

Modelling the TF Plaster Positive

(For internal use only)

Technical Information



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1 Introduction

This technical information supports you in the fabrication of a plaster positive for transfemoral fittings.

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. In addition to the work instructions in this technical information, please read the important information regarding safe processing in the respective instructions for use for the components and materials.

2 Preparation

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.

Measuring Devices and Tools	
Designation	Reference number
Tailor's Measuring Tape	743B1
Otto Bock Body Callipers, large body callipers	743S1=*
Fuchs Drawknife	718H12
Callipers	743S10
Copying Pen	645C1
Plaster Spatula	756G1=12
Plaster Mixing Bowl	754B1
Surform Blade, round	716Y4
Surform Blade, half-round	716Y3
Awl	723Z1
Plaster Smoothing Tool	716G1
Grit Cloth	649G22=180
Contour Shaper	–

3 Procedure

First, the plaster negative is poured and removed from the mould. The plaster positive is measured and reduced to the specified standard sizes. Next, the lowest point of the socket brim is modelled. Finally, the area of the residual limb end is modelled.

3.1 Preparing the Plaster Positive

Place the vacuum pipe in the plaster negative and fill in around the vacuum pipe with plaster. Let the plaster positive cure. In order to transfer the line of progression and plumb lines to the plaster positive, markings are made with an awl through the plaster negative into the plaster positive. Remove the plaster negative from the plaster positive. Trace the line of progression and plumb lines along the marks on the plaster positive. Measure the circumference of the plaster positive and enter the results in the measurement form.

3.2 Volume Reduction of the Plaster Positive

INFORMATION

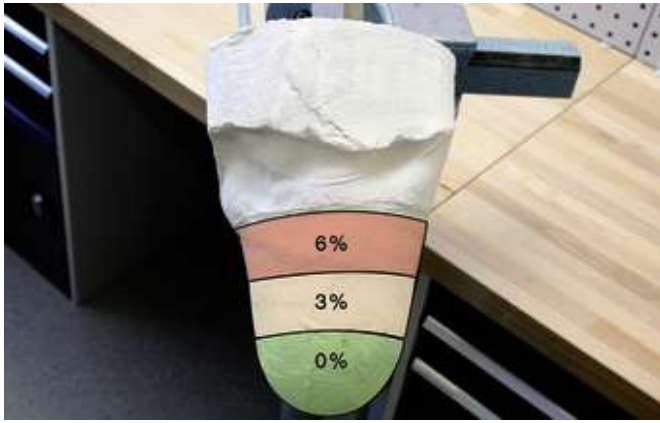
The specified reductions are general indications.

Based on individual factors for the patient (underlying illness, overall situation, etc.), the required measurements may differ.

Subtract the reductions from the patient's measurements.

INFORMATION

Make sure that the residual limb shape is maintained. Only reduce the circumference in the anterior and posterior areas.



Calculate the final measurements using the patient's circumferential measurements and the reduction factors.

From the upper circumference line, divide and reduce the plaster positive in three sections:

- Upper third: **6%**
- Middle third: **3%**
- Lower third: **0%**

3.3 Modelling the Lowest Point of the Socket Brim



Adjust the **m - l measurement** with a reduction on the lateral side.

Only smooth the medial containment wall on the medial side.



Shape the medial containment wall in the area of the gluteus minimus by **15-20 °** into the direction of the median plane.

The level of the socket edge and containment wall is approx. **8-12 cm** above the trochanter major.



Adjust the contour of the medial socket edge, taking the following points into account.

To prevent the ischial tuberosity from slipping out of the socket:

- Position of socket edge of medial containment wall: **3 cm** proximal to lower edge of ischial tuberosity
- So that the pubic bone (ramus ossis pubis) can be released from the socket without contact:
- Position socket edge in front of the medial containment wall anteriorly: **1 cm** distally from lower edge of ischial tuberosity.



Adjust the contour of the medial socket edge, taking the following points into account.

To prevent the ischial tuberosity from slipping out of the socket:

- Position of socket edge of medial containment wall: **3 cm** proximal to lower edge of ischial tuberosity
So that the pubic bone (ramus ossis pubis) can be released from the socket without contact:
- Position socket edge in front of the medial containment wall anteriorly: **1 cm** distally from lower edge of ischial tuberosity.



The images show an impression of a hand in the plaster positive and the trim line.





Reduce planar surface of the plaster positive in the anterior area.

The socket edge lies **3-5 cm** above the trochanter major and varies according to the residual limb length. The shorter the residual limb is, the higher the anterior socket edge must be.

In the posterior area create support surfaces to obtain the reduced measurements.



The posterior trim line lies approx. **2 cm** below the trochanter major.

Leave the gluteus muscles free.

If necessary, fix the socket edge by applying plaster.

3.4 Modelling the Control Area



Finish modelling the femur cuff in the control area.

INFORMATION: The femur cuff improves control of the prosthesis.

Shape the control depression of the femur cuff, particularly posterior to the trochanter major.



Reinforce the femoral support for additional relief at the end of the femur in the medial residual limb area.

3.5 Modelling of the Residual Limb End Area



Leave the impression of the end of the residual limb area on the plaster negative as is.

Manipulate all sides of the plaster positive:

- Smooth the plaster positive
- Mark the line of progression and plumb lines

Place the valve distally, and medially along the adductor tendon.

INFORMATION: If the valve is easier to handle at another position due to other limitations, functionality is more important than cosmetics.

Create a flat surface for the valve dummy at the selected position.



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