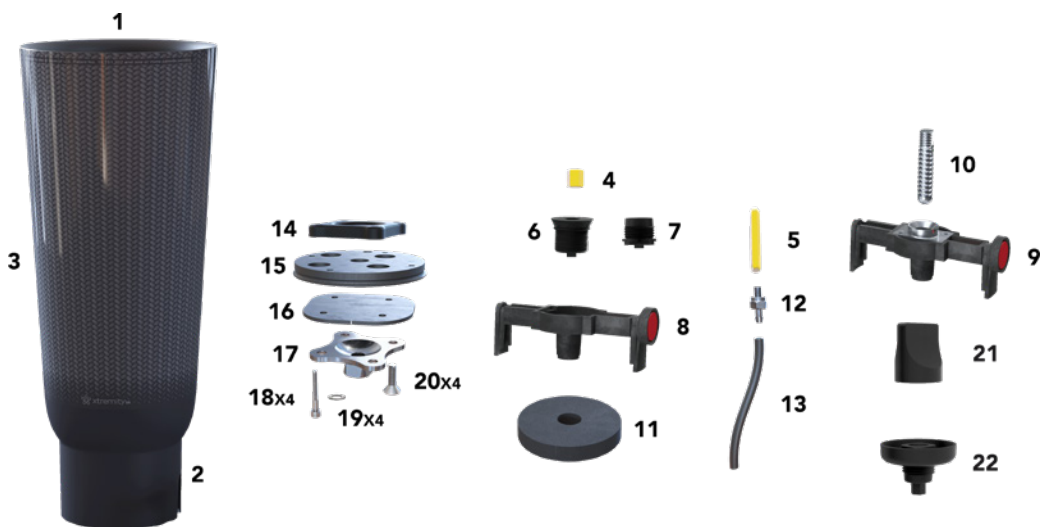




xtremity

Quick Start Guide

XtremityTT Socket System can be fabricated with or without a Distal End Pad. This guide will walk you through fabrication steps for both options.



Parts Key

- | | | |
|--|--------------------------------|---|
| 1. XtremityTT Preform | 9. Pin Lock Bridge Assembly | 16. Base Plate Cover |
| 2. Distal Base | 10. 1.5" Plunger Pin | 17. 4-Hole Pyramid Adapter – Not included |
| 3. Socket Applique | 11. Bridge Foam Spacer | 18. M4 Socket Head Screws |
| 4. Air Valve Filter | 12. Air Hose Barb | 19. Lock Washers |
| 5. Vacuum Port Filter | 13. Vacuum Hose – Not included | 20. M6 Flat Head Screws |
| 6. Suction Air Valve Base | 14. Bolt Ring | 21. DEP Valve Key |
| 7. DEP Compatible Suction Air Valve Base | 15. Base Plate | 22. DEP Injection Valve |
| 8. Suction Bridge Assembly | | |

Fabrication Guide

XtremityTT Socket System



Video
Instructions



1. Prepare Limb Model:

- The XtremityTT socket is formed over a positive limb model. Use your preferred casting or scanning method and modification technique to obtain a positive limb model.
- Remove excessive buildups around the proximal brim to prevent overstretching of the preform.
- Move your finished limb model to the vacuum stand. Add spacers between the model and vacuum stand to ensure the socket will not contact the stand once pulled. **(Fig. 1)**
- Apply a vacuum nylon.



2. Heat

- Place the socket into the Xtremity Benchtop Heating Unit and ensure proper alignment on the pedestal. Place the lid over the socket base. If using size 26 or 26 plus, insert the rubber O-ring. **(Fig. 2)**
- To begin heating, press the POWER button to turn the unit on.
- Press START to accept the temperature.
- Press START again to accept the time and begin heating.
- The timer will start counting down once the oven reaches the set temperature.

3. Shape

- Ensure all supplies are laid out next to vacuum stand.
- Once the timer alarms, remove the socket from the heating unit by the socket base.
- Apply powder to the inside of the socket and gently pre-stretch the proximal end.
- **Identify the anterior logo on the outside of the socket. Ensure correct socket rotational alignment using the anterior logo and the medial and lateral Distal Base cutouts.**
- Pull the preform down over the model as far as possible while holding onto the proximal end with both hands. **(Fig. 3)**

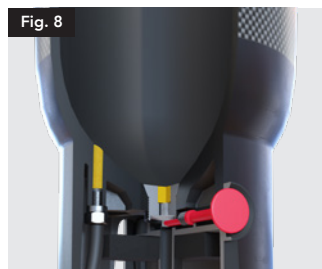


- Use the Base Plate to push down from the distal end while still pulling to prevent distortion of the Distal Base and achieve distal contact.
- Ensure distal contact between the limb model and the socket. Place a piece of tape over the hole in the Distal Base to create seal and apply vacuum. **(Fig. 4)**
- Once cool, remove from vacuum and draw trimlines. XtremityTT requires an anterior trimline of 2.5 cm proximal to MPT to maximize socket strength and maintain warranty. **(Fig. 5)**
- Trim, remove the socket, and smooth the proximal brim of the socket. Ensure the outer surface of the brim is smooth to preserve suspension sleeve life.



