

Vacuum forming of a TF check socket

(For internal use only)

Technical Information

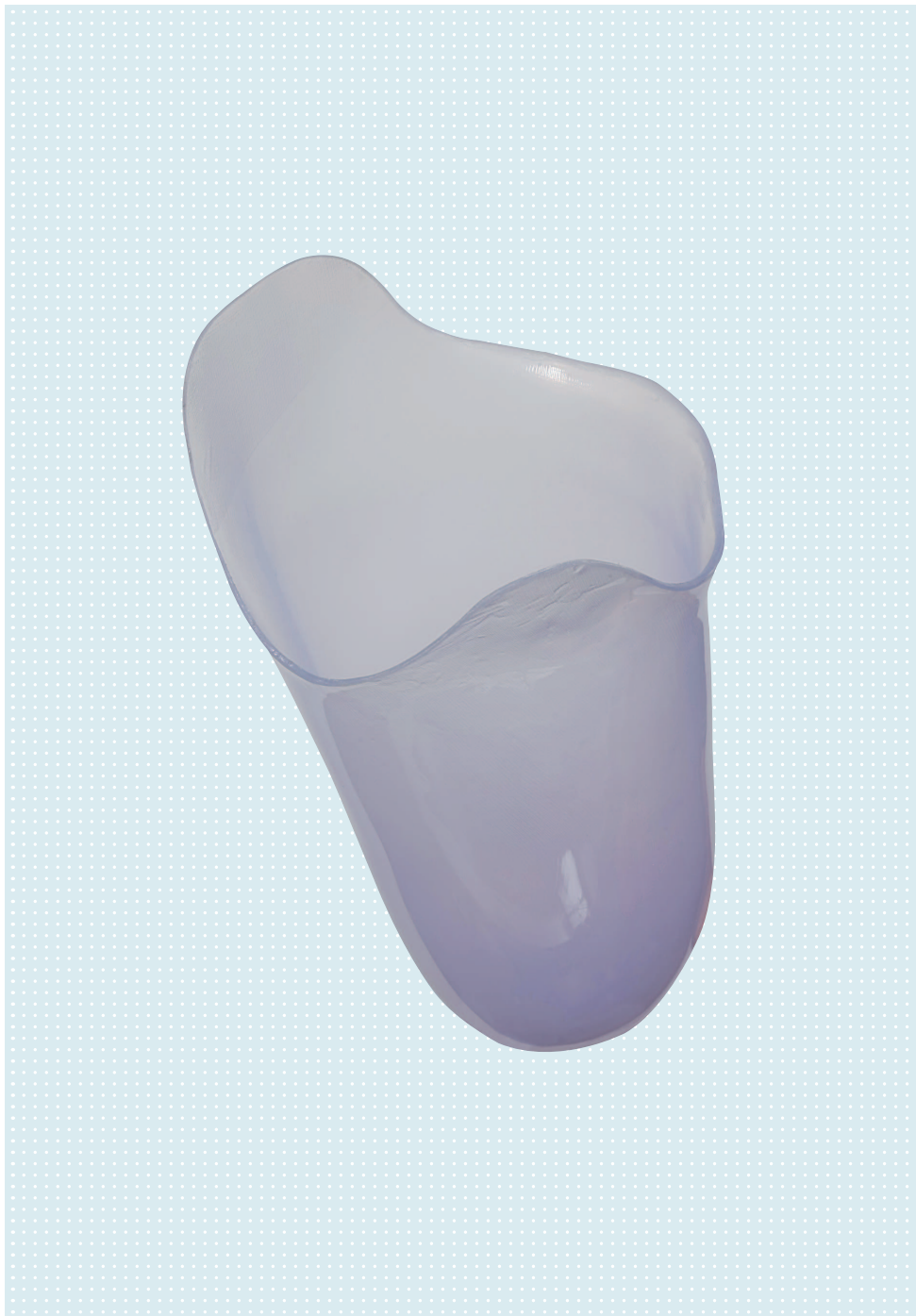


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1 Introduction

This technical information supports you in the fabrication of a check socket 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.



Materials	
Designation	Reference number
ThermoLyn rigid	616T252=*
Antibacterial ThermoLyn soft (EVA), colourless	616T253=*
Outer Ring	755T4=360
Plaster parting agent	85F1
Cord	–

Tools	
Designation	Reference number
Phillips screwdriver	710H5=2
Temperature resistant gloves	641H3

Prosthetic Components	
Designation	Reference number
Tube Sock	99B25
Socket valve with dummy	(e.g. 21Y12 Screw Valve)

3 Procedure

Preparing the material

Select the vacuum plate based on the circumference and length of the residual limb. Select the vacuum plate based on the circumference and length of the residual limb. The longer the residual limb is, the thicker the vacuum plate must be. For a residual limb that is approximately **25 cm** long, select a plate that is **15 mm** thick.

Preheat the oven to the temperature corresponding to the material type (see manufacturer's specification). Pre-heating is not necessary with an infrared oven.

Remove protective sheet on both sides and clamp the plate into place on the vacuum frame. Place the vacuum

frame on the support in the preheated oven.

The heating period in an infrared oven is calculated as one minute per millimetre of material thickness.

3.1 Vacuum Forming



Fasten the plaster positive to the vacuum sealing disk.
Position a valve dummy with a screw on the plaster positive, but do not tighten it yet.

Soak a tube sock in plaster parting agent and pull it over the plaster positive.

Tie off the tube sock at the screw of the valve dummy, so that an accurate casting of the valve dummy on the check socket is ensured.

Tighten the valve dummy.

Verify suction unit functionality.



Remove the ThermoLyn from the oven with temperature resistant gloves when it sags approximately **10-12 cm**.

To ensure a uniform thickness of the socket wall, increase the curvature of the ThermoLyn sheet from the inside to the outside using the back of your hand.

INFORMATION: Do not stretch the material any further downwards.

Place the ThermoLyn back into the oven for approximately **2 min**.

Finally, pull the outer ring slowly over the plaster positive with the curvature facing up.



When the outer ring is about **5 cm** above the vacuum sealing disk, massage the ThermoLyn from the outer ring in the direction of the plaster positive with your hands. This prevents the wall thickness from becoming too thin in the proximal socket area.

Switch on the vacuum device and slowly increase the negative pressure.

Shape the ThermoLyn to the plaster positive so that it fits the valve dummy and does not fold in the proximal socket area.



Allow the ThermoLyn to cool. Switch off the vacuum device.

Transfer the course of the socket brim, the lines of progression and the plumb lines from the plaster positive.

Trim the contour of the prosthetic socket with the oscillating saw.



INFORMATION: Adjust the drill hole diameter of the compressed air gun in order to ensure an airtight connection.

Drill a hole in the prosthetic socket above the set screw of the valve dummy.

INFORMATION: Unscrew the set screw.

Inject air into the hole with the compressed air gun, and remove the prosthetic socket from the plaster positive.

If the prosthetic socket will not separate from the plaster positive, remove the plaster from the socket with a chisel.

NOTE: Do not damage the inner wall of the socket.

Sand the trim line with a milling machine and round off the edges.



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