



Sloffies - Parametric slides

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03 Introduction

Sloffies is an Afrikaans nickname for slides and flip-flops.

I have designed Sloffies to be parametric so anyone can customize them for their feet.

You are able to customize the strap's width, length, and thickness and add a logo.

You are able to customize the sole's width, length, and thickness; add a patch; add a logo; and choose from five available sole patterns, which you can further customize to your liking.

Designing your own Sloffies is a really involved process.

With this guide I hope to simplify the process.

04 What you need

- A metal ruler to measure.
- A piece of cardboard to draw a outline of your feet on.
- A pencil to draw the outline of your feet.
- Loctite 406 Superglue to attach your straps.
- TPU filament; the included print profiles are for eSUN 95A TPU, but you can use any TPU.
- Clamps to secure your straps.

05 How to measure your feet



Place your foot on a piece of cardboard while standing up with all your weight on the floor.

Trace the outside of your foot using a pencil; make sure to keep the pencil upright.

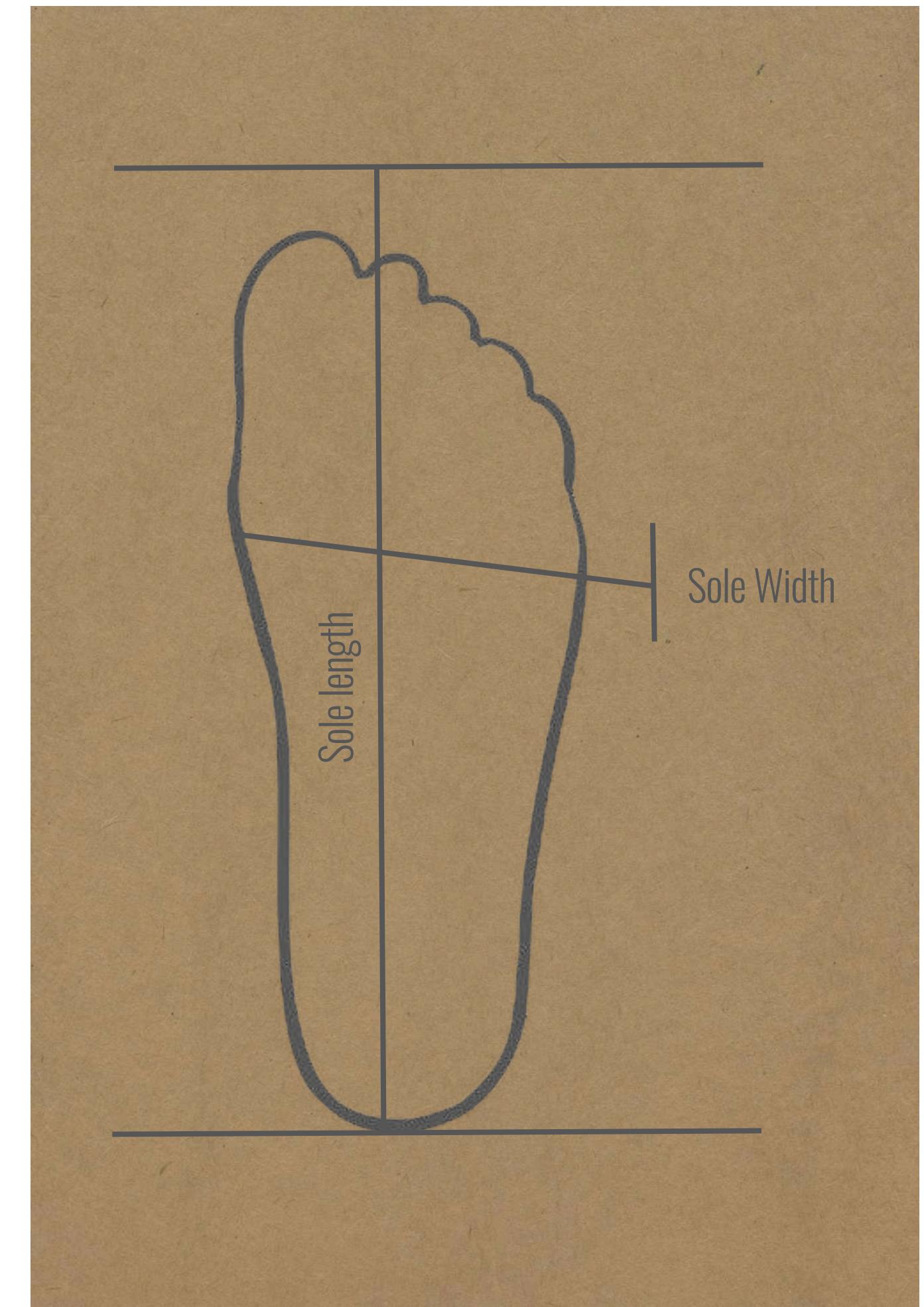
[How To BEST Measure Shoe Size](#)

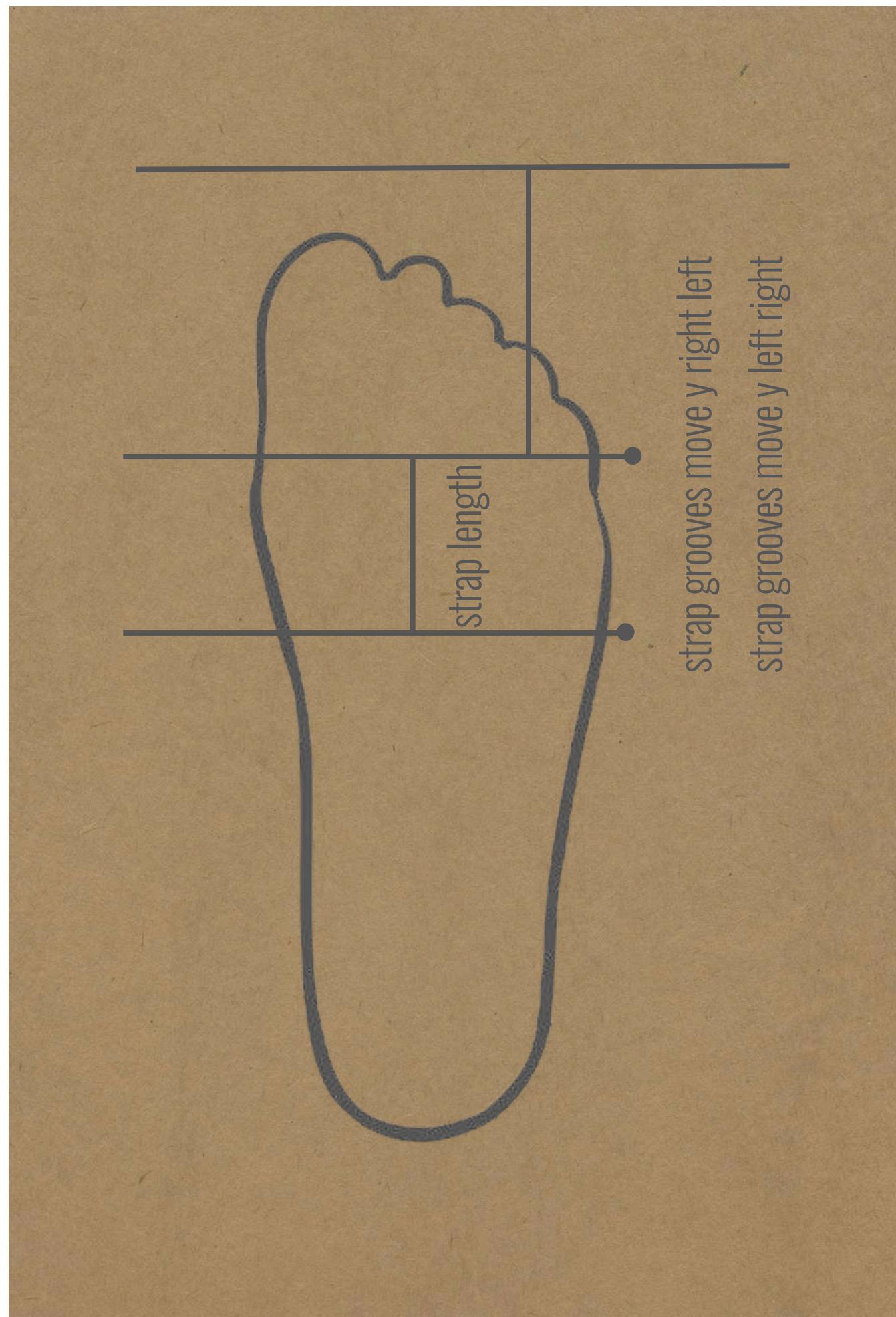
After you have traced your foot. Take the cardboard and place your thumb in front of your longest toe (big toe) on the drawing and make a mark; to add extra length to your sole. Alternatively, you can take a ruler and put it in front of your longest toe on the drawing and measure how much extra length you want to add to your sole and make a mark.

Take your thumb and place it next to the widest part of your foot (ball of your foot) on the drawing and make a mark; this adds extra width to your sole. Alternatively, you can take a ruler and put it next to the widest part of your foot (ball of your foot) on the drawing and measure how much extra width you want to add to your sole and make a mark.

Take a ruler and measure from the mark you made in front of your longest toe (big toe) to your heel. This is your sole length.

Take a ruler and place it at the mark you made next to the widest part of your foot (ball of your foot) and measure across your foot, making sure to place the ruler where your foot is the widest. This is your sole width.





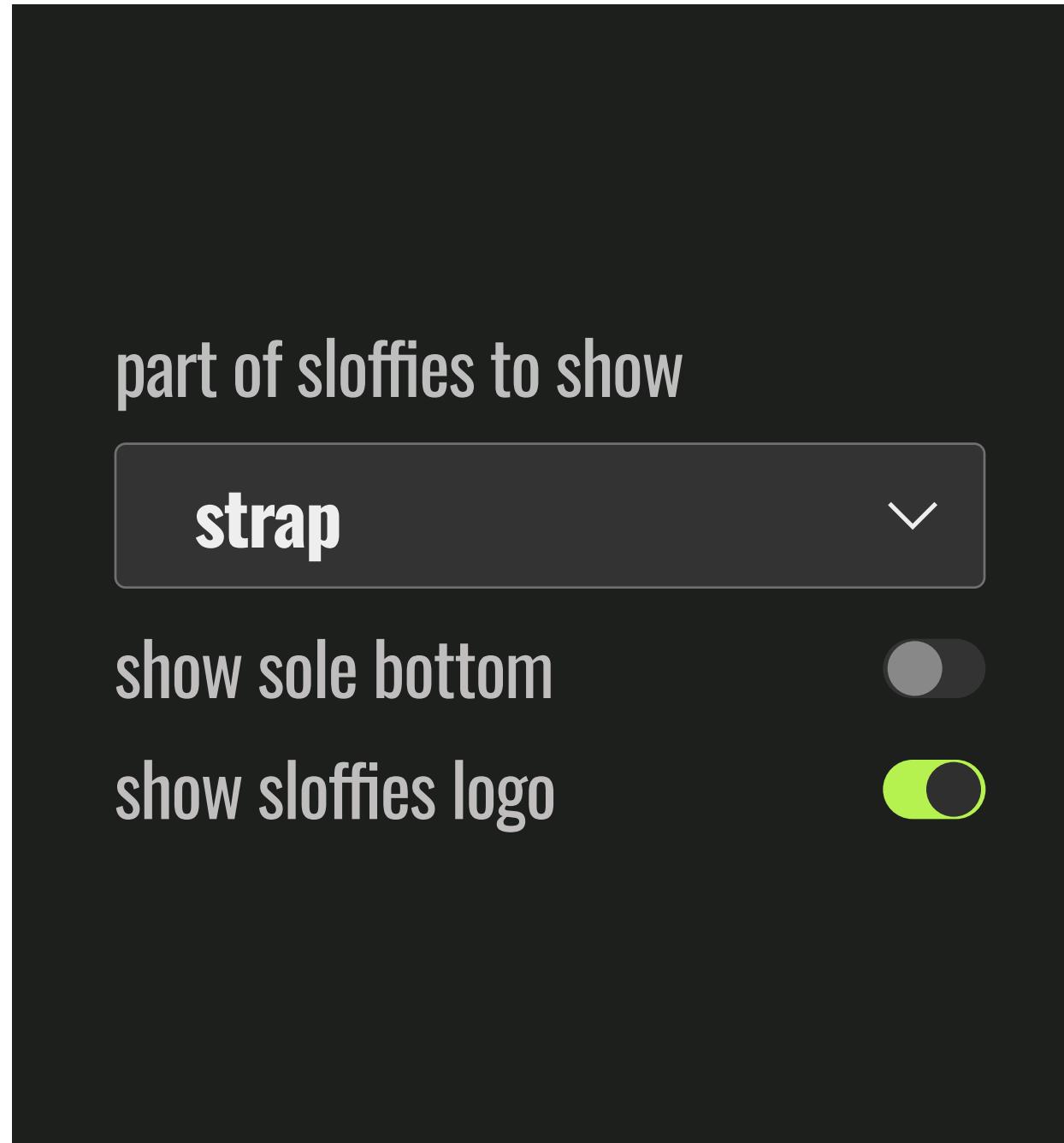
Place your longest toe (big toe) in line with your previous mark in front of your longest toe (big toe) and make a mark next to your foot where you want your strap to be placed.

Measure from this mark to the mark in front of your longest toe(big toe). This is your strap grooves move y right left and strap grooves move y left right value.

Make another mark further down your foot next to your foot; you will measure between this mark and the previous mark to determine your strap length.

Measure between these two marks to get your strap length.

08 Parameters



part of sloffies to show: Click on the dropdown and select which part of the Sloffies you want to design, you only need to design either the right or left sole. All changes effect the other one. If your feet are different lengths you can first design the right sole, download that and then design the left sole.

