



ottobock.

Fabrication of transfemoral foam cosmetic cover for lamination resin socket

(For internal use only)

Technical Information 2.3.4

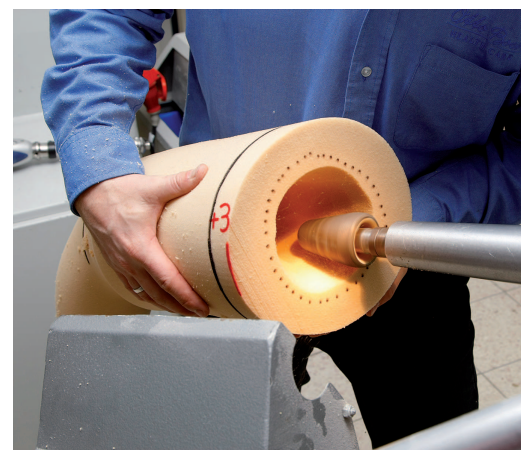




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1 Introduction

This technical information supports you in the fabrication of a transfemoral foam cosmetic cover for a lamination resin socket. All relevant steps are described in detail and illustrated with pictures.

This document is directed to trained prosthetists. It is a prerequisite that the qualified personnel are trained in the handling of the various materials, machines and tools. This technical information does not claim to be exhaustive. Apart from the working conditions described in this technical information, also note the information regarding safe processing contained in the respective Instructions for Use of components and materials.

In addition to the functional reconstruction of the lost limb, most amputees also desire an inconspicuous or visually enhanced appearance. The outer design of the prosthesis as a cosmetic functional fitting for all amputation heights of the leg is therefore of particular significance. The gaps in the interior of the transfemoral foam covers are shaped in accordance with the contours of the prosthetic knee joints. Use the illustrative table ("Foam covers: combination overview" see Page 13) to identify at a glance which cover is suitable for which knee joint.

2 Preparation

The following preparations must be made in order to work effectively:

- Collecting the materials and tools
 - Components and auxiliary devices
 - Materials
 - Machines, equipment and accessories
 - Tools
- Preparatory work

The following subsections include the required information for the above listed points.

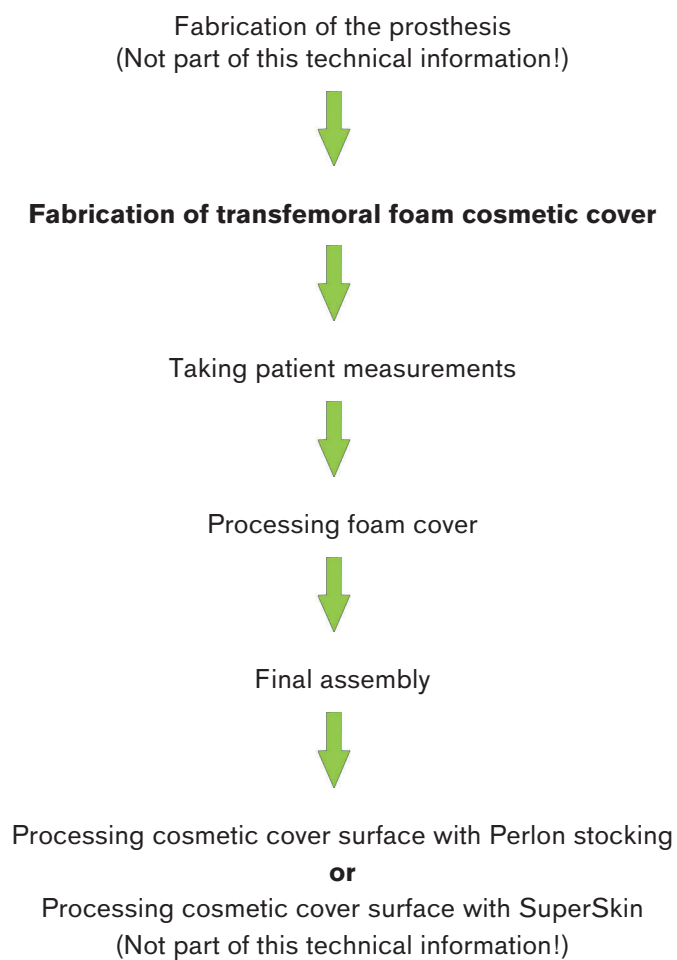
2.1 Collecting the materials and tools

The required materials and tools are listed in the tables below. The tables contain the materials and tools shown in the photos within this technical information. The prosthetist assumes full responsibility for the use of any other materials.

