

LimbLogic® Drop-In Adapter Instructions

Follow these instructions to create the Distal Pad that is required for use with the Drop-In Adapter to fabricate the socket, and to transfer the alignment if necessary.

WHAT'S IN THE BOX

Thermoplastic Fabrication Kit (LLV-KIT-T):

- a. Latex Form
- b. Poron Filter
- c. M6 x 55 screws (4)
- d. 1/4 x 20 Cap Screw
- e. Plastic Anchor
- f. Large Forming Sleeve
- g. Small Forming Sleeve
- h. Drop-In Adapter
- j. Proximal Gaskets (2)

ADDITIONAL MATERIALS REQUIRED

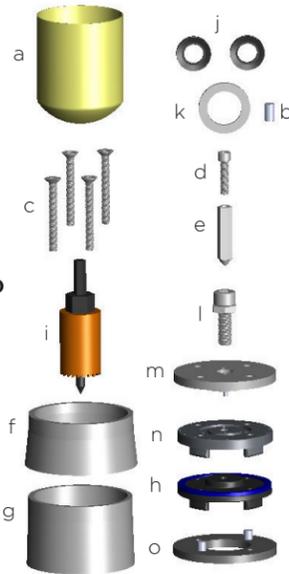
Thermoplastic Tooling Kit (LLV-02100)*:

- i. Hole Saw
- k. Fender Washer
- l. 10mm Cap Screw with Hex Nut
- m. Forming Cap
- n. Tooling Base Resin Kit
- LimLogic Vacuum Pump

If alignment will be transferred:

- o. Transfer Plate (LLV-01045)*

*one-time purchase



Note: if working with plaster models, leave at least 2" of space between the end of the pipe and the distal end of the model to allow for tooling clearance.

1. Place the Tooling Base on the model, with the "A" on the Base facing toward anterior.



2. Select the correct size of Forming Sleeve according to the chart. Place the selected Sleeve on the model.

Forming Sleeve Size	Distance from Distal End	Minimum Limb Circumference
Large	1"	9"+
Small	1.5"	9.5"+

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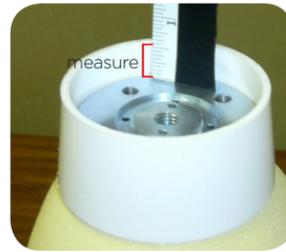
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3. Measure the distance between the surface of the Base and the proximal edge of the Sleeve.



4. The goal for the Distal Pad thickness is 3/8" to 1/2". Subtract the desired pad thickness from the measurement taken in Step 3, then sand that amount from the large end of the sleeve until the goal is reached.



5. Press the Base into the sanded Sleeve.



6. Heat the Sleeve with a heat gun until the Sleeve becomes pliable. Lift the Sleeve off of the Base.



7. Place the Sleeve onto the model and shape it to eliminate any gaps between the Sleeve and the model.



8. Indicate anterior for the 4-hole pattern to be oriented properly. Trace the circumference of the Sleeve onto the model.



9. Press the Base into the Sleeve so that the pin on the distal surface of the Base is aligned with the anterior mark on the Sleeve.



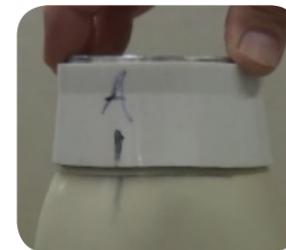
10. Spray the Sleeve/Base assembly with a urethane mold release or coat with petroleum jelly. Do not use a silicone mold release.



11. Stretch the Latex Form onto model, secure it, and spray it with mold release.



12. Place the Sleeve/Base onto the model, making sure to line up the anterior and circumference marks.



13. Secure the Sleeve/Base to the model by wrapping vinyl tape, starting approximately 2" below the circumference mark.



14. Thread the 10 mm Cap Screw with Hex Nut approximately 1/4" into the Tooling Base.



15. Spray urethane mold release onto the surface of the Tooling Base.



16. Mix the resin as instructed on the bottles (50 g each of "A" and "B"). Use only the resin supplied by WillowWood.



17. To create the Distal Pad, pour the resin into the hole in the screw until the resin is visible through the 4 vent holes. Let cure for 30-45 minutes.

18. Attach the Hole Saw to a drill. Using the screw as a drill guide, drill through the urethane Distal Pad until you reach the model.



