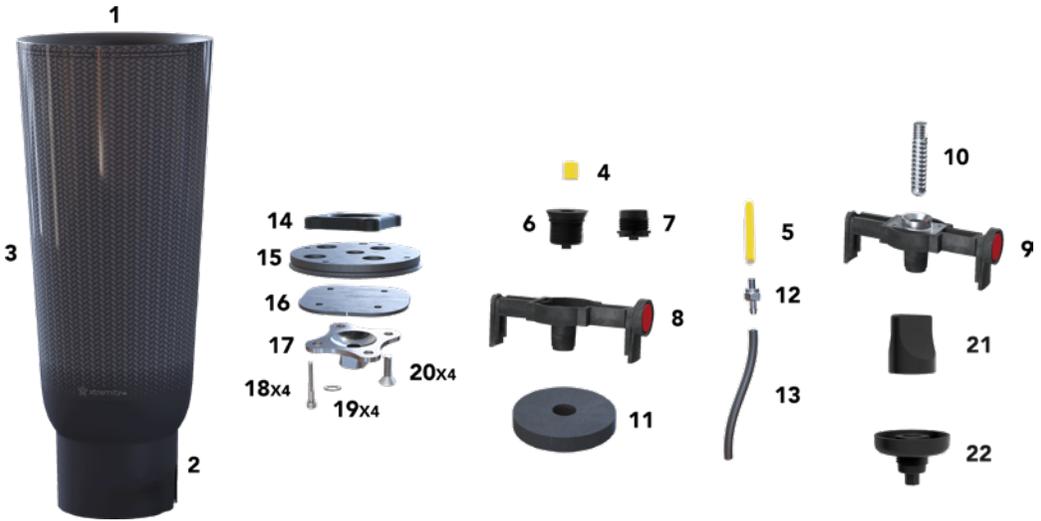




# xtremity

## 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 use with a Distal End Pad.



### 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



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## XtremityTT Socket System for use with a Distal End Pad



Proper sizing of the Preform is critical for successfully fabricating the XtremityTT Socket. Refer to the sizing chart for proper size selection.

### 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 all proximal brim buildups and excess plaster proximal to the trimlines to prevent overstretching and decrease resistance to achieving distal contact while pulling.
- Find the largest circumference measurement proximal to MPT and make sure it stays within the proper size range in relationship to the length from distal end (See Sizing Chart).
- Move your finished limb model to the vacuum stand. Using a straight vacuum pipe without a platen is preferred. If using a stand with a platen, 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 heating unit 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.
- Note the length and shape of your limb model to determine if you need to stretch the socket further down the socket or just the proximal end to allow your fingers inside for pulling.
- **DO NOT** apply powder or silicone spray to the inside of the socket when using a Distal End Pad.



- Identify the anterior logo on the outside of the socket to align with the anterior portion of the limb model. Using this logo and the medial and lateral Distal Base cutouts, ensure correct socket rotational alignment.
- Place all 4 fingers of each hand inside the Preform and pull downward until it will not slide any further. (Fig. 3)
- If not achieving distal contact, insert Base Plate into the Distal Base and push downward while simultaneously massaging the Distal Base transition to prevent material from bulging out in this area. (Fig. 4)
- Place a piece of tape over the hole in the Distal End Pad Injection Valve and then place the Valve Key over the tape. Pull a latex or similar sealing sleeve over the socket brim to achieve vacuum seal and apply vacuum. (Figs. 5 & 6)