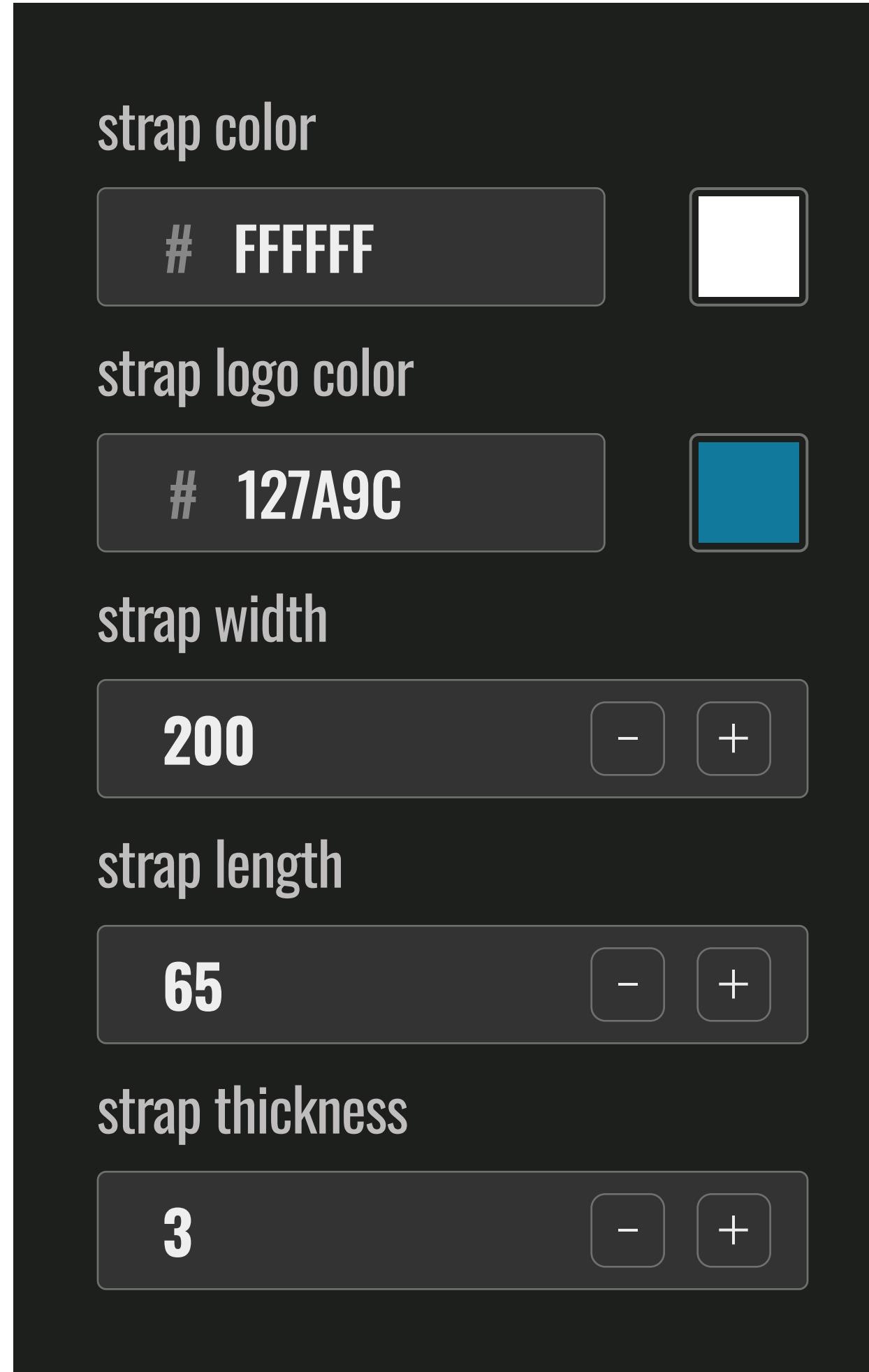
show sole bottom: Toggle this true after you have engraved your strap grooves, it helps you see the changes when designing the sole pattern, sole patch and sole logo.

show sloffies logo: Toggle this false if you want to import your own logos for the strap and sole.

09 Strap dimensions and color

[Video](#)





strap color: Enter the color you want to use for your strap or click on the color box and select a color from there. It can be a hex or named color. The colors are only to help you design, and see what changes. You export the different parts as STL's.

strap logo color: Enter the color you want use for your strap logo or click on the color box and select a color from there. It can be a hex or named color.

strap width: Enter the width you want your strap to be in mm. I would first print one sole and measure your foot on the sole with a measuring tape to get the correct strap width.

strap length: Enter the length you want your strap to be in mm.

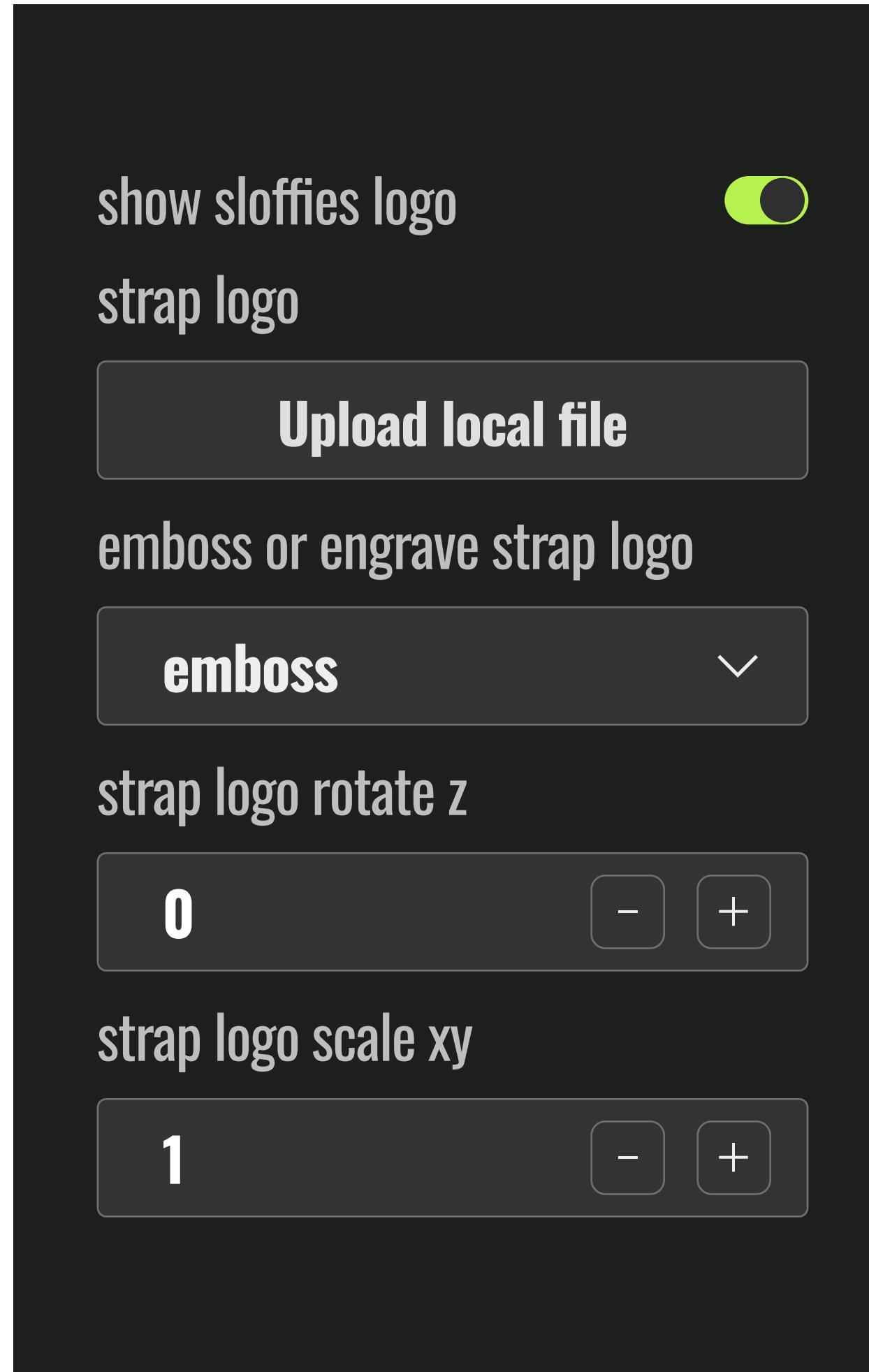
strap thickness: Enter how thick you want your strap to be in mm. I wouldn't recommend going higher than the default 3mm for 95A TPU.

11 Strap logo

[Video](#)



sole logo



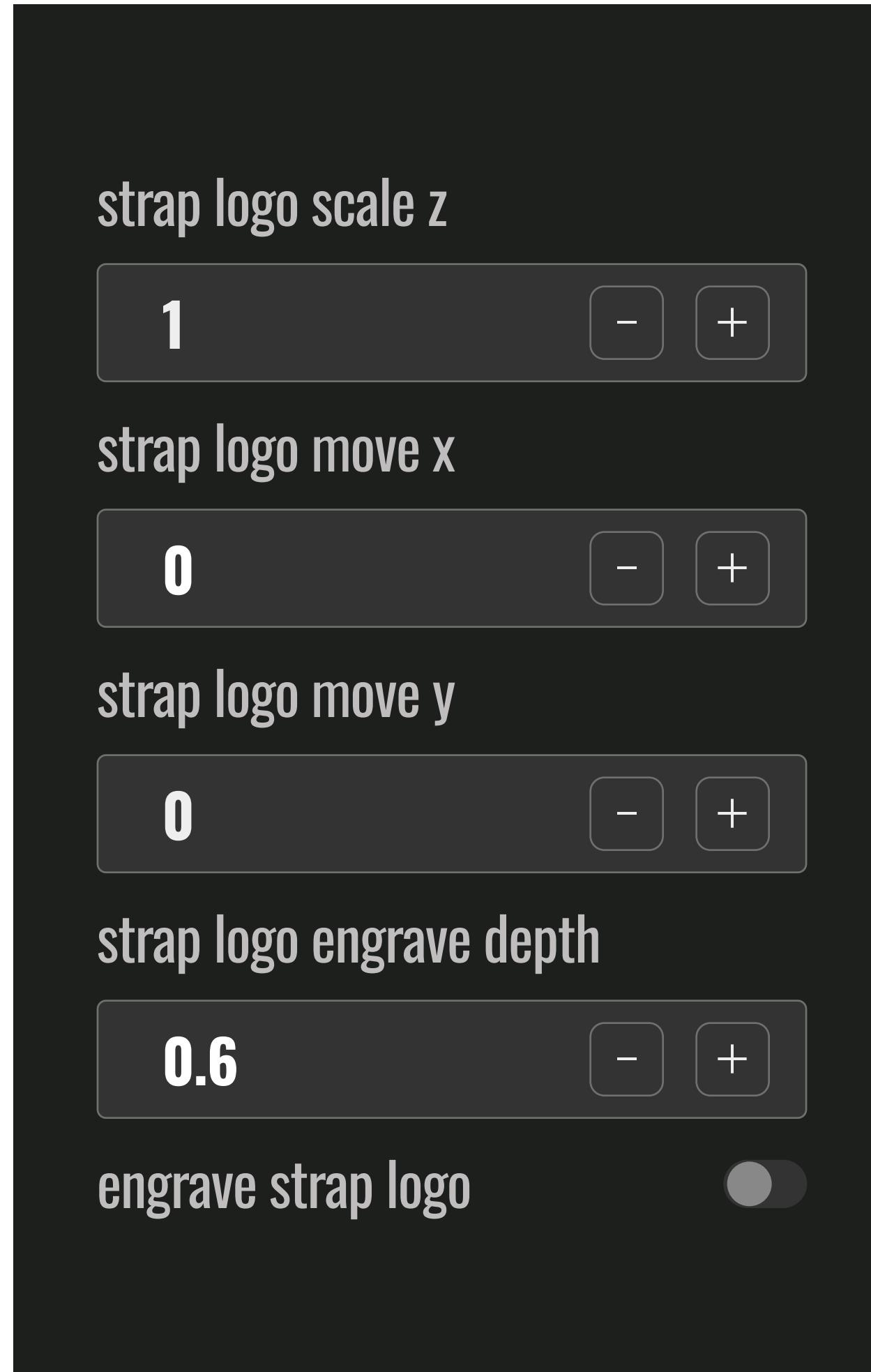
show strap logo: Toggle false if you don't want a strap logo.

strap logo: If you don't want to use the Slöffies logo, toggle the show slöffies logo toggle switch false in the Parameters section and click on Upload local file. It has to be a STL, I tested with SVG and PNG imports and the result was not satisfactory. I would also recommend that you don't export your STL from OrcaSlicer or Bambu Studio the centering will be off, I recommend that you center your logo in your CAD software before importing.

emboss or engrave strap logo: Select if you want to emboss or engrave your strap logo. Engrave only takes effect when you toggle engrave strap logo true.

strap logo rotate z: Rotates the strap logo right or left. A positive number rotates the logo left, and a negative number rotates the logo right.

strap logo scale xy: Enter the scale you want your strap logo to be. This value applies to the xy directions.



strap logo scale z: Enter the scale you want your strap logo to be. This value applies to the z direction.

strap logo move x: Enter how far you want to move your strap logo in the x direction, enter a value in mm. A positive number moves the logo right, and negative number moves the logo left.

