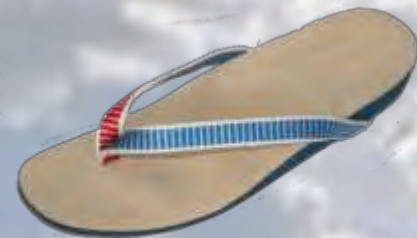




V 1.2 - engl. - August 2011



Manual for Customized Flip Flop Production



Materials

- (1)EVA-Cork, EVA or Cork insole blocks, wide shape
- (2)Top lash
- (3)Top cover (suede/leather recommended)
- (4)Rubber outsole
- (5)Cushion layer e.g. poron
- Narrow grinding head (cone or egg rasp)
- Narrow sand belt (fine)
- Glue
- Solvent
- Hole punch (if using thong top lash)

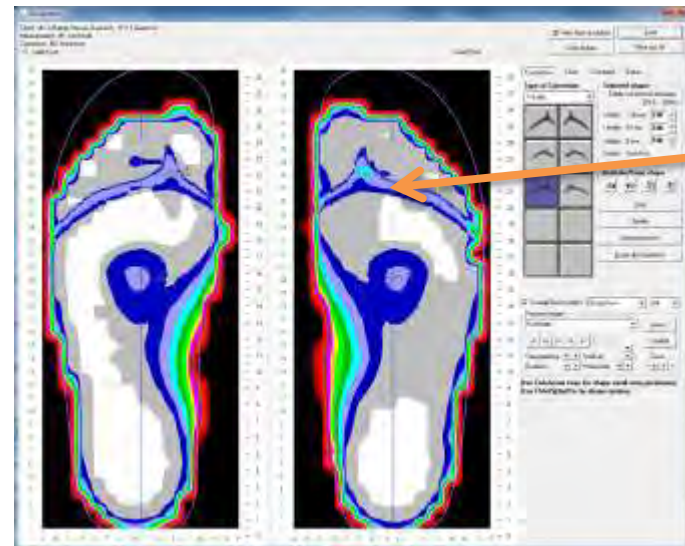
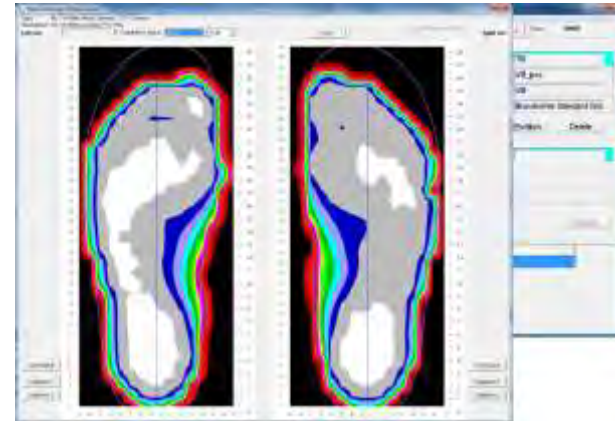


Feet measurement and corrections

1. Measure the feet of the customer in the usual way on the digitizer.

2. In *measurement position* choose the wide outline and add your corrections with the outline position in mind rather than the midline.

3. Add a toe grip of about 4mm height.



3. Add
toe grip

Milling and preparing the block

4. Mill on a wide shape EVA cork insole with 5mm minimum thickness and heel cup high.

5. Tidy the top and sides of the milled insole by removing the excess EVA but do not grind the bottom of the insole. Do not make the medial longitudinal arch hollow. Keep the heel cup thicker than you would for an insole.

6. Grind shallow negative sections proximal to the toe grip for the plantar metatarsal area to rest in and also distal to the toe grip for the toes to rest in. See picture.

7. Glue a leather top-cover to the upper surface. You may choose to put a cushion layer between the insole and leather.



7. With poron and top cover



4. Milled wide block



5. Tidy excess EVA



6. Grind negative indent on dorsal insole

Positioning the top lash

8. Line up the top lash and mark the position of the arms folded around the side and on the underside of the orthotic (approximately 10-20mm should fold underneath the insole, trace this position). Remember to place the buckles on the lateral side of the flip flop.



8. Line up lashes



It would be ideal if the customer could attend a fitting to determine the best placing of the top lash for their flip flop. If this is not possible it is also ok because the top lashes are adjustable with buckles.

- The position of the thong top lash should be approximately 40-50mm distal from the heel with the medial strap laying across the cuneiform bones.
- The position of the slide top lash should be so that the distal strap lies over the toe grip.

Fixing the top lash

9. Use the grinder to make indents of approximately 2mm to match the lash traces on the underside and side of the insole.



Images for leather lash



Image for thong lash

10. Glue the lash to the underside only, fitting it into the indents you have made.



Images for leather lash



Image for thong lash

Finishing the top lash

11. Glue the lash to the sides of the insole in the indents you have made.



11. Image for leather lash

12. Make an incision on the crest of the toe grip for the toe strap to be inserted through the insole.



12. Hole for toe strap insertion

13. Thread the toe strap through the incision the desired amount and mark the border. Grind a shallow indent on the plantar sole for the toe strap to be glued into.



13. Image for leather lash



13. Image for thong lash

Prepare the plantar sole

14. For the leather lashes carefully grind the leather of the lash that is glued to the underside so that it is thinner and will sit flush with the sole. This will require the colour/top layer to be grinded off. The purpose is to prevent elevation on the outsole making the flip flop unstable.



14. Grind these
flush with the insole
bottom

Tips: Use the sanding belt. Start at the midline edge and carefully work towards the outside edge of the leather.

To avoid the grinding belt picking up the corners of the glued top lash turn the flip flop to always be grinding from a large glued section of leather towards the border.

Adding the outsole

14. Glue the outsole onto the bottom of the insole.







15. Grind and tidy as required taking care around the area where the top lash is attached.



You can make these flip flops inhouse with your CNC mill and digitizer, or alternatively you can send your scans to an Orthema milling user who can send the flip flop to you when prepared.

Tips for selecting a block

NB. It is recommended to use wide shape in block selection for making customised flip flops.

Suggested options	Tips	
EVA Cork	Cork particles in EVA. Low thermal conductivity. Long lasting. Lightweight. Recommended to use 45 shore density.	
Cork Latex (Standard shape available.)	Good rebound capacity. Moulds to the foot well. Low thermal conductivity. Impermeable/waterproof. Firm (it is possible to add a cushion layer as a top cover to suit prescriptions that need resistance to weightbearing but comfort and protection from cushioning). Moulded block.	
EVA	Stress crack resistance. Waterproof. Odourless. Soft and flexible. Shock absorbing. To keep the heel cup strength and height the recommended Lowest density in single component blocks is 45 shore. Alternatively, you could select 2 or 3 component blocks with heel cup density 45 or 50 shore.	
Die cut	As per EVA densities. Broader shape. 30mm or 35mm height. Need to bevel the forefoot edge before milling (to avoid the cutting head picking up the block on a square edge)	

Gallery of sample Flip Flop styles