4. Assemble:

- Pin Lock system: **(Fig. 6)**
 - Insert the Pin Lock Bridge into the Distal Base. Then add the Bridge Foam Spacer.
- Suction system: **(Fig. 7)**
 - From the inside of the socket, screw the Air Valve Base into the hole in the distal socket using the 8mm hex wrench provided.
 - Press the Suction Release Bridge into the base.
 - Add the Bridge Foam Spacer.
- Vacuum system: **(Fig. 8)**
 - Drill a 5/32" hole through the Base Vacuum Port. Use a 10-32 tap to thread the Base Vacuum Port from the distal end and insert the Vacuum Port Filter.
 - Screw in the Air Hose Barb and connect the vacuum hose.
 - Screw the Air Valve Base into the hole in the distal socket using the 8mm hex wrench.
 - Insert the Suction Release Bridge and connect the vacuum hose. Then insert the Bridge Foam Spacer.



- To install the Base Plate Assembly for all suspension systems:

- o Attach a 4-hole distal adapter to the Base Plate Assembly using the M6 flat head screws, threading them through the Base Plate Assembly into the Bolt Ring. (Fig. 9)
- o If using vacuum suspension, pass the vacuum hose through the hole in the Base Plate. (Fig. 10)
- o Determine your initial offset direction when installing Base Plate Assembly onto the Distal Base. Using the M4 socket head screw, line up the Base Plate Assembly with the threaded insert in the Distal Base.
- o Press the Base Plate Assembly into place and thread in the remaining screws.
- o Adjust the Base Plate to the desired alignment, then tighten all screws.
- o Loctite and Torque all screws:
 - * M6 Flathead Screws: 13.2NM
 - * M4 Socket Head Screws: 3.8N

Fig. 9



Fig. 10



5. Adjust

- Check the fit of the socket to identify areas that need adjustment.
- Use a heat gun to heat the area, keeping it at least 2 inches from the socket to ensure even heating. (Fig. 11)
- Wearing insulated gloves, adjust the socket as needed.
- Adjustments can be made at any time throughout the lifetime of the prosthesis.

Fig. 11



Fabrication Guide



Video
Instructions

XtremityTT Socket System for use with a Distal End Pad



1. Prepare Limb Model:

- The XtremityTT socket is formed over a positive limb model. Use your preferred casting or scanning method and modification technique to obtain a positive limb model.
- Remove excessive buildups around the proximal brim to prevent overstretching of the socket.
- Move your finished limb model to the vacuum stand. Add spacers between the model and vacuum stand to ensure the socket will not contact the stand once pulled. (Fig. 1)
- Apply a vacuum nylon.



2. Heat

- Place the socket into the Xtremity Benchtop Heating Unit and ensure proper alignment on the pedestal. Place the lid over the socket base. If using size 26 or 26 plus, insert the rubber O-ring. (Fig. 2)
- To begin heating, press the POWER button to turn the unit on.
- Press START to accept the temperature.
- Press START again to accept the time and begin heating.
- The timer will start counting down once the oven reaches the set temperature.

3. Shape

- Ensure all supplies are laid out next to vacuum stand.
- Spray the Distal End Pad (DEP) Injection Valve with mold release.
- Once the timer alarms, remove the socket from the heating unit by the Socket Base.
- From the outside of the socket, thread the DEP Injection Valve into the Distal Base using the DEP Valve Key.
- Gently pre-stretch the proximal end. **DO NOT** apply powder when using a Distal End Pad.
- Identify the anterior logo on the outside of the socket. Ensure correct socket rotational alignment using the anterior logo and the medial and lateral distal base cutouts.