Components and auxiliary devices	
Designation	Reference Number or Article Number
Foam Cover	see Page 13 - Table "Foam Covers: Combination Overview"
Perlon Connection Piece	99B15*
Perlon Cosmetic Stocking	99B14*
Materials	
Designation	Reference Number or Article Number
Plastic Adhesive	636W17
Tools	
Designation	Reference Number or Article Number
Grinding Brush	749B1
Sanding Cone	749F8
Polishing roller	749F7
Sanding Drum	749F6
Rasp milling tool	729W31/729W34
Habermann Cleaner	749Z4

3 Procedure

The entire process is shown in the following flowchart. The steps and process sequences that are not described in this technical information are marked accordingly.





3.1 Fabrication of transfemoral foam cosmetic cover

3.1.1 Taking patient measurements



Create an outline drawing of the contralateral leg at two levels.

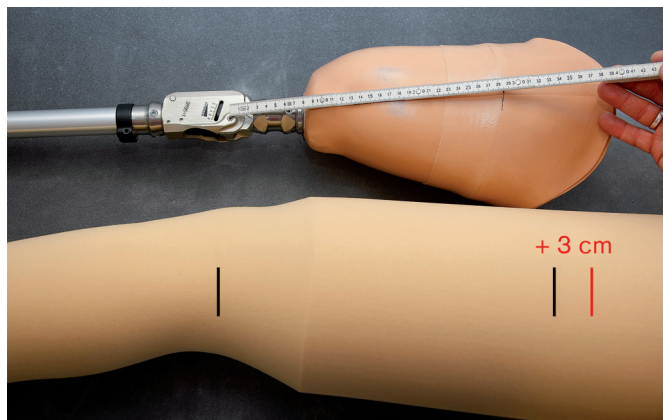


Take circumference measurements of patient if and where necessary (e.g. circumference of ankle and calf).



Procedure

3.1.2 Processing foam cover



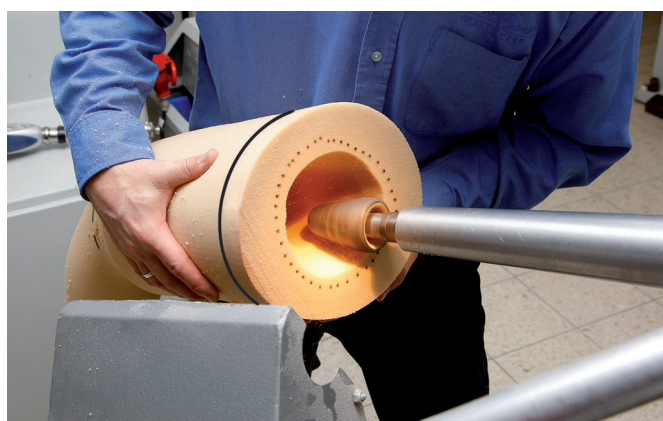
Measure the length of the prosthesis' upper leg (knee axis to trochanteric height) and mark it on the foam cover (here shown in black). In addition, mark an extra length of 3 cm for compression (here shown in red).



Using the band saw, cut the foam cover to length in the thigh area of the upper leg according to the proximal marking.



Measure the circumference of the transfemoral socket at the trochanteric height.



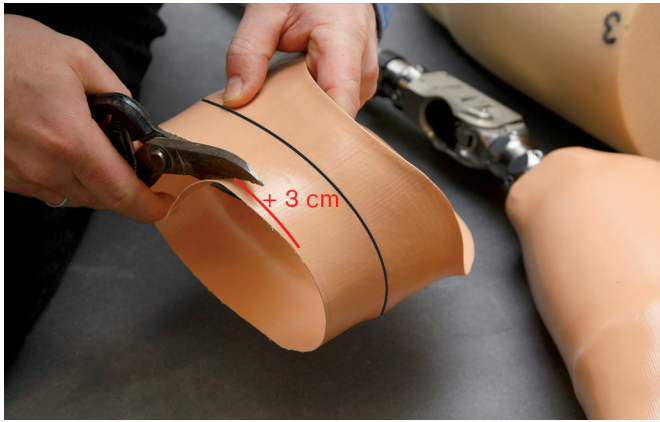
Mill the foam cover according to the marking and outer prosthetic socket form (including connection cap) using a rasp milling tool.

Do not exceed the trochanteric circumference measured; you may actually want to mill 2 cm less.





Procedure



Mark the top of the foam cosmetic cover on the connection cap.

Specify the length of the connection cap (distally approx. 3 cm).