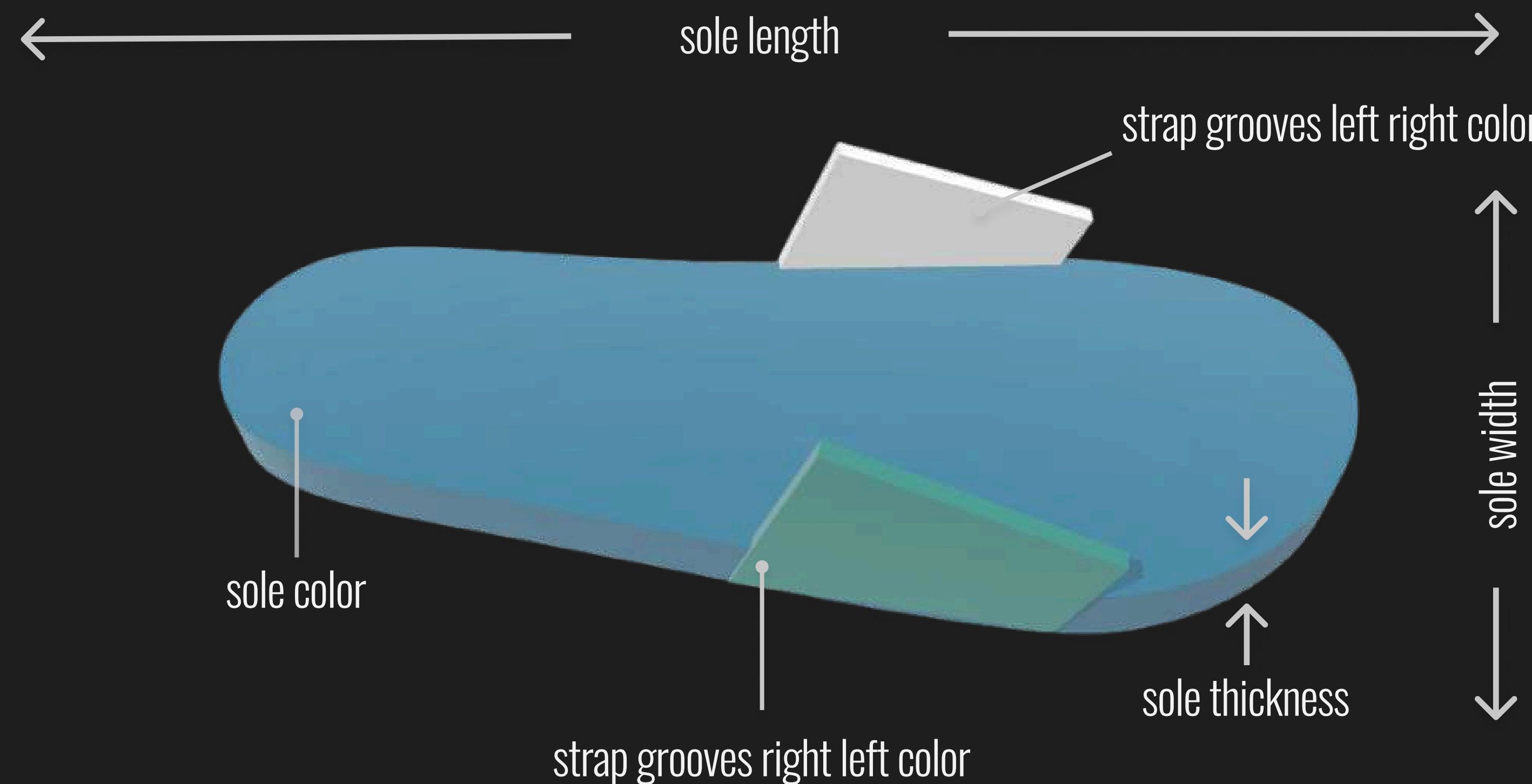
strap logo move y: Enter how far you want to move your strap logo in the y direction, enter a value in mm. A positive number moves the logo forward, and a negative number moves the logo back.

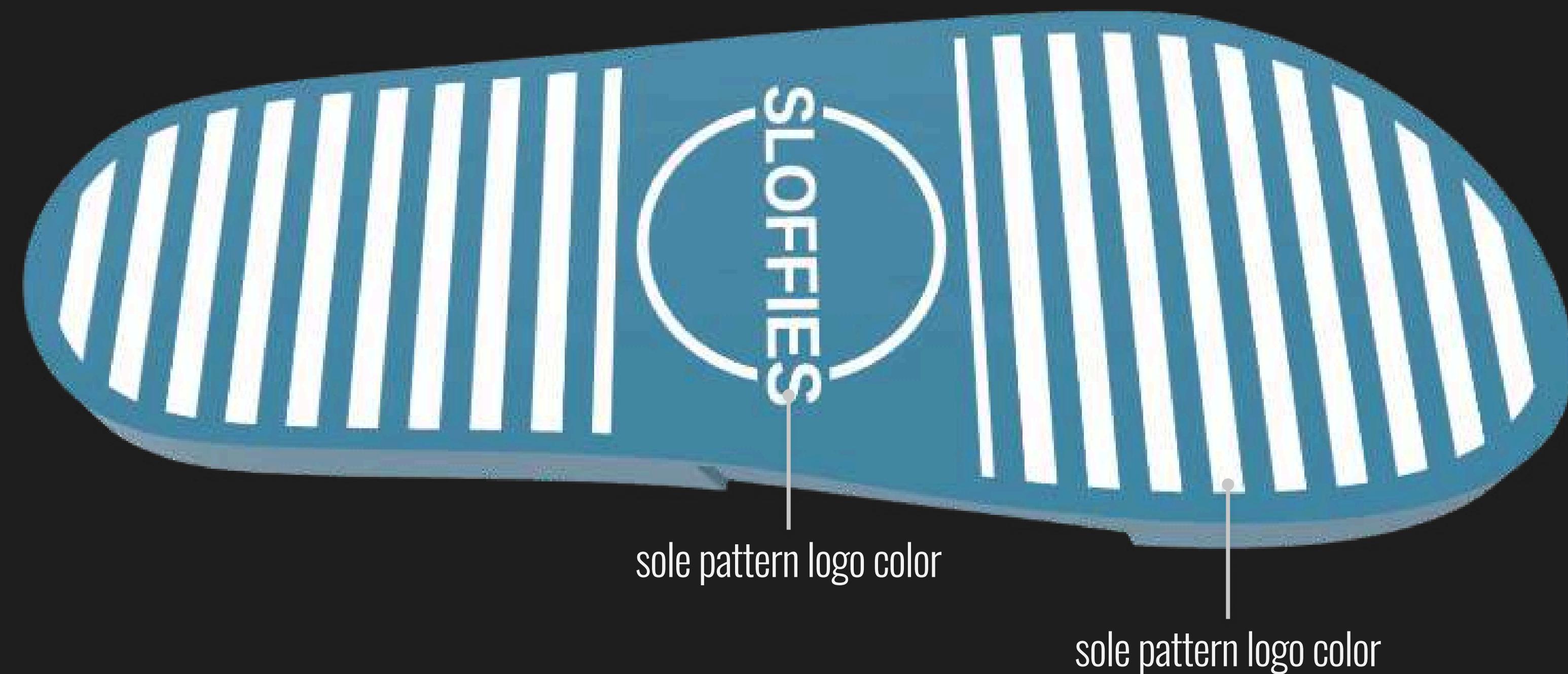
strap logo engrave depth: Enter how deep you want to engrave your logo in the strap. Adjust the strap logo scale z value higher when you set this value higher than how high your logo is.

engrave strap logo: Toggle true when you want to engrave your strap logo. This only takes effect when you have selected engrave from the emboss or engrave strap logo dropdown.

14 Sole dimensions and color

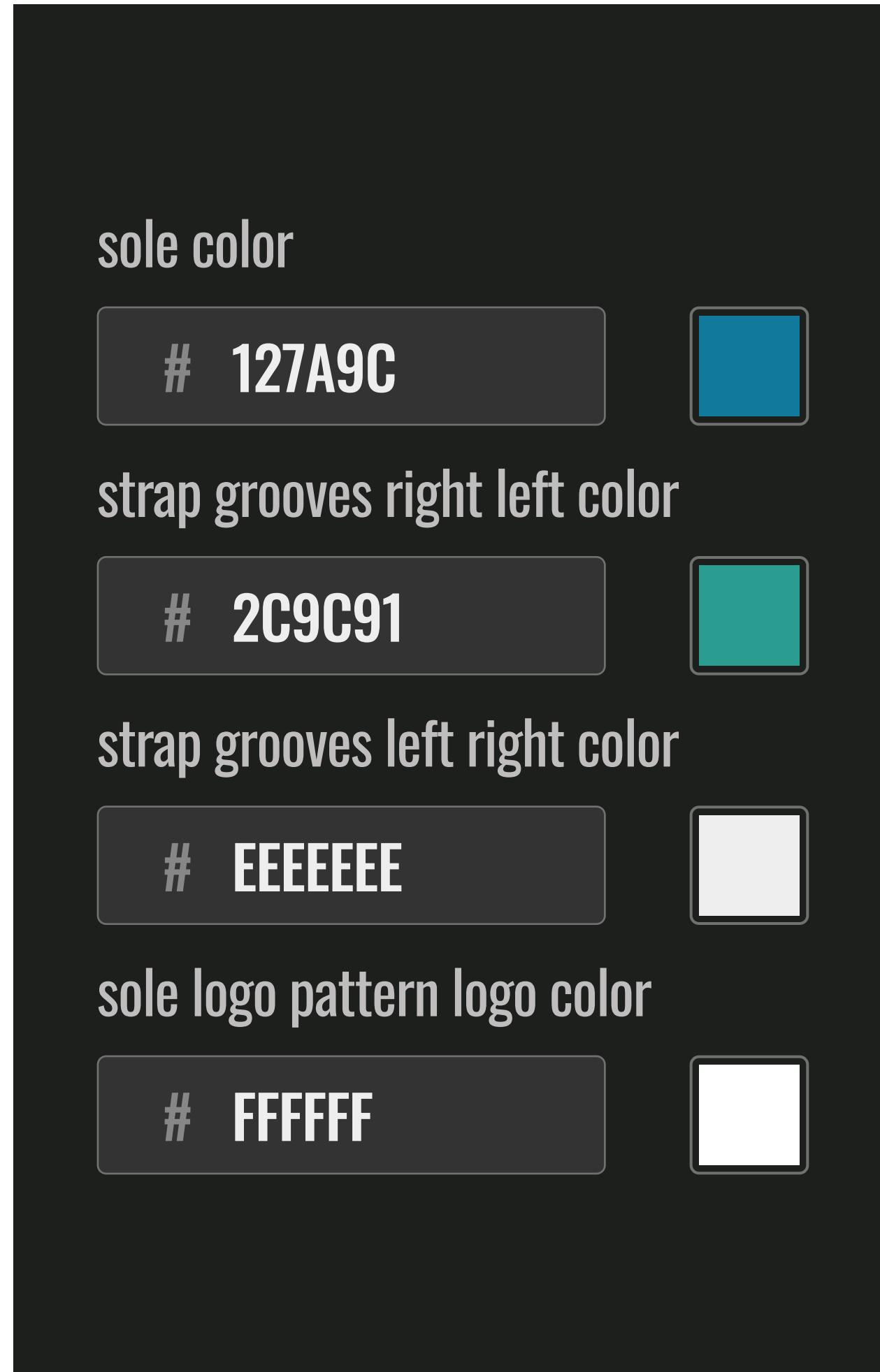
[Video](#)





sole pattern logo color

sole pattern logo color



sole color: Enter a color you want to use for your sole or click on the color box and select a color from there. It can be a hex or named color.

strap grooves right left color: Enter a color you want to use for your strap grooves right left or click on the color box and select a color from there. It can be a hex or named color. This changes the color of the right sole's right strap groove and the left sole's left strap groove.

strap grooves left right color: Enter a color you want to use for your strap grooves left right or click on the color box and select a color from there. It can be a hex or named color. This changes the color of the right sole's right strap groove and the left sole's left strap groove.

sole logo pattern logo color: Enter a color you want to use for your sole pattern logo color or click on the color box and select a color from there. It can be a hex or named color. This helps you see the sole pattern and sole logo change when you are working on them.

sole length

261 - +

sole width

92.52 - +

sole thickness

15 - +

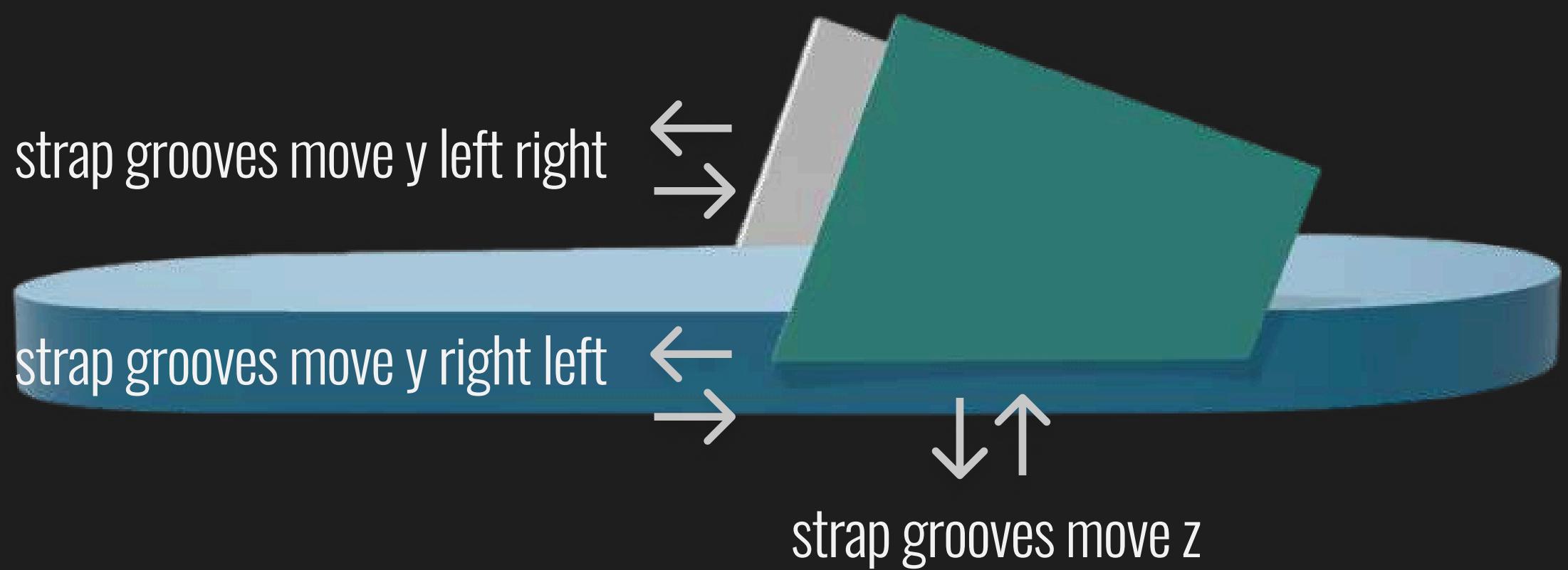
sole length: Enter the length you want your sole to be in mm.

sole width: Enter the width you want your sole to be in mm.

