

nexo™

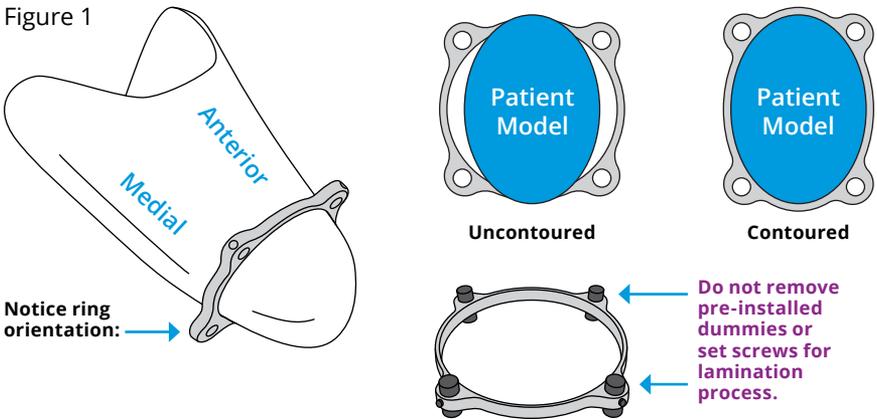
Product Manual

Patent pending

Fillauer®

Transradial Fabrication Instructions

1. Thermoform flexible inner socket.
2. Contour the attachment ring. The socket attachment ring can easily be contoured by hand or by using a vise with soft jaws.
If using the glue-in socket attachment version, contour ring to model and ensure that fabrication dummies are in place and are correctly positioned (see Figure 1).
If using the set screw attachment version, the socket attachment ring comes pre-assembled and ready for fabrication. Do not remove pre-installed dummies or set screws for lamination process (see Figure 1).



3. Apply inner PVA bag over model and tie off at distal end, and trim away excess bag material.
4. Select the appropriate diameter 12K biaxial braided carbon fiber sleeve, and apply sleeve over model, leaving enough material to be reflected back from the distal end to the proximal edge of model. Trim away excess. This creates two continuous layers of carbon fiber and greatly increases the overall strength and durability of the finished socket.
5. Apply nylon hosiery over carbon sleeve. By placing two layers of nylon between each layer of carbon, it ensures proper adhesion of the carbon layers.

6. Place contoured socket attachment ring over first layer of nylon hosiery and carbon sleeve allowing the second layer to protrude out through the attachment ring (see Figure 2). The ring should be placed perpendicular to the ulna for the best alignment. Apply a layer of 1 in. UD carbon tape over attachment ring for reinforcement (see Figure 3).
Tip: A light coat of spray adhesive will secure carbon tape in place.

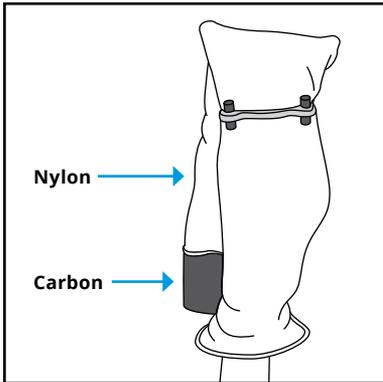


Figure 2

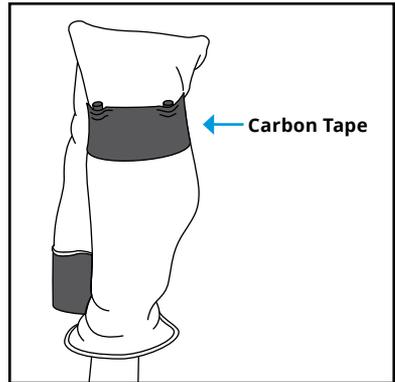


Figure 3

7. Reflect the carbon sleeve over the socket attachment ring, allowing elastomer dummies to protrude through the carbon sleeve at the distal end, and secure the sleeve at the proximal edge (see Figure 4).

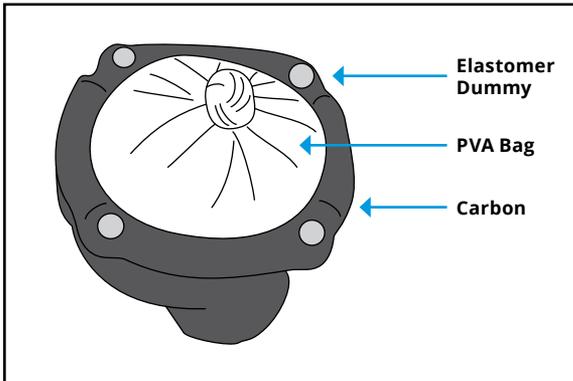


Figure 4

8. Reflect the outer PVA bag to ensure a glossy finish on the outside of the finished socket. Then apply the PVA bag over the model leaving a reservoir for resin at the distal end.