Cut the connection cap using the leather scissors and grind the edges.



Put the connection cap in the milling groove of the foam cover and mark the position inside on the foam cover and outside on the connection cap.



Remove the prosthetic foot from the distal components. Slide the connection cap onto the prosthetic socket and apply the 636W17 plastic adhesive up to the marking.

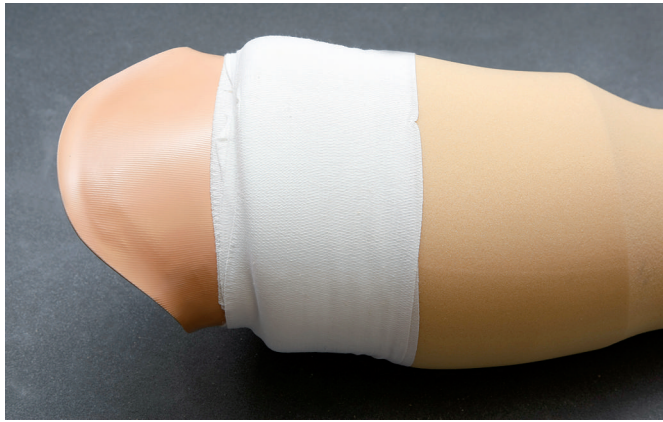


Apply the 636W17 plastic adhesive to the opening of the foam cover.

Immediately insert into the foam cover the prosthetic socket with the connection cap including the distal components and press against the marked position.



Procedure



Press the adhesive connection between the proximal foam cover and connection cap with a belt or bandage.

Tip: After 10 minutes, remove the bandage and remove proximal adhesive residue. Then re-apply the bandage. Let adhesive dry completely (approx. 3 hours).



Using a yardstick, measure distally the protrusion of the foam cover relative to the tube adapter.

Mark the protrusion on the foam cover (here shown in black).

Allow for 3 cm compression and mark it on the foam cover (here shown in red).



Cut to length according to the distal markings.



Place the foot connection cap and/or footplate on the foot.

Slide back the foam cover in the proximal direction and mount the foot.

Apply the 636W17 plastic adhesive to the foam cover and foot connection cap and/or footplate and glue the parts together.





Grind the foam cover only after the plastic adhesive has fully dried.

Start the custom shaping of the foam cover using the 749B1 grinding brush.

The measurements and shape of the outline drawing serve as a template for designing the foam cover.

Using the grinding brush, grind with an extra measure of 4 cm relative to the patient measurements.



Grind the foam cover with 749F6 sanding drum according to the measurements and shape.

Even out the transitions using the 749Z4 Habermann cleaner.

For the final finish, use the 749F8 sanding cone and 749F7 polishing roller.

Remove any uneven areas manually using an abrasive cloth (grain 60).



To attach the valve, bend the prosthesis and manually drill a hole in the foam cover opposite the valve opening using a core drill ($\varnothing$ 20 mm).

3.1.3 Final assembly



Unscrew the adjusting screws proximally to the prosthetic knee joint one by one and fasten with Loctite®.



Procedure



Tighten the adjusting screws with the torque wrench to the specified torque (see Instructions for Use of the component).



Slide back the foam cover.

Screw in the valve and seal it with a silicone bonding agent.

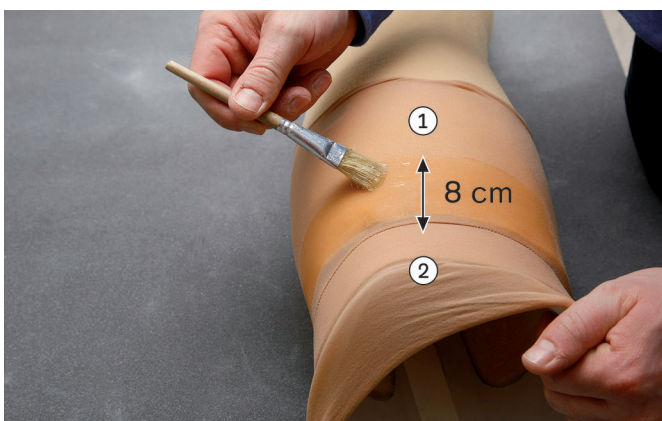
Position the foam cover correctly and check the valve opening.



Unscrew the adjusting screws one by one and fasten with Loctite®.

Tighten the adjusting screws with the torque wrench to the specified torque (see Instructions for Use of the component).