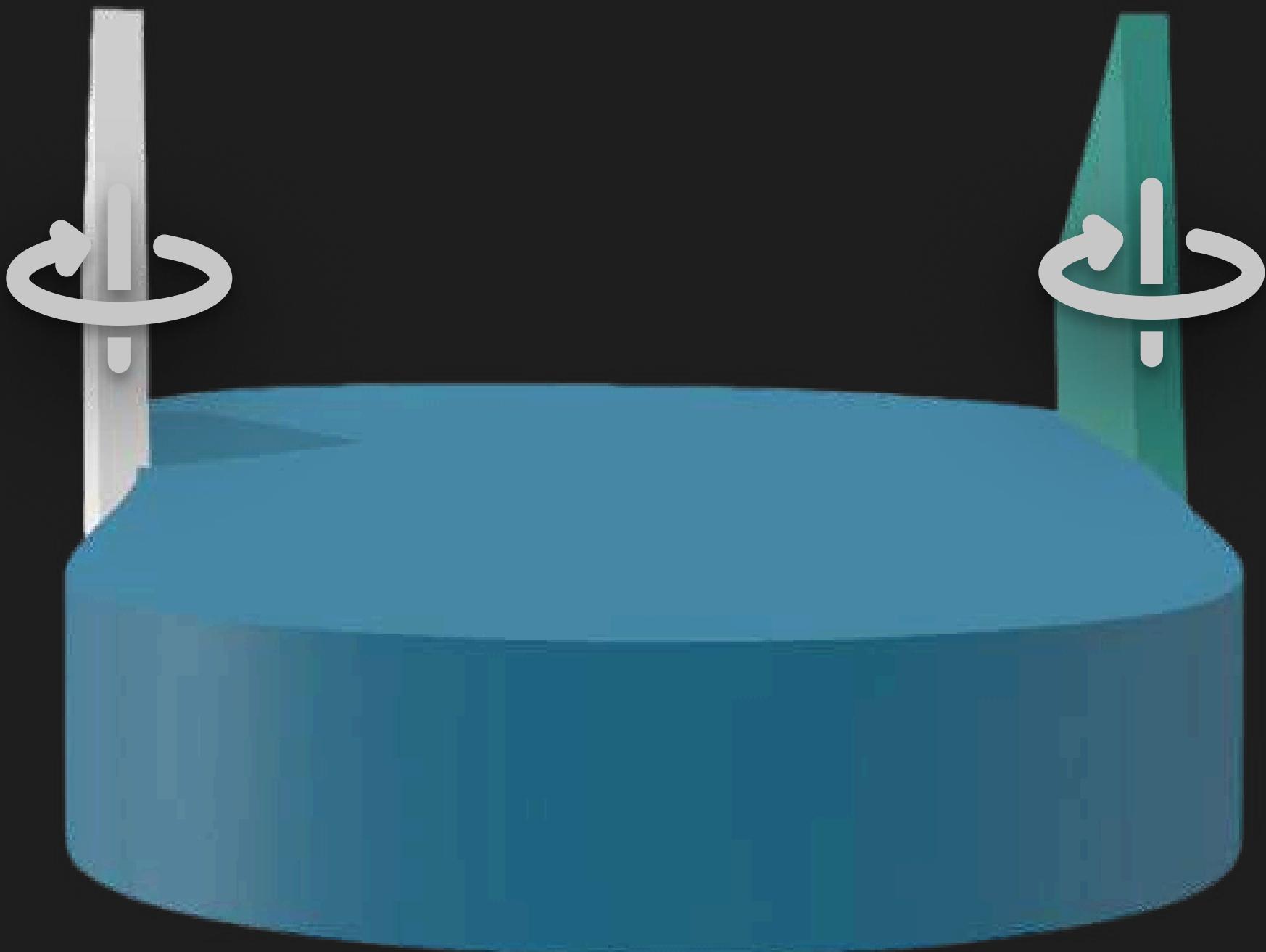
sole thickness: Enter how thick you want your sole to be in mm.

18 Strap grooves

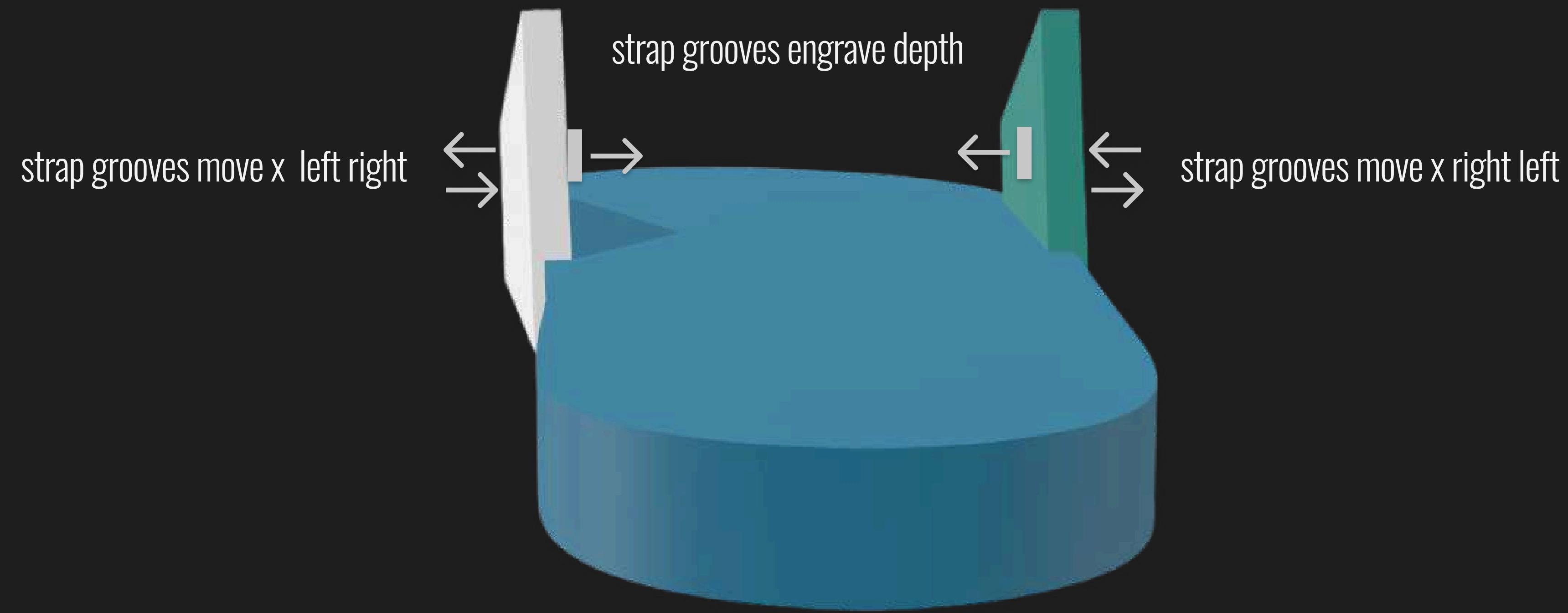
[Video](#)



strap grooves rotate z left right



strap grooves rotate z right left



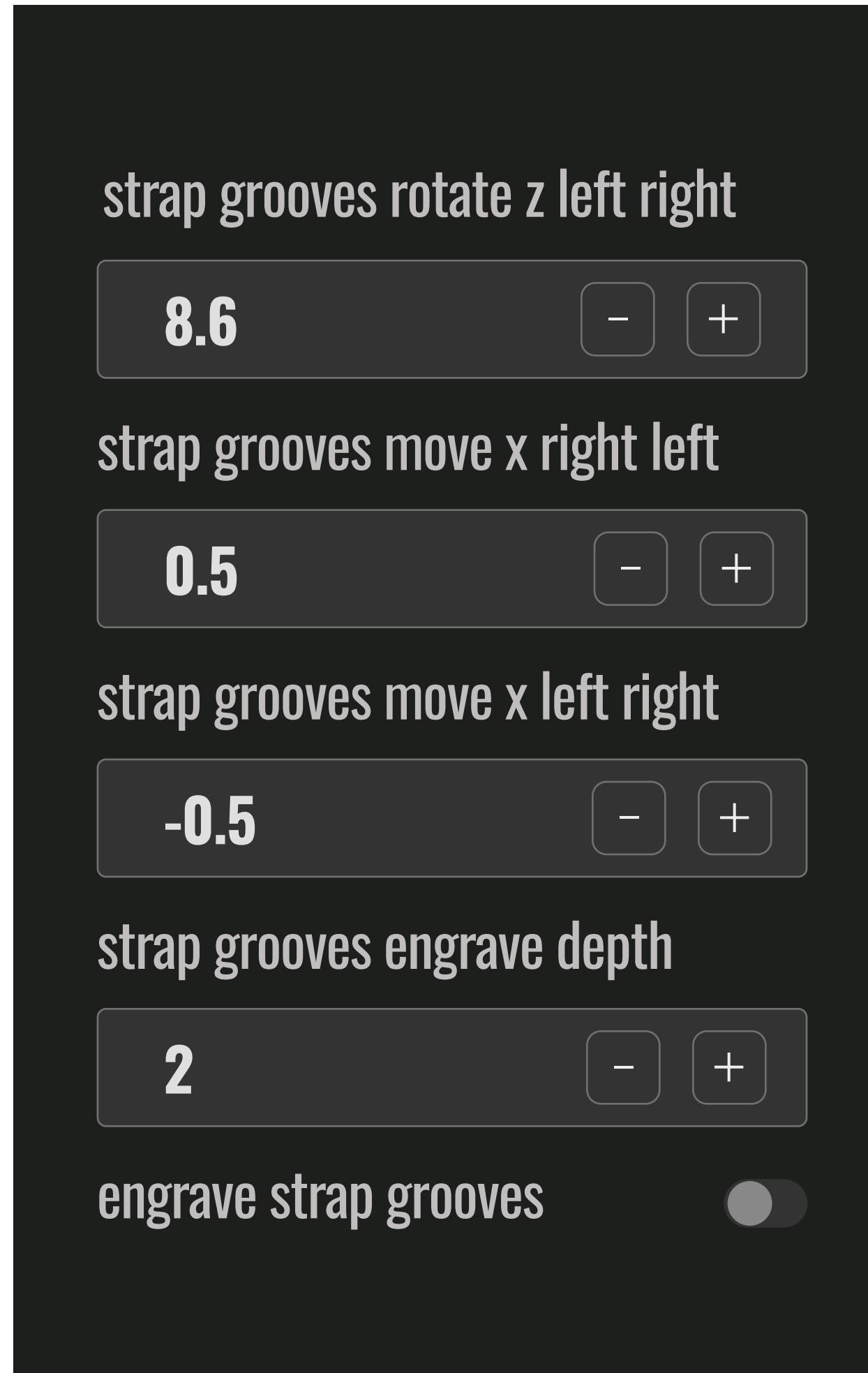
strap grooves move y right left	70
strap grooves move y left right	70
strap grooves move z	2
strap grooves rotate z right left	3.6

strap grooves move y right left: Enter how far you want to move the grooves in the y direction, enter a value in mm. The right-sole right groove will move and the left-sole left groove will move. A positive number moves them back towards the heel, and a negative number moves them forward. This value is measured from the big toe of the sole.

strap grooves move y left right: Enter how far you want to move the grooves in the y direction, enter a value in mm. The right-sole left groove will move, and the left-sole right groove will move. A positive number moves them back towards the heel, and a negative number moves them forward. This value is measured from the big toe of the sole. I would recommend you keep this value the same as the strap grooves move y right left value.

strap grooves move z: Enter how far you want to move the strap grooves in the z direction, enter a value in mm. A positive number moves them up, and a negative number moves them down.

strap grooves rotate z right left: Enter how far you want to rotate the groove in the z direction, enter a value in mm. The right-sole right groove will rotate and the left-sole left groove will rotate. A positive number rotates them in, and a negative number rotates them out.



strap grooves rotate z left right: Enter how far you want to rotate the groove in the z direction, enter a value in mm. The right-sole left groove will rotate, and the left-sole right groove will rotate. A positive number rotates them in, and a negative number rotates them out.

strap grooves move x right left: Enter how far you want to move the grooves in the x direction, enter a value in mm. The right-sole right groove will move and the left-sole left groove will move. A positive number moves them out, and a negative number moves them in.

