate GCode / Send to Printer**

Sends the completed and sliced file to the printer.

**Generate GCode / Send to Folder**

Sends the completed and sliced file to designated folder.

**Rotate**

Allows correct orientation of the socket.

**Vertical**

Allows the socket to be moved vertically.