3.1.4 Processing cosmetic cover surface with Perlon stocking



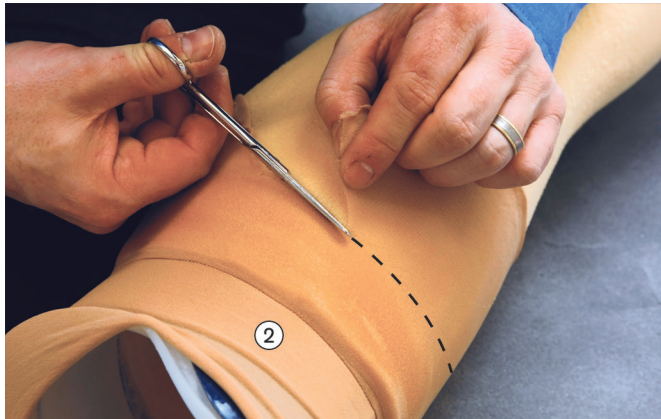
Using scissors, cut off 1 cm from the distal end of the 99B15 Perlon connector.

Pull the Perlon connector over the foam cover (1).

Flip up the outside layer (2).

Apply contact adhesive to the lower layer, from the seam in the distal direction (approx. 8 cm); let dry.





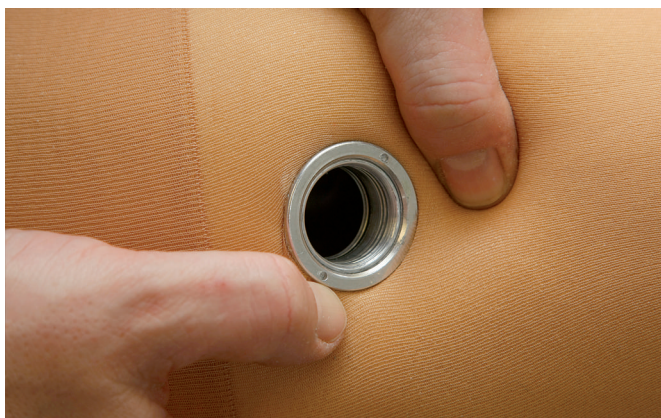
Using scissors, cut off any excess material.

Flip back the outer layer (2) and repeat the process of the lower layer, but apply 1 cm more of adhesive distally.



Pull up the 99B14* Perlon cosmetic stocking and apply adhesive to it at the valve position.

Let the adhesive dry (approx. 15 minutes).



Make a circular cut to the adhesive area, expand the Perlon cosmetic stocking a bit and then clamp it behind the valve.

If necessary, pull up another 99B14* Perlon cosmetic stocking that covers the valve opening.



The foam cosmetic cover is finished.

3.1.5 Processing cosmetic cover surface with SuperSkin

SuperSkin
Processing Ottobock SuperSkin

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Technical Information 7.4.8



Alternatively, the surface of the foam cover can be covered with the SuperSkin coating technology. With Ottobock SuperSkin coating technology, which is described in the Technical Information 7.4.8 (646T7=4.8*) you can custom colour the finished, moulded PUR foam covers and protect them against splashed water. When using the Ottobock SuperSkin coating technology, the steps from the two sets of technical information must be harmonised with each other.



4 Appendix

4.1 Foam Covers: Combination Overview

	3R6	3S106	3R24	3S124	3S107	3S26	3S27*	6R6	6R8	6R18
										
3C86-1 C-Leg®compact						■				
3C88-1 C-Leg®						■				
3C96-1 C-Leg®compact						■	■			
3C98-1 C-Leg®						■	■			
3R15	■	■								
3R17			■	■						
3R20			■	■			■			
3R21	▣							■		
3R23	▣							■		
3R30	▣							■		
3R32	▣							■		
3R33			■	■						
3R36			■	■			■			
3R40			■	■						
3R46	▣							■		
3R49	■	■								
3R55	■	■								
3R60					■					
3R60=KD					▣			■		
3R60=ST					■					
3R60=HD					■		■			
3R60-PRO					■					
3R60-PRO=KD					▣			■		
3R60-PRO=ST					■					
3R60-PRO=HD					■		■			
3R72					■					
3R80					■					
3R90					■					
3R92					■					
3R95			■	■						
3R95=1			■	■						
3R106					■					
3R106=KD					▣			■		
3R106=ST					■					
3R106=HD					■		■			
Transtibial								■	■	■

▣ The knee joints in question are joints for knee disarticulation fittings that are usually finalized with the 6R6 Transtibial Cosmesis. If required, the outer finish can also be covered with the 3R6 or 3S107 TF Foam Covers.

* Compatible with all Otto Bock hipjoints







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