19. Remove the Distal Pad/Base/Sleeve from the model. Remove the Distal Pad and Base from the Sleeve.



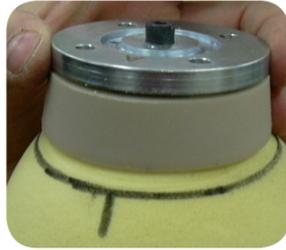
20. Using a 3/8" drill bit, drill 1-3/4" deep into the hole that was started in Step 18.



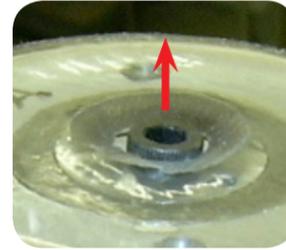
21. Push the Plastic Anchor into the hole until it is flush with the top of the model.



22. Making sure the anterior marks are aligned, secure the Distal Pad/Base to the model by threading the 1/4 x 20 cap screw into the Plastic Anchor.



28. Remove the 1/4 x 20 cap screw.



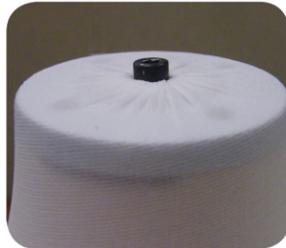
23. Insert the Fender Washer into the recess in the Base.



29. Install the 10 mm cap screw.



24. Apply Nysert and tie off around the 1/4" cap screw. Reflect the rest of the Nysert back onto the model.



30. Using the 10 mm screw as a drill guide, use the Hole Saw to drill a center hole into the plastic.



25. Heat the material for a thermoplastic socket. While the plastic is heating, place the Forming Cap in the oven for fifteen to twenty minutes at the same temperature that is used to heat the socket material.



31. Remove the screw along with the plastic that was cut away.



26. Fabricate the thermoplastic socket using standard procedures.



32. **Wearing heat-protective gloves,** remove the heated Cap from the oven and place it on the model. Align the two pins in the Cap with the holes in the Base.



27. Remove the plastic to expose the head of the 1/4 x 20 screw.



33. Insert the 10 mm cap screw into the Tooling Cap and Base. Use the hex nut to tighten the cap. It may be necessary to use a heat gun or torch to re-heat the Forming Cap. Allow to cool.



34. Using the Forming Cap as a drill guide, drill the 4-hole pattern. Remove the cap screw and the Forming Cap.



35. Remove the socket from the model. Finish all edges of socket in normal manner to prevent discomfort to wearer. Clean the interior of socket thoroughly, to prevent dirt or debris from allowing air to bypass the Drop-In Adapter.



36. Remove the Base and Distal Pad from the socket. Remove the Distal Pad from the Base. Attach the Distal Pad to the Drop-In Adapter. Insert the Poron Filter into the Distal Pad, flush with the surface.



37. Insert the Pad/Adapter into the distal end of the socket, lining up the anterior mark with the anterior of the socket.



38. Using the four M6 x 55 screws provided, install the LimbLogic Vacuum Pump with the two Proximal Gaskets between the pump and the Drop-In Adapter and with the on/off button oriented correctly. Tighten the screws to 9 ft-lbs (12 Nm).



Note: Due to the possibility of compression set of the thermoplastic, check the torque of the four M6 x 55 screws after two weeks of use.

TRANSFER INSTRUCTIONS

- After the prosthesis has been aligned:
 - Secure the socket assembly in a transfer fixture.
 - Tape off the center hole in the Distal Pad.
 - Pour plaster (or equivalent) into the socket to create a positive model of the socket. Let cure.
 - Remove the socket assembly from the transfer fixture.
 - Remove the socket assembly from the model in the normal manner.
 - Place the model back into the transfer fixture.

- Connect the Transfer Plate to the Tooling Base by aligning the pins on the Plate with the hole in the Base.

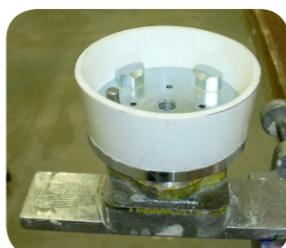
Note: the thickness of the Plate replaces the thickness of the thermoplastic.



- Attach the endoskeletal componentry to the Base/Plate using two M6 screws. Install into the transfer fixture, aligning all components in the most neutral position possible.



- Press the Forming Sleeve onto the Base.



- Heat the Sleeve and lower the model to take the shape of the Sleeve.



- With an indelible pencil, mark the anterior and circumference. Remove the model from the fixture, and return to Step 9 of the fabrication process.