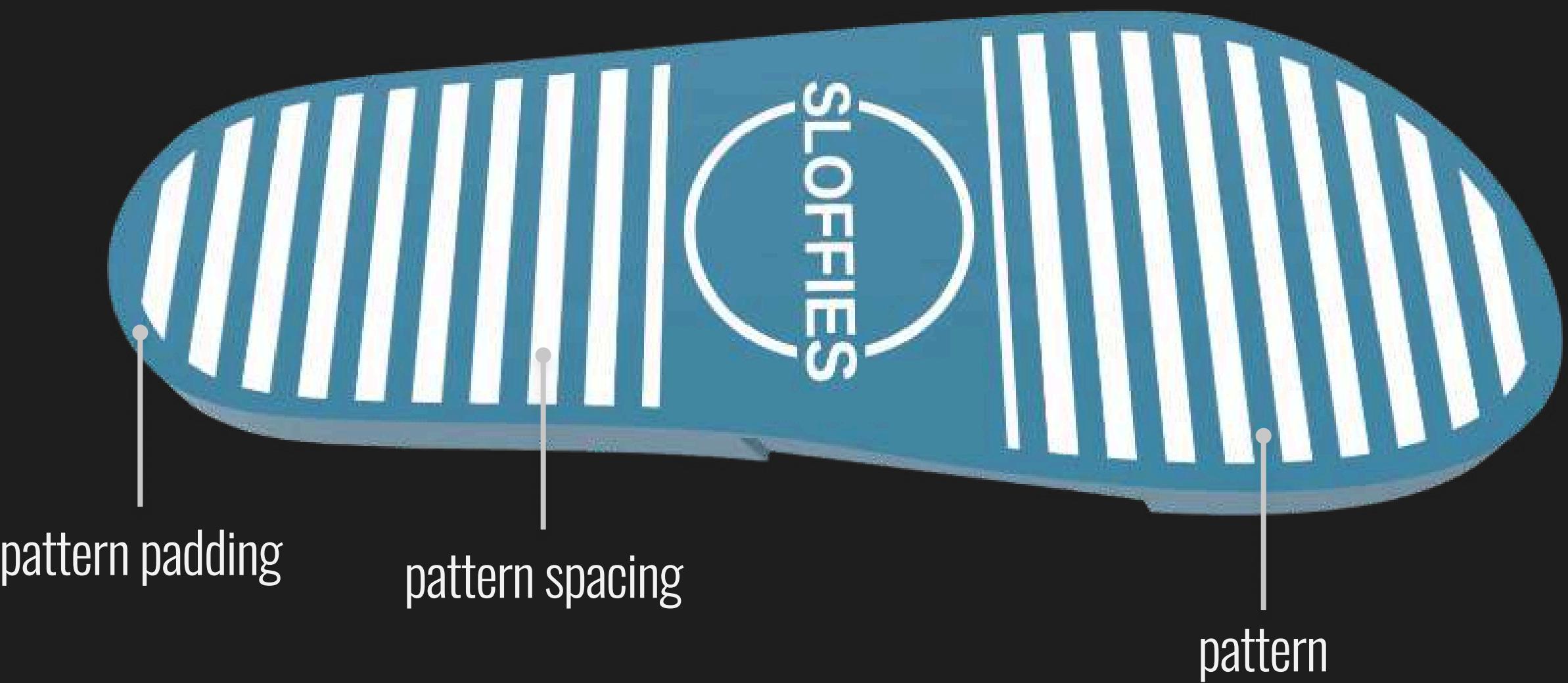
strap grooves move x left right: Enter how far you want to move the groove in the x direction, enter a value in mm. The right-sole left groove will move, and the left-sole right groove will move. A positive number moves them out and a negative number moves them in.

strap grooves engrave depth: Enter the depth you want to engrave the grooves for the straps in mm.

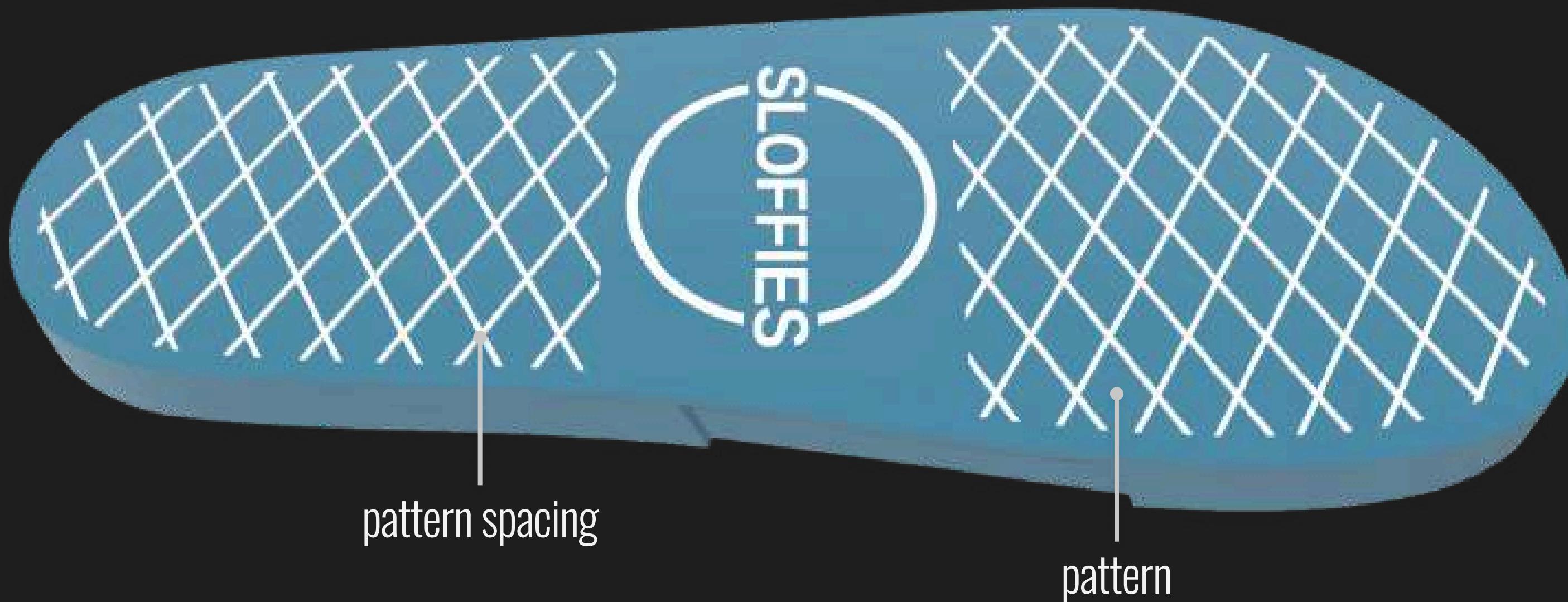
engrave strap grooves: Toggle true to engrave the grooves for the straps in the sole and scroll up to the Parameters section and toggle show sole bottom true.

23 Sole pattern

[Video](#)



When rhombus is selected the pattern spacing is shown as the sole pattern logo color and the pattern is shown as the sole color.



name of pattern

stripe ▾

pattern padding

5 - +

pattern spacing

5 - +

pattern move x

0 - +

pattern move y

0 - +

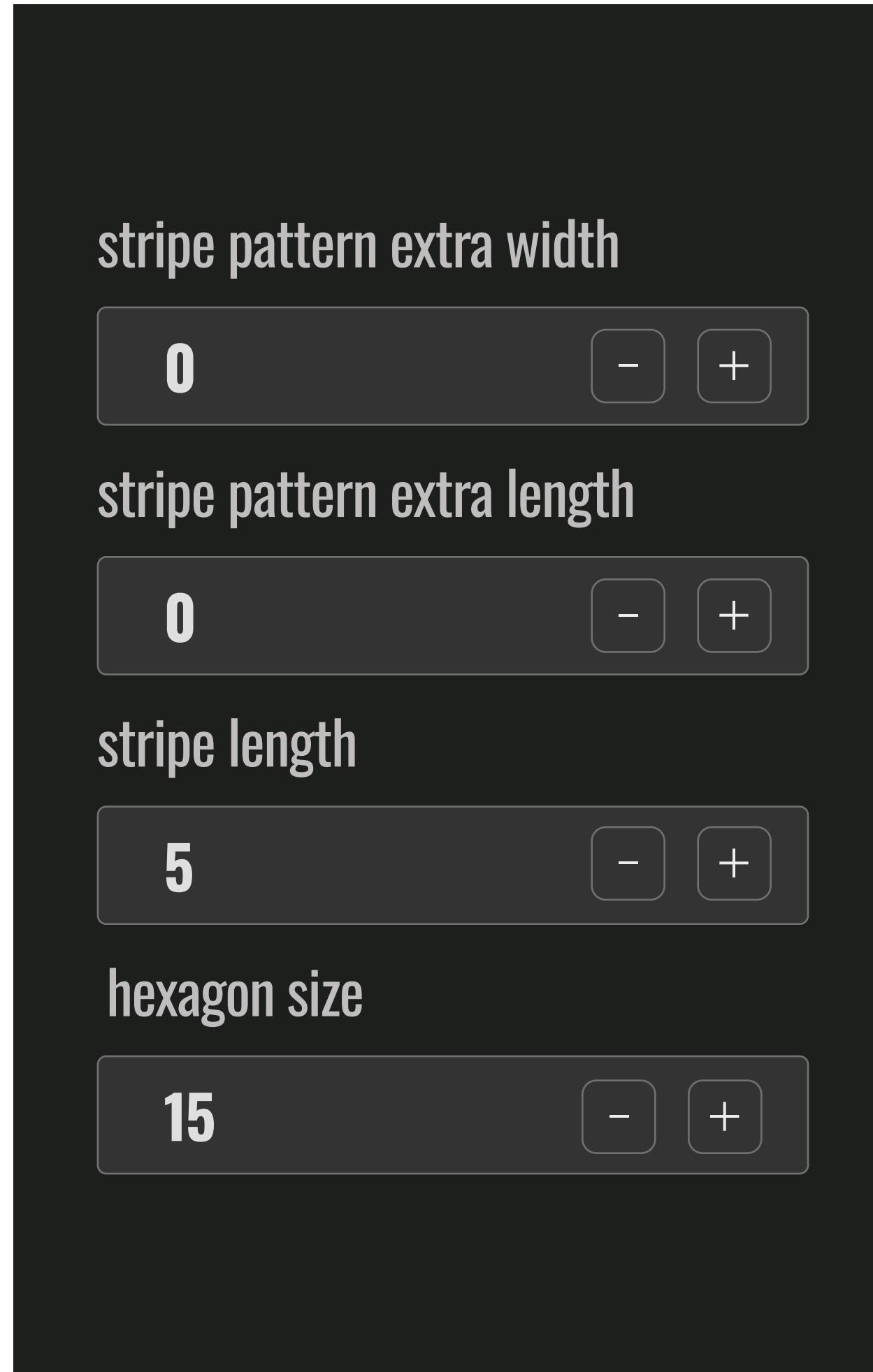
name of pattern: Click on the dropdown and select the pattern you want for your sole. Choose either a stripe, angled stripe, hexagon, diamond or rhombus pattern from the dropdown.

pattern padding: Enter the padding you want for the pattern in mm. This value adjusts the padding between the outside of the pattern and the outside of the sole.

pattern spacing: Enter the spacing you want for the pattern in mm. This value adjusts the spacing between the individual shapes of the pattern.

pattern move x: Enter how far you want to move the pattern in the x direction, enter a value in mm. A positive number moves the pattern right, and a negative number moves the pattern left.

pattern move y: Enter how far you want to move the pattern in the y direction, enter a value in mm. A positive number moves the pattern back, and a negative number moves the pattern forward.

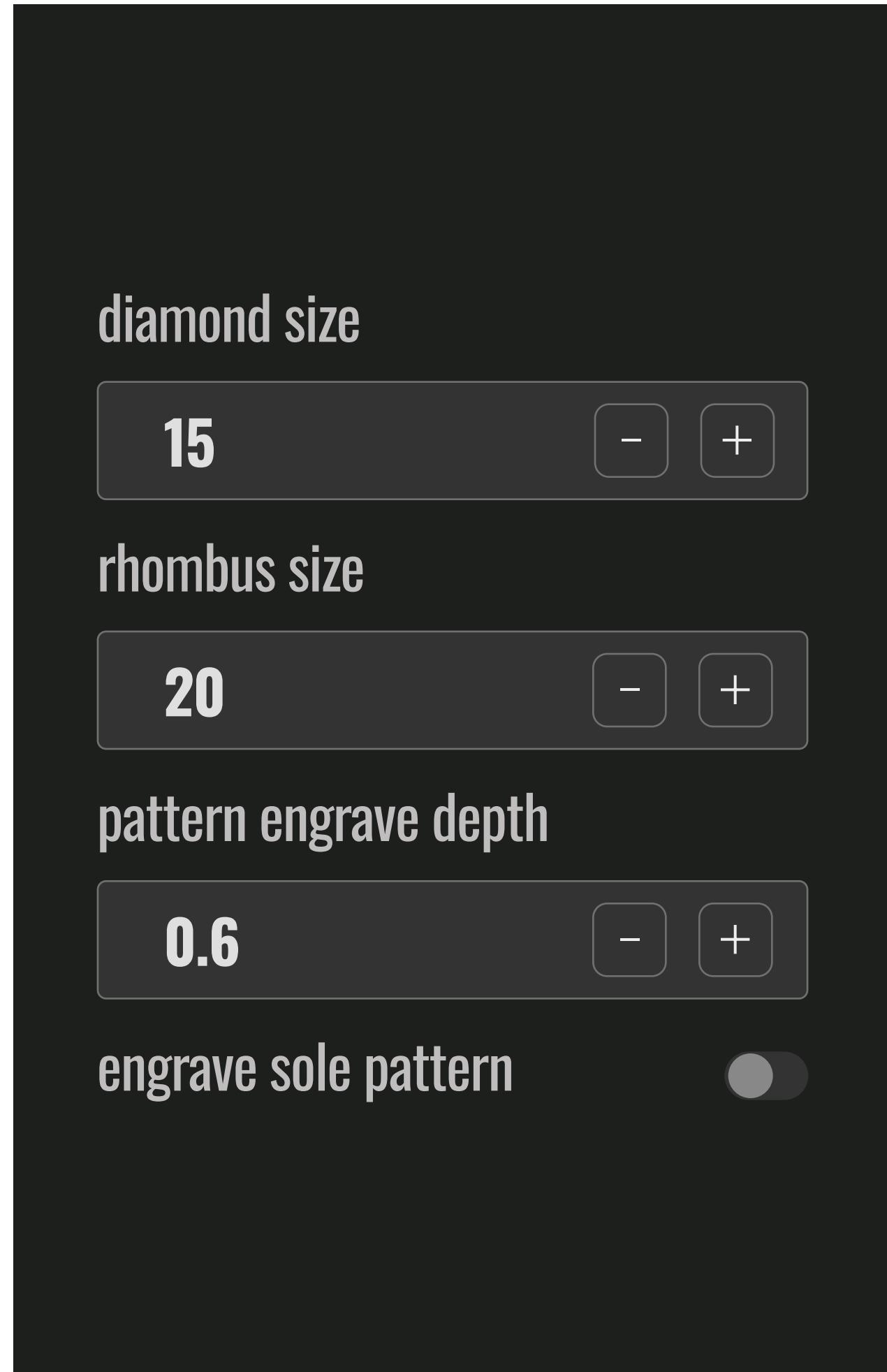


stripe pattern extra width: Enter the extra width you want to add to the stripe patterns in mm. You only need to adjust this value if the stripe patterns width doesn't span the width of the sole.

stripe pattern extra length: Enter the extra length you want to add to the stripe patterns in mm. You only need to adjust this value if the stripe patterns doesn't span the length of the sole.

stripe length: Enter the length you want the stripe to be in mm. Adjusts the length of the individual stripes. Applies to the stripe and angled stripe patterns.

hexagon size: Enter the size you want the hexagon to be in mm. Adjusts the size of the individual hexagons.



diamond size: Enter the size you want the diamond to be in mm. Adjusts the size of the individual diamonds.