9. Pinch off the distal portion of the PVA bag and allow vacuum to evacuate air from carbon sleeve. Pour resin into the PVA bag reservoir, release pinched PVA bag and allow resin flow into material. String resin to wet out fibers, ensuring adequate saturation of the material around socket attachment ring. Eliminate any excess resin from lamination and tie off the PVA bag at the distal end of the model (see Figure 5).

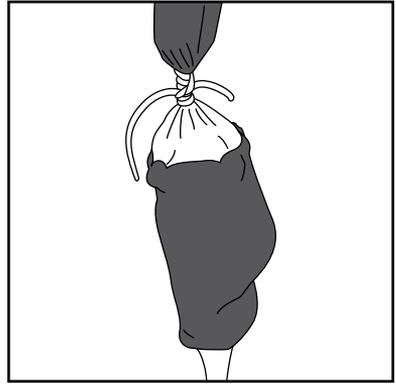


Figure 5

10. When resin is cured, remove the outer PVA bag and the trim proximal edge of socket.
11. When using set screw attachment version: Remove the (4) set screws from the socket attachment ring. Drill a $\frac{1}{16}$ in. diameter hole at the distal end of pre-installed rubber fabrication dummies approximately $\frac{1}{2}$ in. deep (see Figure 6). Fasten the supplied drywall screw into the hole and pull firmly to remove each dummy (see Figure 7). Chase set screw attachment holes with the supplied 10-32 tap to remove lamination resin from threads.

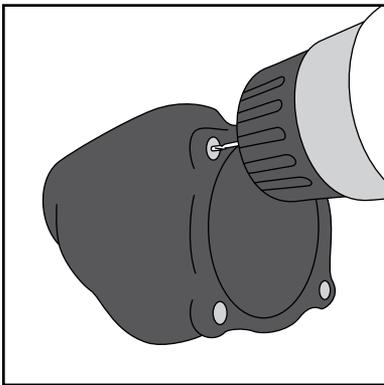


Figure 6

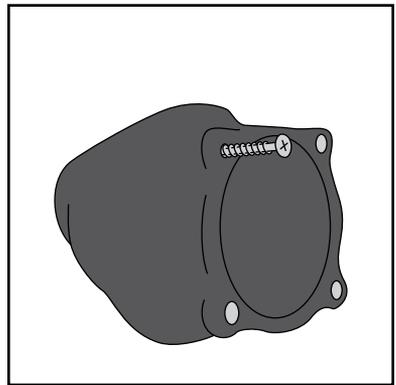


Figure 7

12. When using glue-in socket attachment version: Drill a $\frac{1}{16}$ in. diameter hole into the distal end of the pre-installed rubber fabrication dummies approximately $\frac{1}{2}$ in. deep (see Figure 6). Fasten the supplied drywall screw into the hole and pull firmly to remove each dummy (see Figure 7).

13. Remove socket from the model and finish out the proximal edge. Carefully grind away excess resin from the distal end of the socket ensuring a thin layer of resin is still coating the fibers. **Be careful NOT to grind into the carbon fiber.** Seal all finished edges with a coat of cyanoacrylate adhesive (super glue).
14. When using set screw attachment versions: Insert PEEK rods through the socket attachment ring, ensuring rods protrude a ¼ in. (6 mm) proximally past the set screws into the cavities created by the rubber fabrication dummies. Insert the set screws and tighten them to 25 in-lb.
15. When using glue-in socket attachment versions, use coarse sandpaper to abraid one end of the PEEK rods approximately ½ in. (13 mm) from the end. This will ensure proper adhesion to the socket. Drill ⅛ in. (2 mm) holes at the proximal ends of the cavities created by the fabrication dummies (see Figure 8). This allows trapped air and excess adhesive to escape when the PEEK rods are inserted. Insert the mixer tip of the adhesive cartridge into each of the cavities created by the fabrication dummies, and fill each cavity ⅓ full with urethane adhesive (see Figure 9). Insert a PEEK rod into each of the cavities created by the elastomer fabrication dummies and ensure they are fully seated in the cavities. Then, twist each of the rods 180° to ensure the ends are fully coated with adhesive. Hold rods in place until the adhesive is set (approximately 2 minutes).

Note: Remainder of prosthesis can be assembled approximately 10 minutes after application of adhesive. Adhesive fully cures in 24 hours.