- Pull the preform down over the model as far as possible while holding onto the proximal end with both hands. (Fig. 3)
- Use the base plate to push down from the distal end while still pulling to prevent distortion of the Distal Base and achieve distal contact.
- Place a piece of tape over the hole in the Distal End Pad Injection Valve and then place the Valve Key over the tape to snugly seal and apply vacuum. (Figs. 4 & 5)



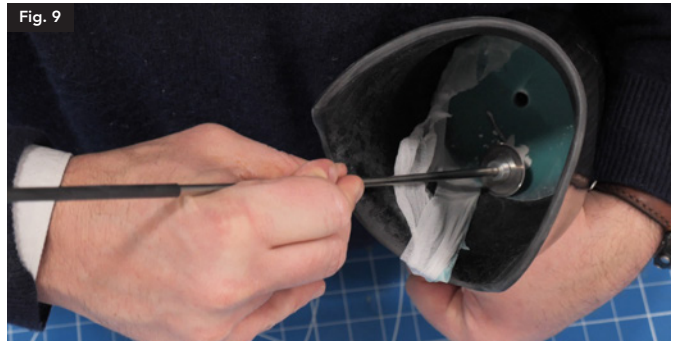
4. Distal End Pad Fabrication:

- If using vacuum suspension, using a 5/32" drill bit, drill a hole through the Base Vacuum Port. Use caution to not drill into the limb model.
- Remove the drill bit and place the smooth end into the hole just drilled until it contacts limb model. This will create a vacuum channel through the DEP. (Fig. 6)
- With a silicone dispenser gun loaded and a mixer tip installed, place the mixer tip into the hole in the DEP Injection Valve.
- Inject silicone into the socket until it overflows. Let the silicone set for approximately 15 minutes. (Fig. 6)
- Remove the DEP Injection Valve (and drill bit if using vacuum).

- Place a 5/16" hole punch into the center of the Distal Base center hole. Punch a hole through the silicone until it reaches the limb model. (Fig. 7)
- Draw socket trimlines on the socket. XtremityTT requires an anterior trimline of 2.5 cm proximal to MPT to maximize socket strength and maintain warranty. (Fig. 8)
- Trim, remove the socket, and smooth the proximal brim. Ensure the outer surface of the brim is smooth to preserve suspension sleeve life.



- Using the Rotary Cutting Stylus, trim the excess nylon along the edge of the DEP to create a smooth transition from the silicone to the inside of the socket. **(Fig. 9)**
- The DEP is permanently adhered to the inside of the socket.



5. Assemble:

- Suction system: **(Fig. 10)**
 - Insert the Air Valve Filter into the hole in the Distal End Pad. From the outside of the socket, insert the DEP Air Valve Base into the threaded hole using the DEP Valve Key.
 - Press the Suction Release Bridge into the base and then add the Bridge Foam Spacer.
- Vacuum system: **(Fig. 11)**
 - Use a 10-32 tap to thread the Base Vacuum Port from the distal end.
 - Screw in the air hose barb and attach the vacuum hose.
 - Insert the Air Valve Filter and Vacuum Port Filter into the respective holes in the DEP. From the outside of the socket, insert the DEP Air Valve Base into the threaded hole using the DEP Valve Key.
 - Press the Suction Release Bridge into the base and then add the Bridge Foam Spacer.

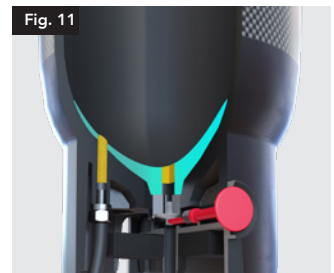
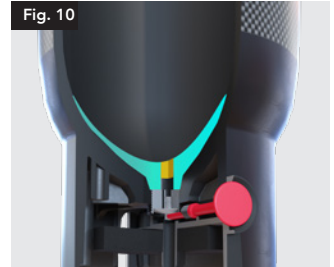


Fig. 12



- **To install the Base Plate Assembly for all suspension systems:**
 - Attach a 4-hole distal adapter to the Base Plate Assembly using the M6 flat head screws, threading them through the Base Plate Assembly into the Bolt Ring. **(Fig. 12)**
 - If using vacuum suspension, pass the vacuum hose through the hole in the Base Plate.
 - Determine your initial offset direction when installing Base Plate Assembly onto the Distal Base. Using the M4 socket head screw, line up the Base Plate Assembly with the threaded insert in the Distal Base.
 - Press the Base Plate Assembly into place and screw in the remaining screws.
 - Adjust the Base Plate to the desired alignment, then tighten all screws.
 - Loctite and Torque all screws:
 - * M6 Flathead Screws: 13.2NM
 - * M4 Socket Head Screws: 3.8NM

Fig. 13



6. Adjust

- Check the fit of the socket to identify areas that need adjustment.
- Use a heat gun to heat the area, keeping it at least 2 inches from the socket to ensure even heating. (Fig. 13)
- Do NOT use an open flame anywhere on the socket
- Do NOT grind into the interior of the socket.
- Wearing insulated gloves, adjust the socket as needed.
- Adjustments can be made at any time throughout the lifetime of the prosthesis.