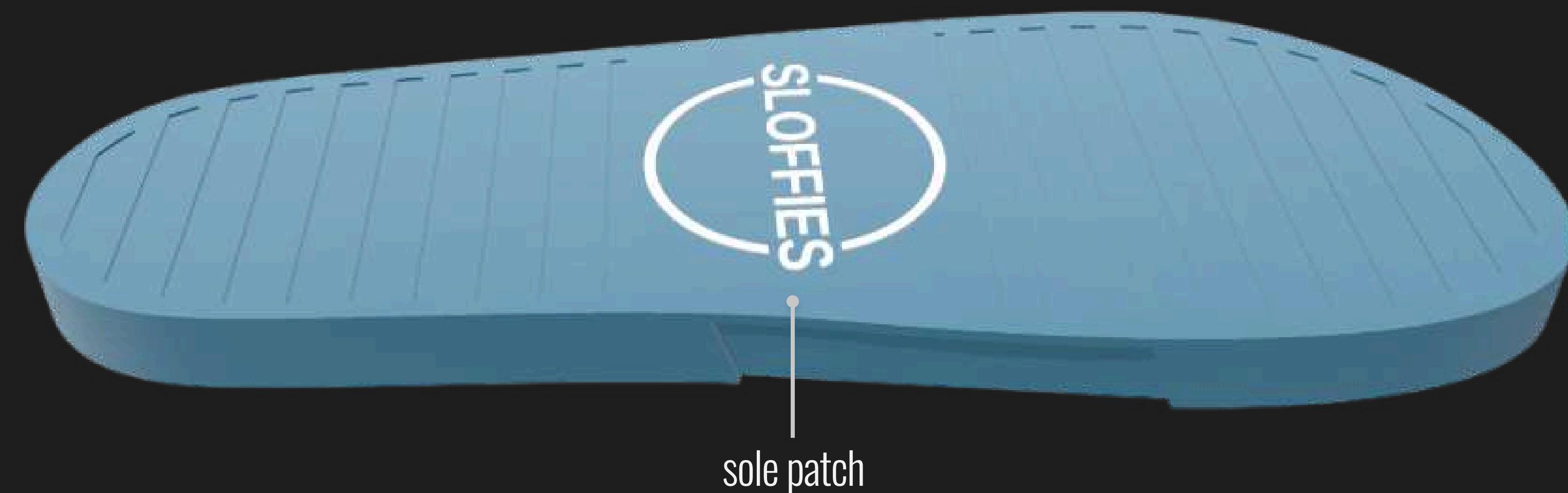
rhombus size: Enter the size you want the rhombus to be in mm. Adjusts the size of the individual rhombi.

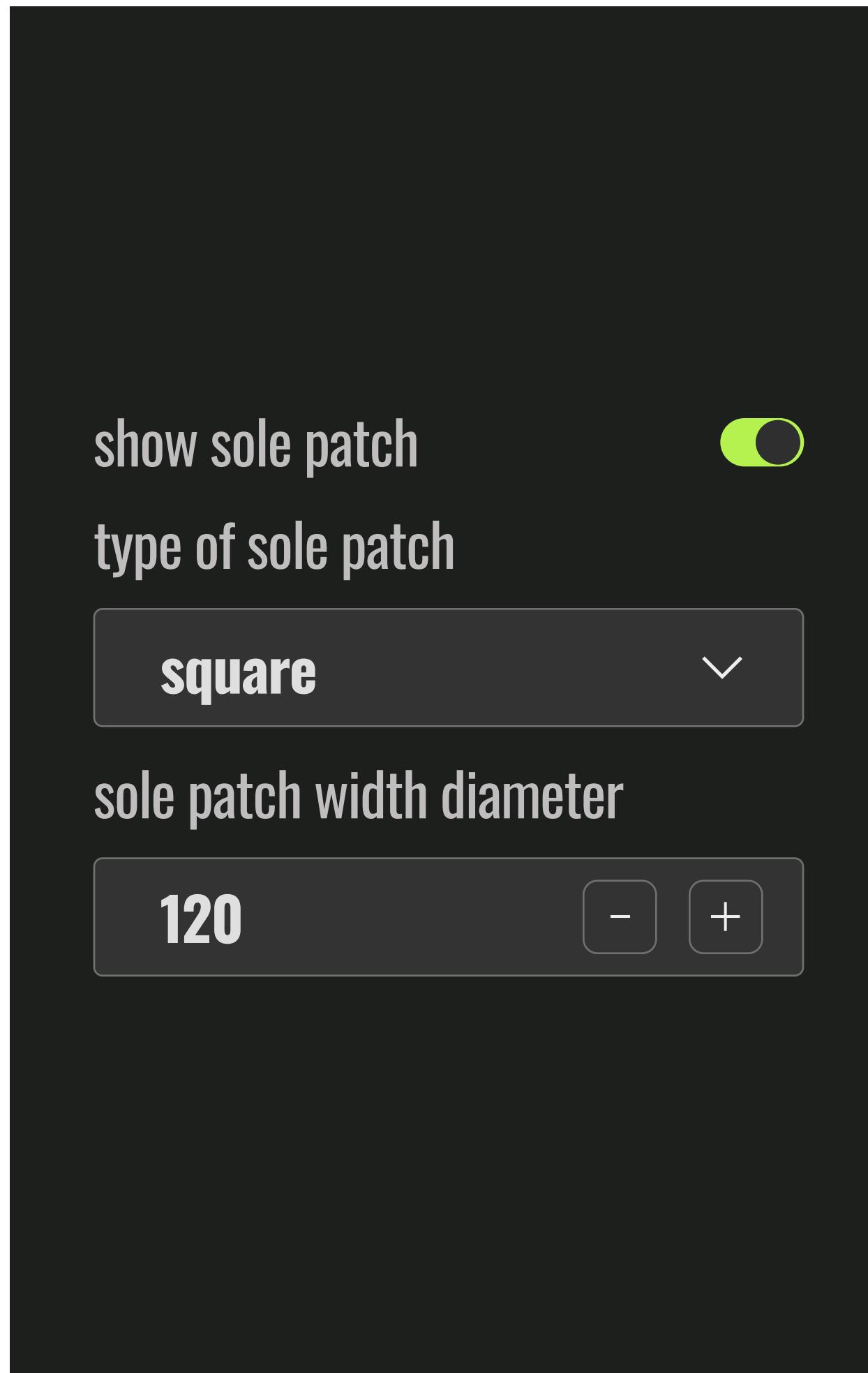
pattern engrave depth: Enter the depth you want to engrave the pattern in the sole in mm.

engrave sole pattern: Toggle true to engrave the pattern in the sole.

28 Sole patch

[Video](#)

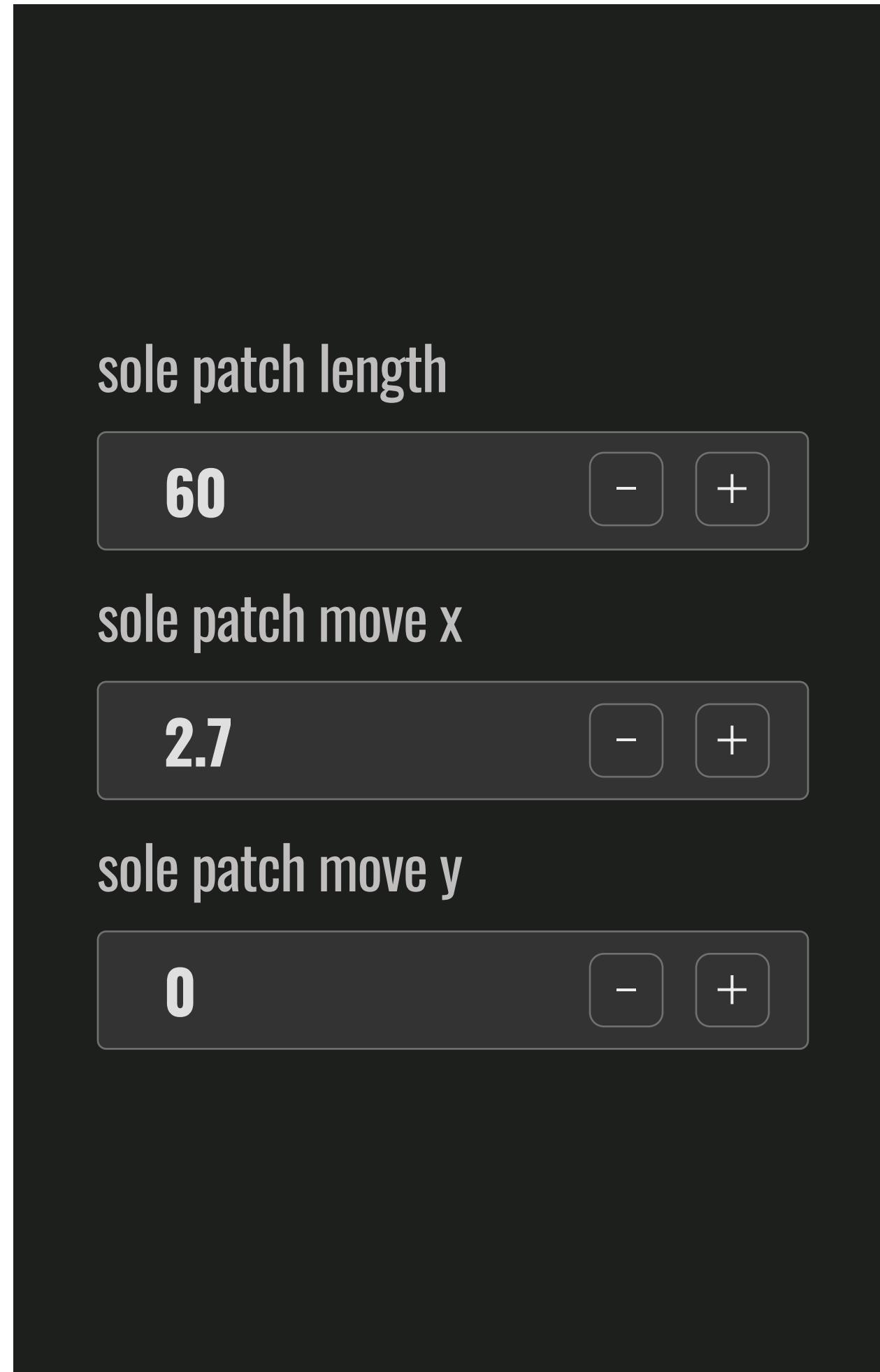




show sole patch: Toggle false if you don't want a sole patch.

type of sole patch: Click on the dropdown and select the sole patch you want for your sole. Choose either a square or round sole patch from the dropdown.

sole patch width diameter: Enter the width or diameter you want the sole patch to be in mm. When square is selected, it adjusts the width, and when round is selected, it adjusts the diameter.



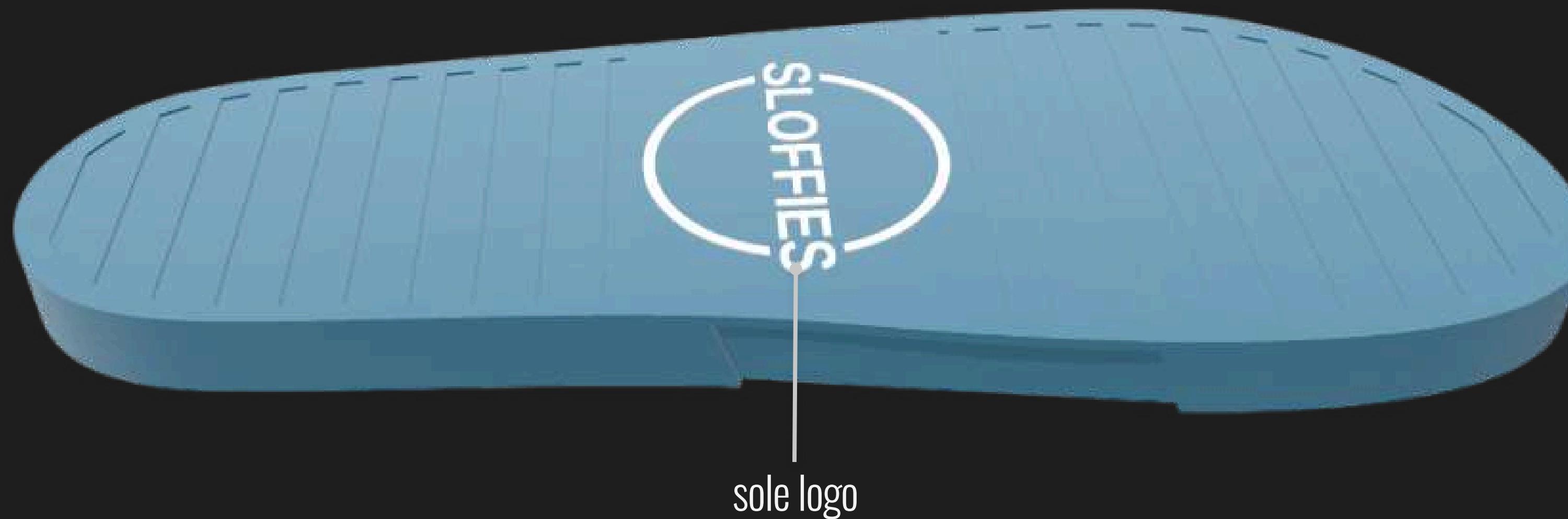
sole patch length: Enter the length you want the sole patch to be in mm. When square is selected, it adjusts the length, and when round is selected, it has no effect.