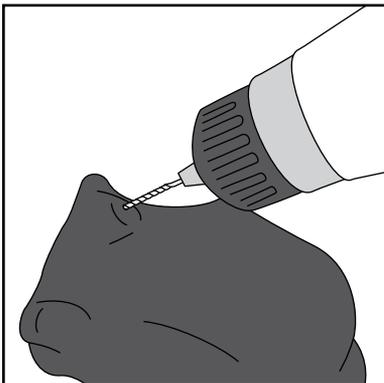


Figure 8

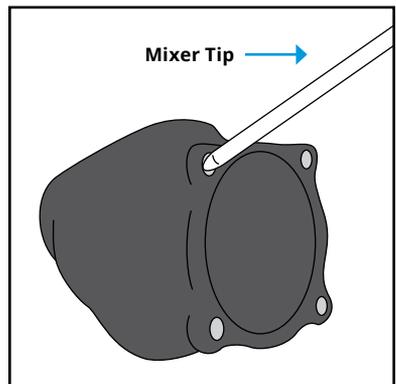


Figure 9

16. Remove the (5) 4-40 socket head screws that secure the wrist unit, and carefully remove the wrist unit from the wrist attachment ring. Slide the PEEK rods through the wrist attachment ring to determine the length and alignment angles. Once length and alignment angles have been determined, mark the distal end of the PEEK rods at the wrist attachment ring and trim off excess PEEK rod (see Figures 10 and 11). Ensure that the rods are fully inserted into the wrist attachment ring, then securely tighten the (4) set screws. Replace the wrist unit and the (5) 4-40 socket head screws and then tighten screws securely.

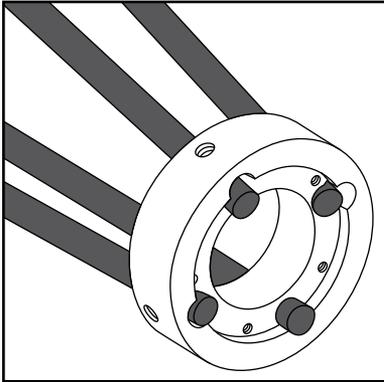


Figure 10

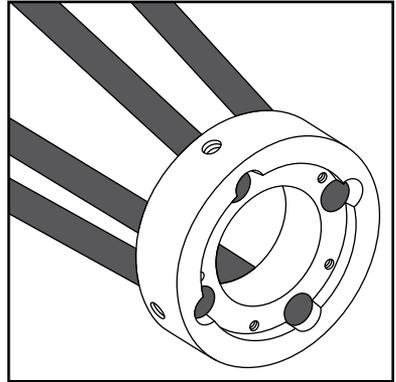
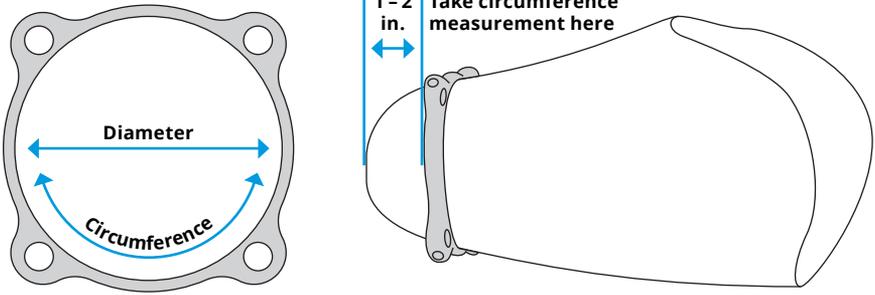


Figure 11

Warranty

12 months from date of patient fitting

NEXO Replacement Parts



NEXO Socket Rings

To select the appropriate socket attachment ring, measure the circumference 1 - 2 in. from the distal end of the patient model.

Model	Circumference	Ring Diameter	Set Screw Attachment	Adhesive Attachment
6	6 ½ in. (15.2 - 16.5 cm)	2 in. (5.1 cm)	158150	158156
6 ¾	6 ¾ - 7 ¼ in. (17.1 - 18.4 cm)	2 ¼ in. (5.7 cm)	158151	158157
7 ½	7 ½ - 8 in. (19.1 - 20.3 cm)	2 ½ in. (6.4 cm)	158152	158158
8 ¼	8 ¼ - 8 ¾ in. (21 - 22.2 cm)	2 ¾ in. (7.0 cm)	158153	158159
9	9 - 9 ½ in. (22.9 - 24.1 cm)	3 in. (7.6 cm)	158154	158160

Socket ring includes fabrication dummy and set screws where applicable.

NEXO Parts

Model	Description
158161	PEEK Rod, ¼ × 8 in., Transradial
158170	NEXO Quick Disconnect Wrist, Transradial ½-20
158171	NEXO Wrist Adapter Ring, Transradial
158172	NEXO Friction Wrist, Transradial
880102	Set Screw, 10-32 × ¾ in.

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