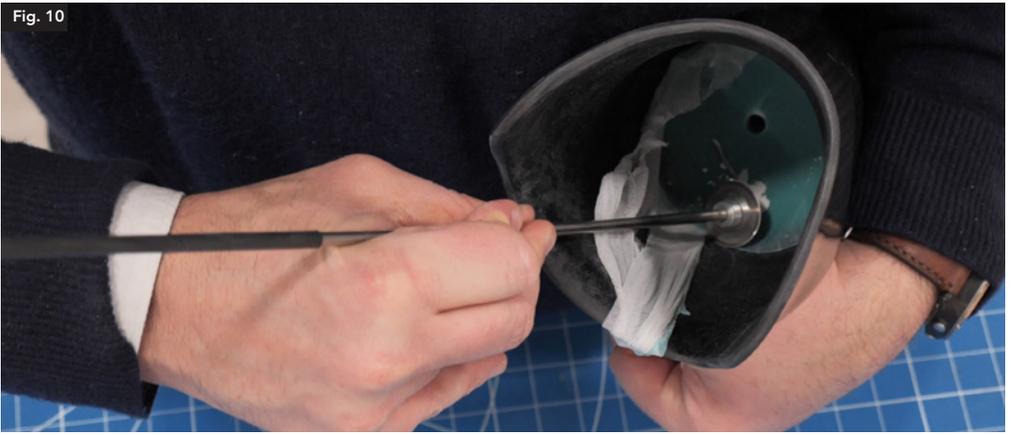
#### 4. Distal End Pad Fabrication

- 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. 7)
- 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. 7)
- 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. 8)
- 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. 9)
- Trim, break out model, and smooth the proximal brim of the socket. 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. 10)
- The DEP is permanently adhered to the inside of the socket.

Fig. 10



## 5. Assemble

- Suction system: **(Fig. 11)**
  - o 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.
  - o Press the Suction Release Bridge into the base and then add the Bridge Foam Spacer.
- Vacuum system: **(Fig. 12)**
  - o Use a 10-32 tap to thread the Base Vacuum Port from the distal end.
  - o Screw in the air hose barb and attach the vacuum hose.
  - o 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.
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Fig. 11

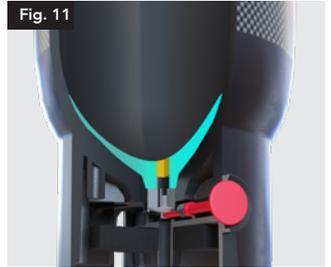


Fig. 12



Fig. 13



- **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. 13)**
  - o If using vacuum suspension, pass the vacuum hose through the hole in the Base Plate.
  - 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 screw 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: 3.8NM



## 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. 14)
- Wearing insulated gloves, adjust the socket as needed.
- Adjustments can be made at any time throughout the lifetime of the prosthesis.
- Do NOT use an open flame anywhere on the socket.
- Do NOT grind into the interior of the socket.



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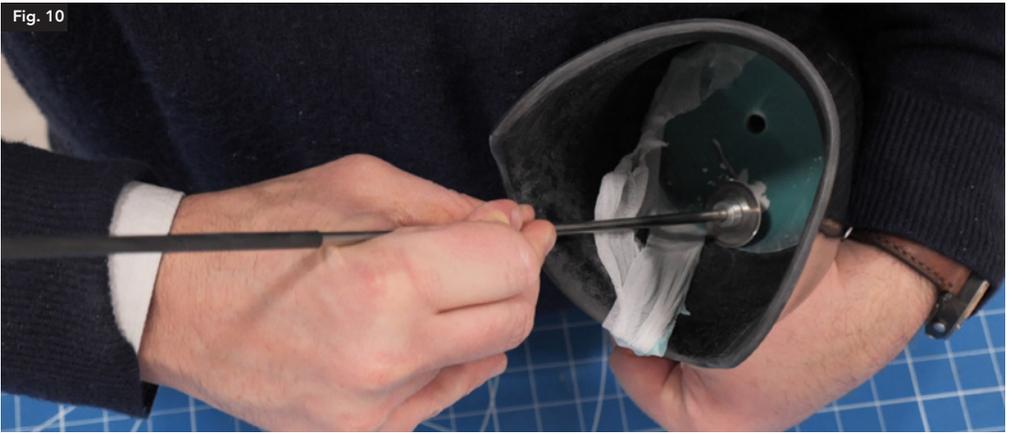
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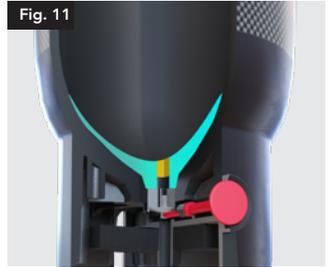


Fig. 12

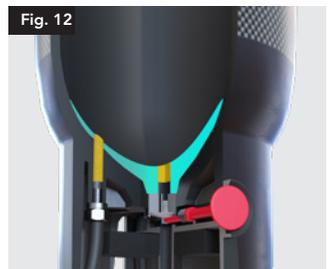


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