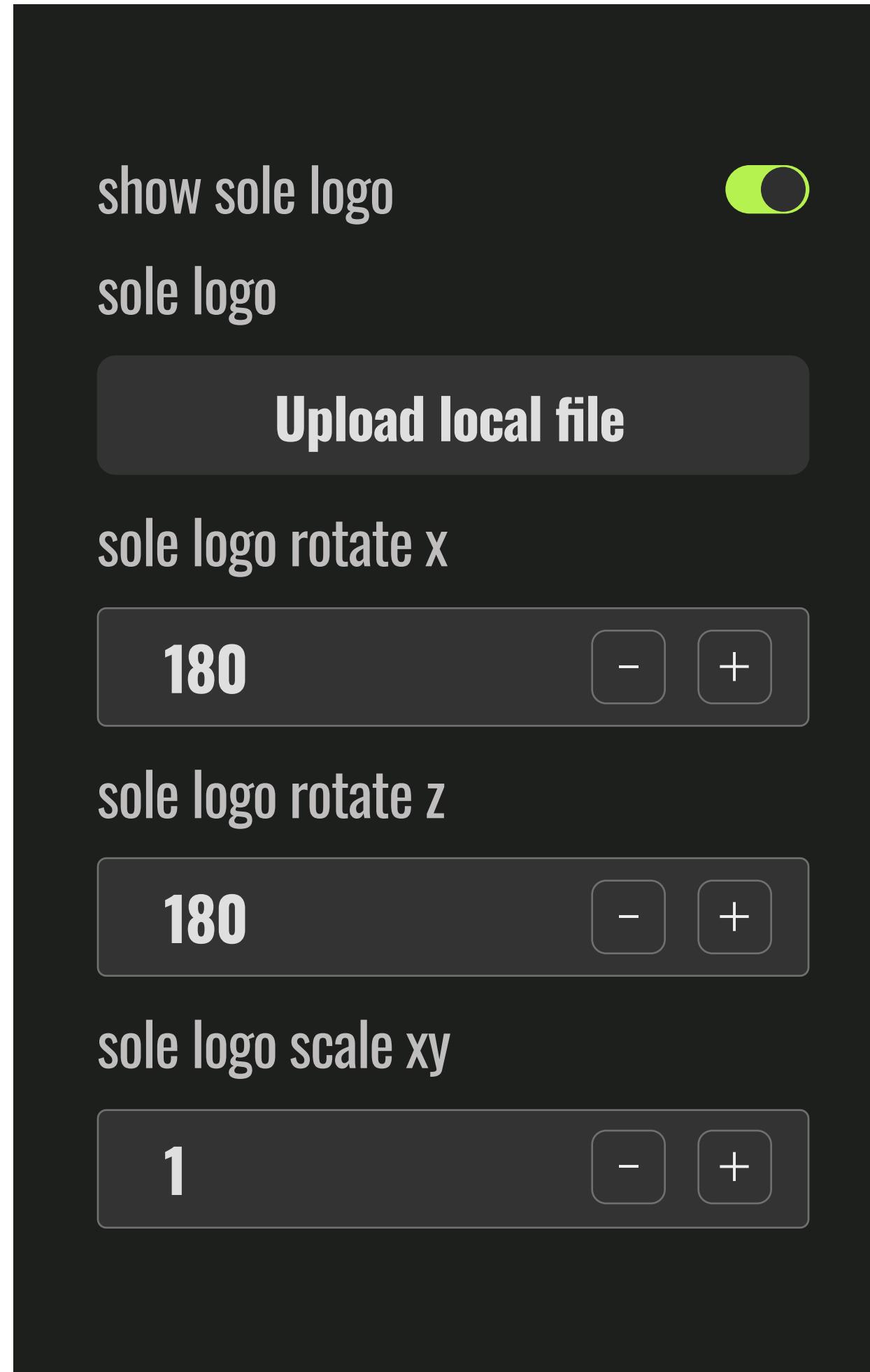
sole patch move x: Enter how far you want to move the sole patch in the x direction, enter a value in mm. A positive number moves the right-sole sole patch left and the left-sole sole patch right, and a negative number moves the right-sole sole patch right and the left-sole sole patch left.

sole patch move y: Enter how far you want to move the sole patch in the y direction, enter a value in mm. A positive number moves it forward, and a negative number moves it back.

31 Sole logo

[Video](#)





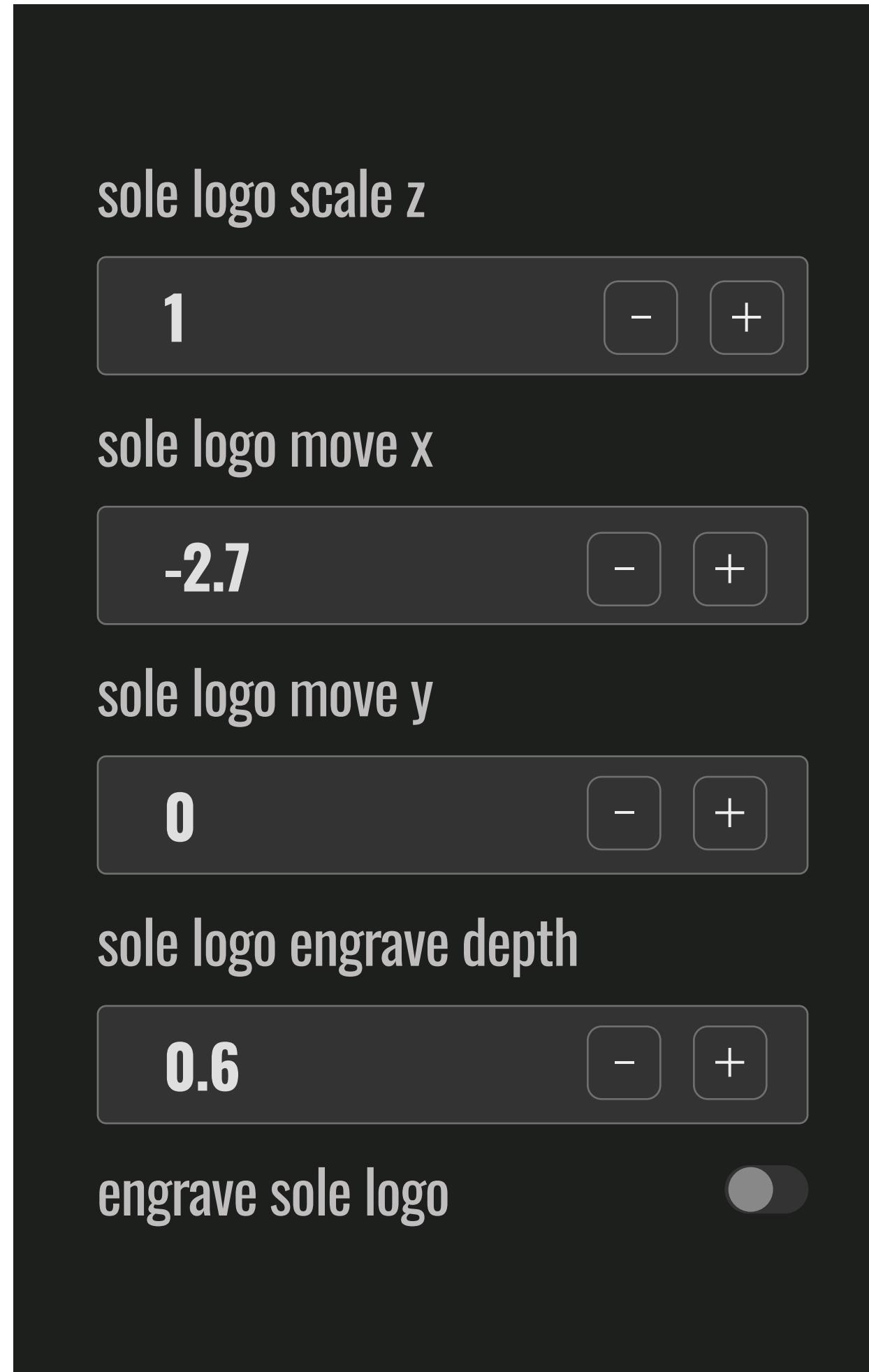
show sole logo: Toggle false if you don't want a sole logo.

sole logo: If you don't want to use the Sloffies logo, toggle the show sloffies logo toggle switch false in the parameters section and click on Upload local file. It has to be a STL, I tested with SVG and PNG imports and the result was not satisfactory. I would also recommend that you don't export your STL from OrcaSlicer or Bambu Studio the centering will be off, I recommend that you center your logo in your CAD software before importing.

sole logo rotate x: Enter how far you want to rotate the sole logo in the x direction, enter a value in mm. A positive number rotates it back, and a negative number rotates it forward.

sole logo rotate z: Enter how far you want to rotate the sole logo in the z direction, enter a value in mm. A positive number rotates it right, and a negative number rotates it left.

sole logo scale xy: Enter the scale you want your sole logo to be. This value applies to the xy directions.



sole logo scale z: Enter the scale you want your sole logo to be. This value applies to the z direction.

sole logo move x: Enter how far you want to move your sole logo in the x direction, enter a value in mm. A positive number moves the logo right, and negative number moves the logo left.

sole logo move y: Enter how far you want to move your sole logo in the y direction, enter a value in mm. A positive number moves the logo forward, and a negative number moves the logo back.

sole logo engrave depth: Enter how deep you want to engrave your logo in the sole. Adjust the sole logo scale z value higher when you set this value higher than how high your logo is.

engrave sole logo: Toggle true when you want to engrave your sole logo. Scroll up and toggle show sole bottom false in the Parameters section.

34 How to download

Video

The screenshot shows a software interface with a sidebar on the left labeled "Code" at the top. Below it are several parameter sections:

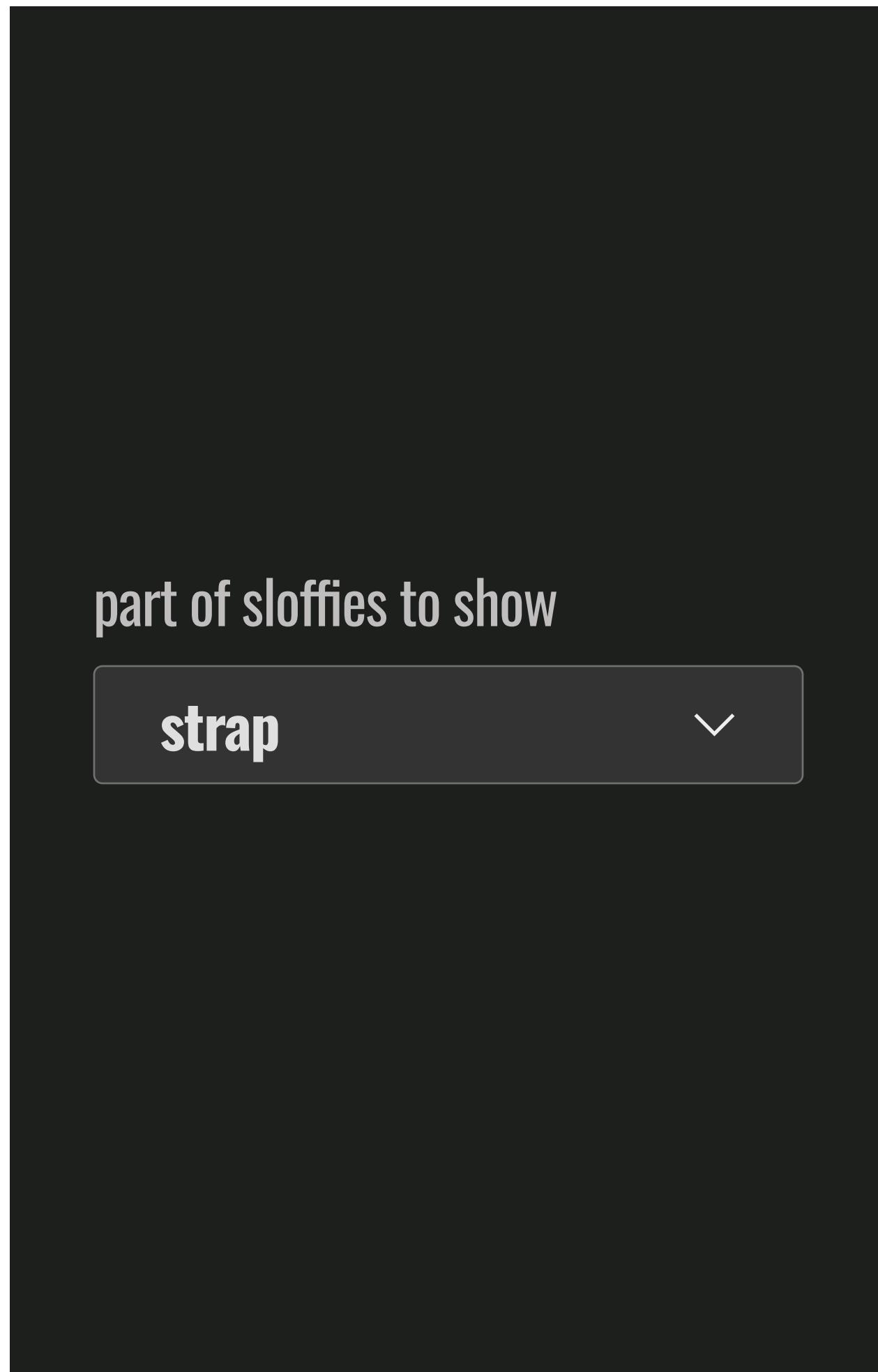
- Parameters**
 - part of sloffies to show**: Select which part of the Sloffies to show. The dropdown menu shows "right sole".
 - show sole bottom**: Toggle true to show the bottom of the sole. The toggle switch is off.
 - show sloffies logo**: Toggle false if you don't want to use the Sloffies logo and instead want to use your own imported logos. The toggle switch is on.
- Strap dimensions and color**
- Strap logo**

A modal window is open on the right side of the screen, displaying a progress icon with a checkmark and the text "Your make is ready". Below this, there is an **Export Notice** message:

Export Notice: By exporting this model, you agree to adhere to the licensing terms associated with the original customizable models, which requires you to follow specific sharing and usage guidelines. Ensure you review and comply with these terms before using the exported model.

STL files will not include color information.

At the bottom of the modal, there are two green buttons: "Download 3MF" and "Download STL".

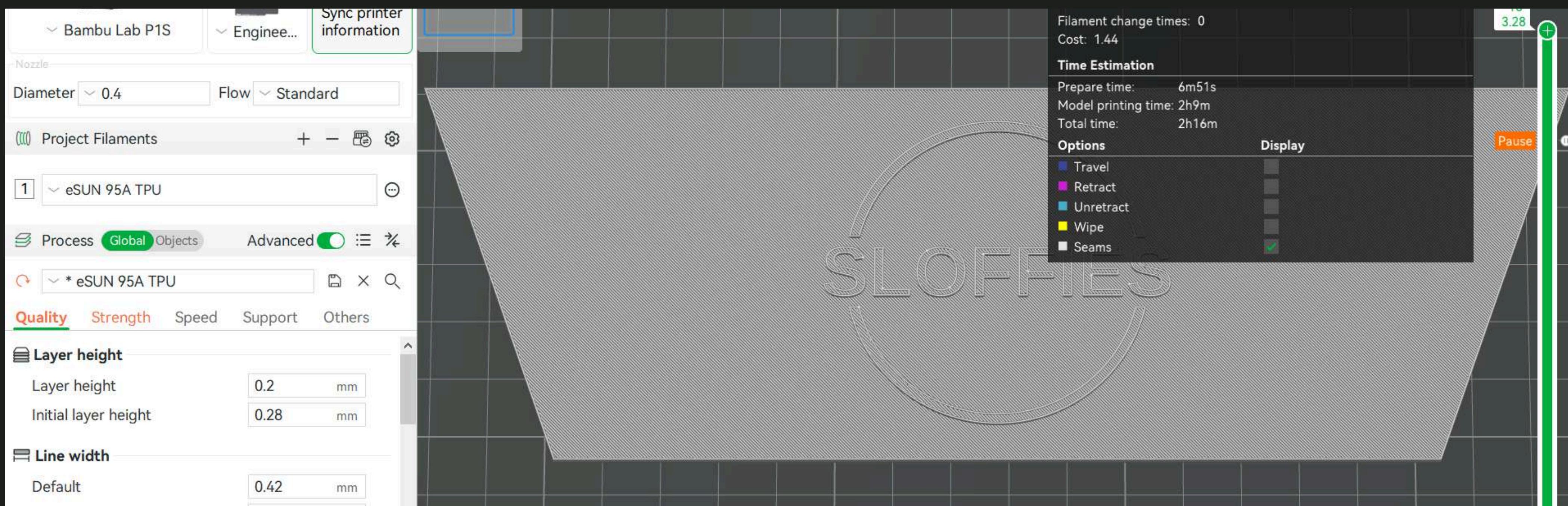


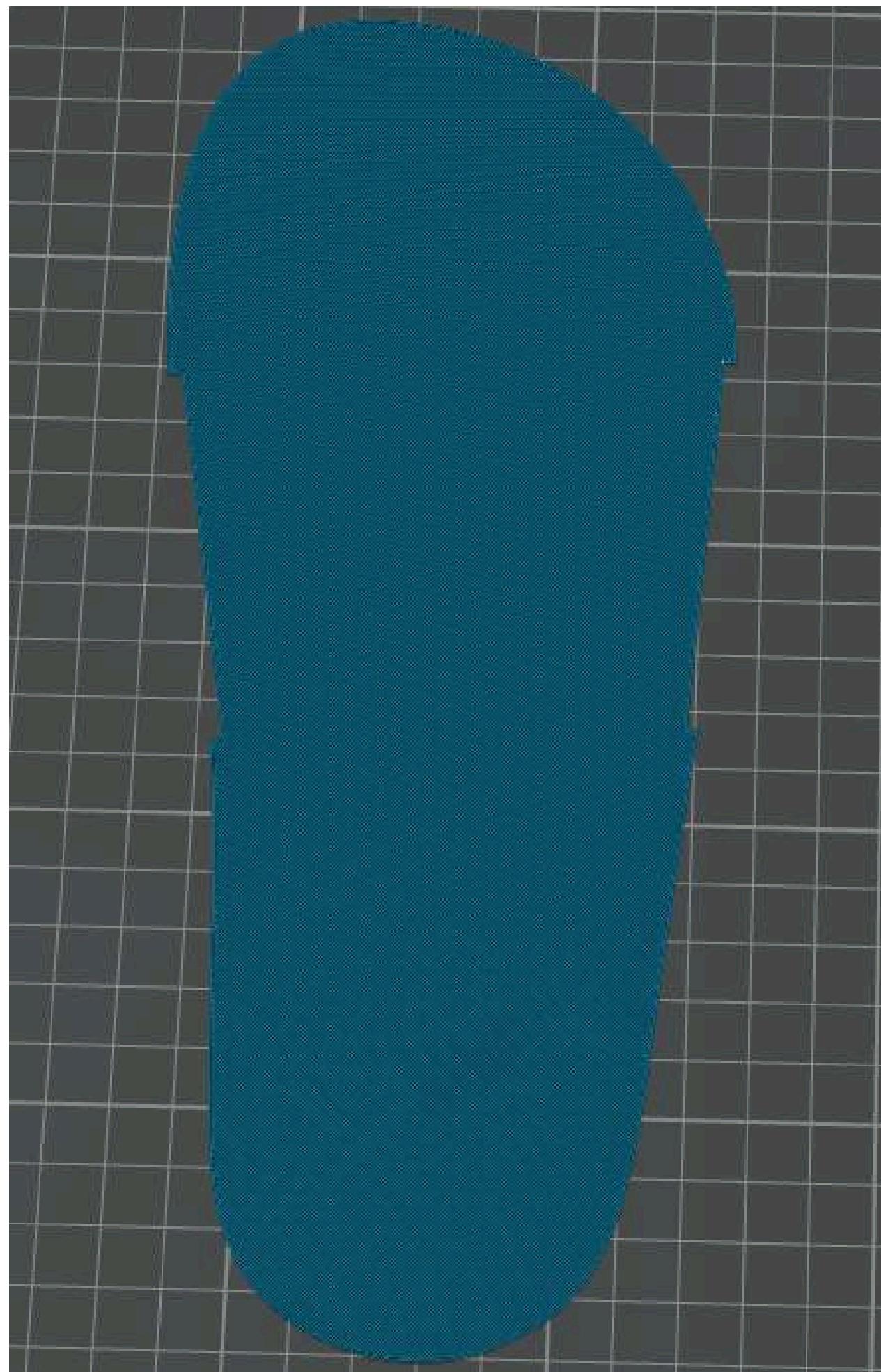
part of sloffies to show: Select strap from the part of sloffies to show dropdown. Click generate, download, select your printer, click confirm, click download STL, and save it as strap.

Next, select right sole from the dropdown. Click generate, download, click confirm, click download STL, and save it as right_sole.

Finally, select left sole from the dropdown. Click generate, download, click confirm, click download STL, and save it as left_sole.

36 How to print



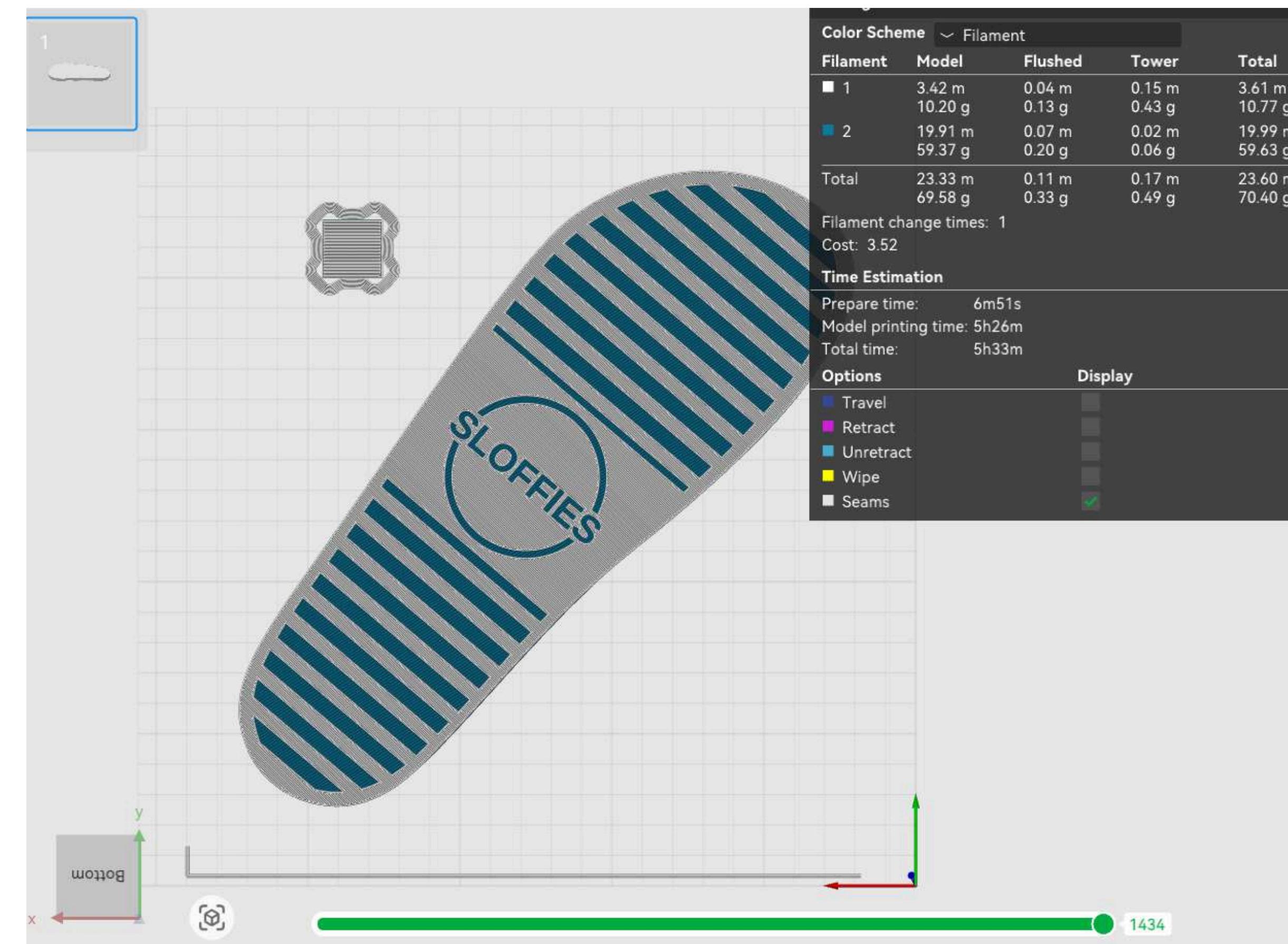


I would recommend you do a test print. Import your sole into your slicer and move it down so you only slice the two top layers. I would print it in PLA with PLA settings to speed up the process. This is to make sure you got your measurements correct and the sole fits.

When printing your sole you can adjust the infill percentage if you want your sole stiffer or squishier. The default infill percentage is 6%. The same is true for your strap; the default infill percentage is 5%.

I have included a 3MF to print the sole with eSUN TPU 95A TPU. If you want to print your soles in multicolor, you have to add a pause in Bambu Studio. From the right-hand layer view, scroll down to the layer after your sole pattern has printed, right-click, and click Add Pause. If your sole pattern engrave depth is 0.6, add a pause at layer 4.

When your printer pauses, go in the filament menu, click on unload filament, remove the filament, add the other filament, click on load filament, and then you click resume print. Make sure the filament doesn't ooze on your sole before it starts printing.



How to Add a Pause in Bambu Studio Slicer



I have included a 3MF to print the straps with eSUN 95A TPU. If you have chosen to emboss your logo and want to print your straps in multicolor, you have to add a pause in Bambu Studio. From the right-hand layer view, scroll down to the layer where your logo starts printing, right-click, and click Add Pause. If your strap is 3 mm thick, add a pause at layer 16.

When your printer pauses, you go in the filament menu, click on unload filament, remove the filament, add the other filament, click on load filament, and then you click resume print. Make sure the filament doesn't ooze on your sole before it starts printing.

[How to Add a Pause in Bambu Studio Slicer](#)

Use loctite 406 superglue to attach your straps to your soles.

I recommend you use clamps to make sure it adheres correctly.



Methods of gluing Flexible Prints in TPU together!

41 Thank you

I hope this guide has assisted you in designing and printing your own Sloffies.

I hope you find them comfortable and you enjoy walking around in them.

Thank you very much for supporting my work. I really appreciate it.